



RRB Group D 2019

Level-1 Posts (Group D) · CEN RRC 01/2019 · CBT (17 Aug - 11 Oct 2022) · Question Paper

English

All 99 Shifts (Sets) · Official Answer Key

About this Compilation

This booklet contains all **99 shift papers** of the **RRB Group D 2019** examination in **English**, with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

Source and order. Original question images of the official RRB response sheets (no retyping). RRB shuffled questions and options for every candidate; here each paper runs section by section in the official order (Maths Q1-25, Reasoning Q26-55, General Science Q56-80, General Awareness Q81-100), options in RRB's own order.

Answer key. Official RRB key; 12 questions carry RRB's final (post-objection) answer; 36 questions dropped by RRB are printed as asked, with RRB's note and no tick.

English not saved. For the whole 26 Aug 2022 12:45 PM paper and 149 questions of 17 other shifts no English version was saved; the Hindi version is printed, marked HINDI.

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear section by section in the order of the paper, numbered 1 onward.
- Diagram and wide-table questions appear at full width at the end of their section.
- The correct answer is highlighted in green with a tick.

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Index — All Sets (click to open)

<div>Set 1</div> <div>17 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>	<div>Set 19</div> <div>26 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>
<div>Set 2</div> <div>17 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>	<div>Set 20</div> <div>26 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>
<div>Set 3</div> <div>17 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>	<div>Set 21</div> <div>26 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>
<div>Set 4</div> <div>18 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>	<div>Set 22</div> <div>29 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>
<div>Set 5</div> <div>18 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>	<div>Set 23</div> <div>29 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>
<div>Set 6</div> <div>18 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>	<div>Set 24</div> <div>29 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>
<div>Set 7</div> <div>22 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>	<div>Set 25</div> <div>30 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>
<div>Set 8</div> <div>22 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>	<div>Set 26</div> <div>30 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>
<div>Set 9</div> <div>22 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>	<div>Set 27</div> <div>30 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>
<div>Set 10</div> <div>23 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>	<div>Set 28</div> <div>01 Sep 2022</div> <div>9:00 AM - 10:30 AM</div>
<div>Set 11</div> <div>23 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>	<div>Set 29</div> <div>01 Sep 2022</div> <div>12:45 PM - 2:15 PM</div>
<div>Set 12</div> <div>23 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>	<div>Set 30</div> <div>01 Sep 2022</div> <div>5:00 PM - 6:30 PM</div>
<div>Set 13</div> <div>24 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>	<div>Set 31</div> <div>02 Sep 2022</div> <div>9:00 AM - 10:30 AM</div>
<div>Set 14</div> <div>24 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>	<div>Set 32</div> <div>02 Sep 2022</div> <div>12:45 PM - 2:15 PM</div>
<div>Set 15</div> <div>24 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>	<div>Set 33</div> <div>02 Sep 2022</div> <div>5:00 PM - 6:30 PM</div>
<div>Set 16</div> <div>25 Aug 2022</div> <div>9:00 AM - 10:30 AM</div>	<div>Set 34</div> <div>05 Sep 2022</div> <div>9:00 AM - 10:30 AM</div>
<div>Set 17</div> <div>25 Aug 2022</div> <div>12:45 PM - 2:15 PM</div>	<div>Set 35</div> <div>05 Sep 2022</div> <div>12:45 PM - 2:15 PM</div>
<div>Set 18</div> <div>25 Aug 2022</div> <div>5:00 PM - 6:30 PM</div>	<div>Set 36</div> <div>05 Sep 2022</div> <div>5:00 PM - 6:30 PM</div>

Set 37 06 Sep 2022
9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

Set 41 08 Sep 2022
12:45 PM - 2:15 PM

Set 42 08 Sep 2022
5:00 PM - 6:30 PM

Set 43 09 Sep 2022
9:00 AM - 10:30 AM

Set 44 09 Sep 2022
12:45 PM - 2:15 PM

Set 45 09 Sep 2022
5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

Set 48 12 Sep 2022
5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

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12:45 PM - 2:15 PM

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5:00 PM - 6:30 PM

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9:00 AM - 10:30 AM

Set 95 07 Oct 2022
12:45 PM - 2:15 PM

Set 96 07 Oct 2022
5:00 PM - 6:30 PM

Set 97 11 Oct 2022
9:00 AM - 10:30 AM

Set 98 11 Oct 2022
12:45 PM - 2:15 PM

Set 99 11 Oct 2022
5:00 PM - 6:30 PM

Mathematics

25 Questions • Answer Key

Q1 Mathematics

If $x + y + z = 11$ and $xy + yz + zx = 42$, then the value of $x^2 + y^2 + z^2$ is:

A. 37



B. 39

C. 41

D. 43

Q2 Mathematics

P and Q alone can complete a piece of work in 9 days and 12 days, respectively. In how many days will the work be completed if they work on alternate days starting with Q?

A. $10\frac{1}{3}$ B. $10\frac{5}{6}$ C. $11\frac{1}{3}$ D. $11\frac{5}{6}$

Q3 Mathematics

Srinivas has just got married to a girl who is 4 years younger than him. After 5 years their average age will be 33 years. Find the present age of the girl.

A. 30 years

B. 26 years



C. 31 years

D. 35 years



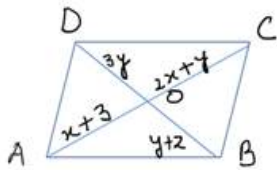
Q4 Mathematics

The greatest possible length which can be used to measure exactly the lengths 5 m 25 cm, 7 m 35 cm and 4 m 90 cm is:

- A. 35 cm
- B. 45 cm
- C. 25 cm
- D. 55 cm

Q5 Mathematics

Find x if ABCD is a parallelogram as given in figure below, with two diagonals AC and BD intersecting at O and $OA = x + 3$, $OB = y + 2$, $OC = 2x + y$, $OD = 3y$



- A. 1
- B. 2
- C. 3
- D. 4

Q6 Mathematics

The average speed of Gaurav during a two-way journey is 15 km/h. If he walked a distance of 20 km every hour while going, then his speed while returning will be:

- A. 10 km/h
- B. 15 km/h
- C. 12 km/h
- D. 11 km/h

Q7 Mathematics

The roots of the equation $ax^2 + x + b = 0$ are equal if:

- A. $b^2 = 4a$
- B. $b^2 < 4a$
- C. $b^2 > 4a$
- D. $ab = \frac{1}{4}$



Q8 Mathematics

Which is a quadratic equation?

A.) $b - \sqrt{3} + 2b - \sqrt{32} = 0$

B.) $(x - 4x^2 + 5) + \sqrt{3}x + 8 = 0$

C.) $(p - q)^2 - q^3 + 2pq - \sqrt{p} = -3$

D.) $(x + 3)^{\frac{1}{2}} = 0$

A. A

B. B



C. C

D. D

Q9 Mathematics

20 women can complete a work in 15 days. 16 men can complete the same work in 15 days. Find the ratio between the work efficiency of a men to a women .

A. 3: 2

B. 4: 3

C. 5: 4



D. 5: 3

Q10 Mathematics

John bought a laptop at 25% discount on the marked price. If he paid ₹28,473 for the laptop, what was its marked price?

A. ₹37,694

B. ₹37,964



C. ₹37,496

D. ₹37,946



Q11 Mathematics

A water tank is in the form of a cube of side 2 m. It has an inlet in the shape of a circle with radius 3.5 cm. How long will it take to fill the tank (approximately), if the water is flowing at a speed of 2 m/s?

- A. 22 minutes
- B. 19.2 minutes
- C. 17.3 minutes
- D. 1 hour

**Q12** Mathematics

One year ago, the ratio of the ages of Saketh and Tilak was 5 : 6, respectively. Four years hence, this ratio would become 6 : 7. The present age of Saketh is:

- A. 26 years
- B. 30 years
- C. 25 years
- D. 31 years

**Q13** Mathematics

Express $\sin \theta$ in terms of $\cot \theta$, where θ is an acute angle.

- A. $\frac{1}{\sqrt{1 + \cot^2 \theta}}$
- B. $\frac{1}{1 + \cot^2 \theta}$
- C. $1 + \cot^2 \theta$
- D. $\sqrt{1 + \cot^2 \theta}$

**Q14** Mathematics

The value of $0.6 + \left(\sqrt{0.81} - \left(\sqrt{0.0144} + 0.4 \div 0.5 \right) \right)$ is:

- A. 0.58
- B. 0.62
- C. 0.78
- D. 0.82



Q15 Mathematics

X and Y are two alloys of Gold and Platinum prepared by mixing the metals in the ratio of 5: 2 and 5: 7, respectively. If we melt equal quantities of the alloys to form a third alloy Z, then the ratio of the quantity of Gold to the quantity of Platinum in Z will be:

A. 73: 95

B. 95: 73



C. 84: 73

D. 95: 84

Q16 Mathematics

If 6, 18, 39, and x are in proportion, then find the value of x.

A. 139

B. 117



C. 112

D. 115

Q17 Mathematics

If the perimeter of one face of a cube is 24 cm, then its volume is:

A. 216 cm^3



B. 200 cm^3

C. 180 cm^3

D. 154 cm^3

Q18 Mathematics

The average of 11 numbers arranged in an order is 41. The average of the first five numbers is 18 and that of the last five numbers is 64. What is the sixth number?

A. 41



B. 45

C. 55

D. 64



Q19 Mathematics

The ages of two persons differ by 30 years. If 5 years ago, the elder one was 3 times as old as the younger one, then the present age of the younger person is:

A. 20 years



B. 30 years

C. 25 years

D. 35 years

Q20 Mathematics

Find the simple interest on ₹2,000 at 8.25% per annum for the period from 7 February 2022 to 20 April 2022.

A. ₹35

B. ₹33



C. ₹31

D. ₹37

Q21 Mathematics

If the cost price of an article is ₹2,500 and its selling price is ₹2,375, then the loss percentage is:

A. 3%

B. 4%

C. 5%



D. 6%

Q22 Mathematics

The value of

$$27 \div 3 - 27 \times 0 + 1 =$$

A. -18

B. 12

C. 10



D. 13



Q23 Mathematics

In $\triangle ABC$ if $\angle A = 40^\circ$ and $\angle B = 70^\circ$, find the measure of exterior angle A.

A. 110°

B. 140° ✓

C. 30°

D. 70°

Q24 Mathematics

Convert 36 cm to km.

A. 0.0036 km

B. 0.00036 km ✓

C. 0.00063 km

D. 0.000036 km

Q25 Mathematics

If the sum of two numbers is 430 and their HCF is 43, then which of the following is the correct pair?

A. 86, 344

B. 129, 301 ✓

C. 172, 258

D. 215, 215

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

E, F, G, H, I, J and K are sitting in a straight row, facing north. H is second to the right of G. F and K are immediate neighbours. Both F and E are immediate neighbours of I. H and E are immediate neighbours. K is at the extreme right end of the row. J is at the immediate left of H. Who is at the immediate left of J?

A. G ✓

B. H

C. F

D. E

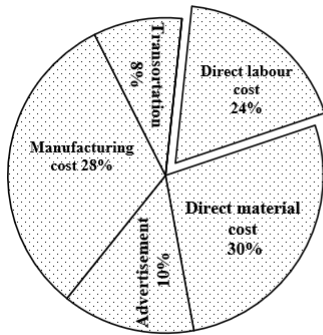


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Q27 General Intelligence and Reasoning

The following pie chart shows the percentage distribution of the expenditure incurred in manufacturing a scientific calculator. Study the pie chart and answer the question.



If 500 products are manufactured and the direct labour cost on them amounts to ₹1,00,000, then what should be the selling price of the product so that the manufacturer can earn a profit of 44%?

- A. ₹1,500
- B. ₹1,000
- C. ₹1,200
- D. ₹600



Q28 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$25.19 \times 3 + 4.41 - 0.9 = ?$$

- A. 62
- B. 78
- C. 95
- D. 100



Q29 General Intelligence and Reasoning

In a certain code language, 'MFBTF' is written as 'LEASE' and 'UNISE' is written as 'TMHRD'. How will 'TRICK' be written in that language?

- A. USDJL
- B. SSHJB
- C. USJDL
- D. SQHBJ



Q30 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

10 : 55 :: 12 : 65 :: 18 : ?

A. 85

B. 92

C. 95



D. 90

Q31 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete ?

S2L, P6N, M18P, J54R, G162T, ?

A. D486V



B. D324V

C. E486V

D. D386V

Q32 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts, and decide which of the given conclusions logically follow/s from the given statements.

Statements:

All pans are pens.

All pens are brushes.

All brushes are tables.

Conclusions:

(I) Some tables are pans.

(II) All pens are pans.

(III) No pen is a pan.

A. Only conclusion I follows



B. Only conclusion II follows

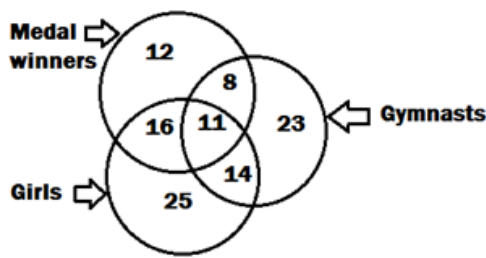
C. Either conclusion I or conclusion III follows

D. None of the conclusions follow



Q33 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



Which of the following statements is correct on the basis of the above diagram?

- A. The number of girls who are also gymnasts is 41.
- B. The number of gymnasts who are also medal winners is 34.
- C. The number of girls who are neither gymnasts nor medal winners is 23.
- D. The number of medal winners who are also girls is 27. ✓

Q34 General Intelligence and Reasoning

P, Q, R, S, T and U are six giraffes in a jungle, each with a different height. S is taller than Q. P is taller than R. S is shorter than T. Q is taller than P but shorter than T. T is shorter than U. Which of the six giraffes is the shortest?

- A. Q
- B. P
- C. T
- D. R ✓

Q35 General Intelligence and Reasoning

Raman started from a point and walked a distance of 200 m towards the north, he then turned left and walked 300 m, turned right and walked 400 m, and then turned right again and walked 300 m. How far is Raman from the starting point?

(All turns are 90 degree turns only)

- A. 600 m ✓
- B. 700 m
- C. 1400 m
- D. 200 m

Q36 General Intelligence and Reasoning

If 3 is added to each odd digit and 1 is subtracted from each even digit in the number 42514563, what will be difference between the highest and lowest digits thus formed?

A. 2

B. 5

C. 7



D. 8

Q37 General Intelligence and Reasoning

Six persons, A, B, C, D, E and F, are sitting around a circular table. All are facing the centre of the table. Only two persons are sitting between D and A. F is to the immediate right of C. E is second to the right of F. E is second to the left of A. Who is sitting to the immediate right of F?

A. D



B. E

C. C

D. A

Q38 General Intelligence and Reasoning

P, L, K, U, J and Y went for a trip to Rajasthan and Uttar Pradesh in six consecutive months of the same calendar year. P preferred to visit Rajasthan in the month of November. U visited Uttar Pradesh exactly two months prior to P. Y preferred the month of July. J preferred to visit Rajasthan exactly between the months preferred by Y and U. L visited exactly one month prior to Y. In which month did K visit?

A. August

B. September

C. October



D. November



Q39 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

Y H S D S Y I R A Y E U G I R O A B U B R X M P Q

How many such vowels are there in the series each of which is immediately preceded by a consonant and also immediately followed by a consonant?

A. 2

B. 3

C. 4



D. 5

Q40 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(15, 41 , 4)

(19, 71, 5)

A. (13, 55, 3)

B. (44, 91, 3)

C. (10, 8, 2)



D. (41, 125, 4)

Q41 General Intelligence and Reasoning

Rajan started from a point and walked a distance of 200 m towards the north, he then turned left and walked 300 m, turned right and walked 400 m, and then turned left and walked 1 km. In which direction is Rajan facing now?

(All turns are 90 degree turns only)

A. South

B. East

C. West



D. North



Q42 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

55, 104, 140, 165, ?

A. 185

B. 181



C. 192

D. 174

Q43 General Intelligence and Reasoning

Study the given letter, number, symbol series and answer the question that follows.

T % N 9 * M \$ 3 U = L 8 Y @ G & 3 E > W & 4 R F ! K

Find out the total number of symbols that are immediately preceded by a number and immediately followed by a letter.

A. 1



B. 2

C. 3

D. 4

Q44 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

No computer is a marker.

All erasers are markers.

All pens are erasers.

Conclusions:

I. No pen is a computer.

II. Some erasers are computers.

A. Only conclusion I follows



B. Only conclusion II follows

C. Both conclusions I and II follow

D. Neither conclusion I nor II follows



Q45 General Intelligence and Reasoning

Five friends A, S, D, F and G took admission in a coaching institute in consecutive months of the same calendar year. A took admission in May. Only D took admission between F and S, while G took admission exactly one month after A. F was the last one to take admission. In which month did D take admission?

A. August



B. July

C. September

D. June

Q46 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the given assumptions is/are implicit in the statement.

Statement:

Please register for the event latest by 21 April to collect free passes. Passes will not be issued without valid address proof.

Assumptions:

I. Voter ID card is a valid address proof.

II. Passes can be purchased at the venue.

A. Only assumption I is implicit

B. Only assumption II is implicit

C. Neither assumption I nor II is implicit

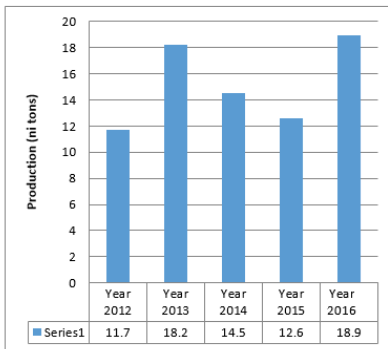


D. Both assumptions I and II are implicit



Q47 General Intelligence and Reasoning

The following chart shows the production of an organization in various years from 2012 to 2016. Study the chart and answer the question.



What was the percentage increase in the production from 2015 to 2016?

- A. 40%
- B. 50%
- C. 25%
- D. 21%



Q48 General Intelligence and Reasoning

In a class of students, Paulo ranked 18th from the top and 45th from bottom. What is the total number of students in the class?

- A. 60
- B. 61
- C. 62
- D. 63



Q49 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

9, 10, 18, 45, 109, ?

- A. 234
- B. 218
- C. 198
- D. 327



Q50 General Intelligence and Reasoning

What will be the approximate angle between the two hands of a clock (hour hand and minute hand) when the time is 8:45?

A. 17°

B. 10°

C. 7°



D. 2°

Q51 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

PRO : LJM

ZEN : BWN

A. DEN : WWN

B. KLP : QPL



C. NYZ : MCB

D. GUN : UGM

Q52 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $P \leq Q < F = R > M \geq B$

Conclusions:

I. $R > P$

II. $F < B$

A. Only conclusion I is true



B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true



Q53 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' is interchanged with '÷', and '-' is interchanged with '×'?

$$100 \times 121 + 11 - 7 \div 24 - 8 \times 33 \times 99 \div 17 = ?$$

A. 80

B. 90

C. 100



D. 101

Q54 General Intelligence and Reasoning

How many such pairs of letters are there in the word DAUGHTER (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. 2

B. 3

C. 4



D. 5

Q55 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	7	5	E	%	&	4	8
Codes	S	D	M	U	T	L	A

Conditions:

- (i) If the second element is an odd number and the last element is an even number, the codes for these two (the second and the last elements) are to be interchanged.
- (ii) If the third element is an even number and the fifth element is a symbol, the codes for these two (the third and the fifth elements) are to be interchanged.
- (iii) If the fifth element is a symbol and the sixth element is also a symbol, both these elements (the fifth and the sixth elements) are to be coded as R.

Question: E 7 5 % & 4 % 8

A. MATUDLUS

B. MSDUTLUA

C. MADUTLUS



D. MADURRUS



Q56 General Science

What is the process by which water seeps into the ground?

- A. Osmosis
- B. Transpiration
- C. Infiltration
- D. Incineration



Q57 General Science

Which of the following types of images can be obtained on a screen?

- (a) Real and enlarged
- (b) Real and diminished
- (c) Virtual and enlarged
- (d) Virtual and diminished

- A. Both (a) and (b)
- B. Both (b) and (c)
- C. Both (c) and (d)
- D. Both (a) and (d)



Q58 General Science

In Newland's law of octaves, the first element is _____ and the last known element is _____.

- A. hydrogen, zirconium
- B. hydrogen, lanthanum
- C. hydrogen, thorium
- D. helium, zirconium



Q59 General Science

The difference in molecular mass between two consecutive homologous series members will be:

- A. 08
- B. 12
- C. 14
- D. 16



Q60 General Science

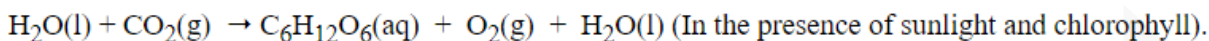
The part of an electric motor that reverses the direction of flow of current in it, is:

- A. split ring
- B. brush
- C. coil
- D. soft iron core



Q61 General Science

How many water and carbon dioxide molecules take part, respectively, in the process of photosynthesis as indicated by the following *unbalanced* equation?



- A. 3 and 6
- B. 4 and 5
- C. 6 and 6
- D. 6 and 3



Q62 General Science

The table given below shows four methods of contraception and their modes of action. Which option shows the correct matching?

Method	Mode of action
A. Copper-T	i) Egg will not reach uterus
B. Oral pills	ii) Sperms do not reach the cervix
C. Condom	iii) Prevent implantation
D. Tubectomy	iv) Prevent fertilization

- A. A-i, B-ii, C-iii, D-iv
- B. A-ii, B-i, C-iv, D-iii
- C. A-iv, B-iii, C-ii, D-i
- D. A-iii, B-ii, C-iv, D-i



Q63 General Science

What part of the respiratory system prevents the air-passage from collapsing?

- A. Trachea
- B. Ribs
- C. Spine
- D. Rings of cartilage



Q64 General Science

Select the correct option for the full form of AIDS.

- A. Artificial Immune Deficiency Syndrome
- B. Acquired Immune Deficiency Syndrome
- C. Aggravated Immune Deficient Syndrome
- D. Added Immune Deficient Syndrome



Q65 General Science

The filament of a bulb is made extremely thin and long in order to achieve:

- A. high resistance
- B. high resistivity
- C. high voltage
- D. high current



Q66 General Science

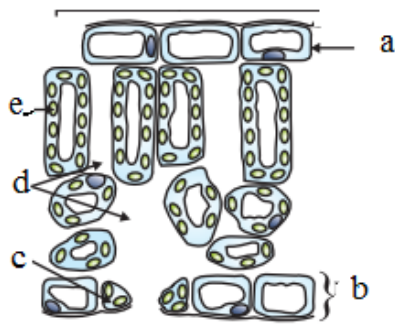
What important function is performed by SER in the liver cells of vertebrates?

- A. Synthesis of proteins
- B. Synthesis of lipids
- C. Synthesis of complex sugars
- D. Detoxification of drugs and poisons



Q67 General Science

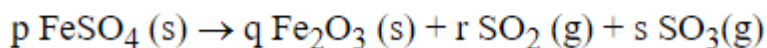
Study the diagram of the cross-section of a leaf given below. Which option shows the correct labelling?



- A. a - waxy cuticle, b - upper epidermis, c - stoma, d - air spaces, e - nucleus
- B. a - upper epidermis, b - waxy cuticle, c - stoma, d - air spaces, e - chloroplast
- C. a - upper epidermis, b - lower epidermis, c - stoma, d - air spaces, e - nucleus
- D. a - upper epidermis, b - lower epidermis, c - guard cell, d - air spaces, e - chloroplast

Q68 General Science

In the following decomposition reaction, identify the p q r s:



- A. 1,1,2,1
- B. 1,1,1,1
- C. 3,1,1,1
- D. 2,1,1,1

Q69 General Science

As atomic number ____ and nuclear charge ____, the force of attraction between nucleus and valence electrons ____, hence, atomic radii ____ from Li to F.

- A. increases, increases, increases, decreases
- B. decreases, decreases, decreases, increases
- C. increases, decreases, decreases, increases
- D. increases, increases, decreases, decreases



Q70 General Science

Which of the following groups of organisms help in keeping the environment clean?

A. Algae and Protozoa

B. Protozoa and Lichens

C. Bacteria and Fungi



D. Algae and Lichens

Q71 General Science

Which of the following statements are correct?

(i) Tin-lead alloy is used for making fuse wires.

(ii) Fuse is connected to live wire.

(iii) The material chosen for making fuse should have high melting point.

A. Both (i) and (ii)



B. Both (ii) and (iii)

C. Both (i) and (iii)

D. (i), (ii) and (iii)

Q72 General Science

A fine beam of light becomes visible when it enters a smoke filled room due to:

A. reflection of light

B. refraction of light

C. dispersion of light

D. scattering of light



Q73 General Science

If a ray of light is incident passing through the centre of curvature of a concave mirror, then the angle between the incident ray and the reflected ray will be equal to:

A. 0°



B. 90°

C. 150°

D. 180°

Q74 General Science

Which of the following compound is/are used in black and white photography?

A. Silver chloride

B. Silver bromide

C. Silver chloride and silver bromide both



D. Silver oxide

Q75 General Science

Which of the following relations represents the correct mathematical form of Ohm's law?

A. $R = I/V$

B. $I = R/V$

C. $I = V^2R$

D. $V = IR$



Q76 General Science

A chemical compound X is prepared by heating gypsum. It is white powder and used as a fire proofing material. Compound X is:

A. baking soda

B. washing soda

C. sodium hydroxide

D. plaster of Paris



Q77 General Science

Which of the following statements is/are correct for a current carrying solenoid?

- (i) It can be used to magnetise a piece of soft iron.
- (ii) It acts like a bar magnet
- (iii) The field lines are concentric circles

A. Only (i)

B. Only (ii)

C. Both (i) and (ii)



D. Both (i) and (iii)

Q78 General Science

Three products, _____, _____ and _____ are produced in chlor-alkali process.

A. Hydrogen, Chlorine, NaOH



B. Chlorine, Hydrogen, Na_2CO_3

C. Oxygen, Hydrogen, NaOH

D. Chlorine, Oxygen, Na_2CO_3

Q79 General Science

Which of the following statements is/are true about the principal axis of a spherical mirror?

- (i) It is normal to the mirror
- (ii) Point of incidence always lies on the principal axis
- (iii) Principal focus always lies on the principal axis

A. Only (i)

B. Only (ii)

C. Both (i) and (ii)

D. Both (i) and (iii)



Q80 General Science

In which of the following reactions of respiration is oxygen required?

- A. Conversion of glucose to pyruvate
- B. Conversion of pyruvate to ethanol
- C. Conversion of pyruvate to CO_2 , H_2O and energy
- D. Conversion of pyruvate to CO_2

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In which year did the Supreme Court give its judgement in the 'Satbir Singh versus the State of Haryana' case, which was related to dowry issues?

- A. 2022
- B. 2021
- C. 2020
- D. 2019

Q82 General Awareness and Current Affairs

On 7 March 2022, the Ministry of Women and Child Development (MoWCD), in partnership with the Ministry of Education and UNICEF, launched the _____ campaign to bring back out of school adolescent girls in India to the formal education.

- A. Kanya Shiksha Pravesh Utsav
- B. Sukanya Samriddhi Yojana
- C. Balika Padhao Yojana
- D. Kishori Shakti Yojana

Q83 General Awareness and Current Affairs

Who among the following has been authorised to act as the Chairperson, Lokpal, with effect from 28 May 2022?

- A. Justice BS Patil
- B. Justice P Vishwanath Shetty
- C. Justice Pradip Kumar Mohanty
- D. Justice Chittaranjan Sharma



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Q84 General Awareness and Current Affairs

What is the name of the indigenously developed High-Speed Expandable Aerial Target System which was successfully flight-tested by Defence Research and Development Organisation (DRDO) in December 2021?

- A. Pralay
- B. Nirbhay
- C. Abhyas
- D. Shaurya



Q85 General Awareness and Current Affairs

Which of the following statements is INCORRECT about longitudes and latitudes?

- A. 180° E and 180° W refer to the same longitudinal line.
- B. Longitudes never intersect each other.
- C. Latitudes never intersect each other.
- D. The latitude lines are parallel to each other.



Q86 General Awareness and Current Affairs

In Jainism, the word 'Jain' is derived from the Sanskrit word 'Jina', which means _____, implying one who has transcended all human passions.

- A. conqueror
- B. vigour
- C. candour
- D. immortal



Q87 General Awareness and Current Affairs

In economics, the slope of the demand curve is typically _____.

- A. downward from left to right
- B. upward from left to right
- C. Straight parallel to X axis from left to right
- D. Curved moving from left to right



Q88 General Awareness and Current Affairs

Tropical Evergreen Forests are found in which of the following states of India?

A. Kerala



B. Uttar Pradesh

C. Gujarat

D. Rajasthan

Q89 General Awareness and Current Affairs

In January 2022, V Anantha Nageswaran was appointed as the new Chief Economic Advisor (CEA) of India, thus replacing _____.

A. Kaushik Basu

B. Krishnamurthy Subramanian



C. Arvind Subramanian

D. Raghuram Rajan

Q90 General Awareness and Current Affairs

The Rajiv Gandhi Khel Ratna award was renamed by the Government of India as Major Dhyan Chand Khel Ratna Award in the year _____.

A. 2019

B. 2020

C. 2021



D. 2022



Q91 General Awareness and Current Affairs

In February 2022, who launched the ICMR/DHR Policy on Biomedical Innovation?

A. Amit Shah

B. Mansukh Mandaviya



C. Nitin Gadkari

D. Narendra Modi

Q92 General Awareness and Current Affairs

Who became the first Indian woman to win a silver medal in the World Wrestling Championships in 2021?

A. Sarita Mor

B. Babita Phogat

C. Mona

D. Anshu Malik



Q93 General Awareness and Current Affairs

Which of the following was a non-violent protest against the British monopoly on salt production in 1930?

A. Civil disobedience

B. Dandi March



C. Kheda Satyagraha

D. Khilafat Movement

Q94 General Awareness and Current Affairs

The Periyar River flows in which of the following Indian states?

A. Kerala



B. Punjab

C. Odisha

D. Tripura



Q95 General Awareness and Current Affairs

In how many languages was The Bal Sahitya Puraskar awarded in 2021?

A. 23

B. 22



C. 24

D. 21

Q96 General Awareness and Current Affairs

Who among the following was the chairman of Planning Commission when the First Five Year plan was started?

A. Rajendra Prasad

B. Harendra Coomar Mookerjee

C. Sardar Vallabhbhai Patel

D. Jawaharlal Nehru



Q97 General Awareness and Current Affairs

The Indian Constitution gives the President the authority to declare three types of emergencies. Which of following is NOT among them?

A. Article 352 - National Emergency

B. Article 356 - Emergency in State (President's rule)

C. Article 358 - Public health emergency



D. Article 360 - Financial Emergency



Q98 General Awareness and Current Affairs

The Panchayati Raj system was first implemented in which state of India?

- A. West Bengal
- B. Madhya Pradesh
- C. Rajasthan ✓
- D. Utter Pradesh

Q99 General Awareness and Current Affairs

In which state is the 'Chalo Loku' festival celebrated?

- A. Andhra Pradesh
- B. Arunachal Pradesh ✓
- C. Uttar Pradesh
- D. Madhya Pradesh

Q100 General Awareness and Current Affairs

_____ is the nodal agency for releasing data related to national income, consumption expenditure, savings and capital formation, since 1956.

- A. Monetary Policy Office
- B. Central Statistics Office ✓
- C. Central Financial Office
- D. Public Asset Management Office



Mathematics

25 Questions · Answer Key

Q1 Mathematics

Last year, Ranjan's monthly salary was ₹34,500 and this year his monthly salary is ₹38,640. What is the percentage increase in Ranjan's monthly salary in this year over his monthly salary last year?

A. 12%



B. 13%

C. 15%

D. 20%

Q2 Mathematics

A, B and C started a business. They partnered for 6 months, 12 months and 14 months respectively. If their profit is in the ratio 5 : 4 : 7 respectively, then the ratio of their respective investments is _____.

A. 5 : 2 : 3



B. 2 : 3 : 5

C. 1 : 5 : 3

D. 2 : 3 : 7

Q3 Mathematics HINDI - no English version saved

36 संख्याओं का माध्य 42 पाया गया। बाद में, यह पता चला कि एक संख्या 47 को चूकवश 41 पढ़ा गया था। दी गई संख्याओं का सही माध्य ज्ञात कीजिए (दशमलव के दो स्थानों तक पूर्णांकित)।

A. 42.17



B. 42.83

C. 43.74

D. 43.62



Q4 Mathematics

Express $0.4\overline{24}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{41}{990}$

B. $\frac{41}{165}$

C. $\frac{13}{33}$

D. $\frac{14}{33}$ ✓

Q5 Mathematics HINDI - no English version saved

एक वस्तु को ₹1,920 में बेचने पर जेम्स द्वारा अर्जित प्रतिशत लाभ, उस वस्तु को ₹1,500 में बेचने पर हुई प्रतिशत हानि के बराबर है। यदि वह 10% लाभ अर्जित करना चाहता है, तो उसे उस वस्तु को किस विक्रय मूल्य पर बेचना चाहिए?

A. ₹4,000

B. ₹2,000

C. ₹1,881 ✓

D. ₹7,000

Q6 Mathematics HINDI - no English version saved

$(\sin^2 22^\circ + \sin^2 68^\circ)$ और $(\cos^2 33^\circ + \cos^2 57^\circ)$ का अनुपात ज्ञात कीजिए।

A. 1 : 4

B. 1 : 1 ✓

C. 2 : 1

D. 1 : 2



Q7 Mathematics HINDI - no English version saved

एक पाठ्यपुस्तक में कुल 892 पृष्ठ हैं। इसे दो भागों में बांटा गया है। पुस्तक के दूसरे भाग में, पहले भाग की तुलना में 52 पृष्ठ कम हैं। पुस्तक के दूसरे भाग में कितने पृष्ठ हैं?

A. 420



B. 472

C. 482

D. 464

Q8 Mathematics

Which of the following is divisible by both 4 and 8?

A. 8342

B. 3842

C. 4382

D. 3824



Q9 Mathematics

$6124.8 \times 625.5 \times 0.0043$ is equal in value to:

A. $6.1248 \times 62.55 \times 0.43$

B. $612.48 \times 625.5 \times 0.43$

C. $61.248 \times 6255 \times 0.043$



D. $6.1248 \times 62.55 \times 0.043$

Q10 Mathematics

Reena reaches a birthday party 20 min late if she walks 3 km/h from her house. If she increases her speed to 4 km/h she would reach 30 min early, then the distance between her house and the venue of the birthday party is

A. 4 km

B. 7 km

C. 9 km

D. 10 km



Q11 Mathematics

If the volume of a sphere is $36\pi \text{ cm}^3$, then the diameter of the sphere is:

A. 3 cm

B. 6 cm



C. 9 cm

D. 27 cm

Q12 Mathematics

When three parallel lines are cut by two transversals and the intercepts made by the first transversal are in the ratio 3 : 4, then the intercepts made by the second transversal are in the ratio _____.

A. 4 : 3

B. 2 : 4

C. 3 : 4



D. 1 : 1

Q13 Mathematics

Simplify $(3^2)^3 + (2^3)^2$.

A. 729

B. 379

C. 739

D. 793



Q14 Mathematics

5 men and 6 women can do a piece of work in 6 days while 3 men and 5 women can do the same work in 9 days. In how many days can 3 men and 2 women do the same work?

A. $10\frac{9}{11}$ days

B. $11\frac{5}{11}$ days



C. $12\frac{1}{11}$ days

D. $13\frac{3}{11}$ days



Q15 Mathematics HINDI - no English version saved

एक तल पर चार अलग-अलग बिंदु इस प्रकार हैं, कि कोई भी तीन बिंदु संरेख नहीं हैं। उनसे होकर खींची जा सकने वाली भिन्न ऋजु रेखाओं (distinct straight lines) की संख्या ज्ञात कीजिए।

A. 4

B. 8

C. 6



D. 2

Q16 Mathematics

The LCM of 48, 72 and another number, x , is 576. Which of the values given below can be the value of x ?

A. 96

B. 192



C. 144

D. 288

Q17 Mathematics

A is twice as old as B. B is $\frac{1}{3}$ as old as C. The sum of ages of A, B and C is 42 years, find the sum of the ages of A and B.

A. 15 years

B. 21 years



C. 23 years

D. 12 years

Q18 Mathematics

At simple interest, a certain sum of money amounts to ₹1,250 in 2 years and to ₹2,000 in 5 years. Find the rate of interest per annum (rounded off to two places of decimal).

A. 11.11%

B. 16.67%

C. 27.27%

D. 33.33%



Q19 Mathematics

Which of the following is the most beneficial for a customer?

Scheme 1.) Buy 5 get 3 free

Scheme 2.) Buy 5 get 6

Scheme 3.) Two successive discounts of 10% and 5%

A. Scheme 1



B. Scheme 1 and 2 both

C. Scheme 2

D. Scheme 2 and 3 both

Q20 Mathematics

14 years ago, the age of a father was three times the age of his son. Now, the father is twice as old as his son. What is the sum of the present ages of the father and the son?

A. 56 years

B. 84 years



C. 98 years

D. 42 years

Q21 Mathematics

What is the nature of the roots of $3x^2 + 6x - 5 = 0$?

A. The roots are real and equal.

B. The roots are real and distinct.



C. The roots are real and more than 2.

D. There are no real roots.

Q22 Mathematics

The expansion of $(3a - 4b - 2c)^2$ is:

A. $9a^2 + 16b^2 + 4c^2 - 24ab + 16bc - 6ac$

B. $9a^2 + 16b^2 + 4c^2 - 24ab + 8bc + 12ac$

C. $9a^2 + 16b^2 + 4c^2 - 24ab + 16bc - 12ac$



D. $9a^2 + 16b^2 + 4c^2 + 12ab - 8bc + 6ac$



Q23 Mathematics

Find the median of the data 11, 16, 33, 15, 51, 18, 71, 75, 22, 17.

- A. 18
- B. 22
- C. 20
- D. 24



Q24 Mathematics

Find the amount of water contained in a cylindrical tank of radius 7 m and height 20 m. It is known that the tank is completely filled.

- A. 3080 m^3
- B. 3125 m^3
- C. 4250 m^3
- D. 5110 m^3



Q25 Mathematics

The product of the roots of $3x^2 - 13x + 6 = 0$ is:

- A. 4
- B. 5
- C. 2
- D. 3



General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning HINDI - no English version saved

दिए गए अक्षर, प्रतीक शृंखला का अध्ययन करें, और पूछे गए प्रश्न का उत्तर दें।

9 1 @ 4 * 7 ^ 5 3 # 9 1 < 5 4 @ 3 \$ # 2 * 6 ! 4 2 & 9 < 3 6 # 2 % 2 @ 7

यदि दी गई शृंखला की सभी सम संख्याओं को एक ऐसी संख्या से बदल दिया जाता है, जो अभाज्य और सम दोनों ही है, तो इस प्रकार बनने वाली परिणामी शृंखला में ऐसी कितनी संख्याएं होंगी, जिनके ठीक पहले एक अभाज्य संख्या और ठीक बाद एक प्रतीक होगा?

- A. 4
- B. 3
- C. 5
- D. 2



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Q27 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All phones are tablets.

No tablet is a calculator.

All drives are calculators.

Conclusions:

I. Some drives are phones.

II. Some calculators are phones.

III. No tablet is a drive.

A. Only conclusions I and III follow

B. Only conclusion II follows

C. Only conclusions I and II follow

D. Only conclusion III follows



Q28 General Intelligence and Reasoning

If '+' means '÷', '-' means '×', '×' means '+', '÷' means '-', what will come in place of the question mark (?) in the following equation?

$$16 + 4 - 8 \div 3 \times 2 = ?$$

A. 31

B. 22

C. 23

D. 14



Q29 General Intelligence and Reasoning

HINDI - no English version saved

बिंदु A से बिंदु B तक पहुंचने के लिए, अनीता को पश्चिम की ओर 70 m चलना चाहिए, फिर उसे दाएं मुड़ना चाहिए और 70 m चलना चाहिए, फिर उसे बाएं मुड़ना चाहिए और 150 m चलना चाहिए, फिर उसे बाएं मुड़ना चाहिए और 70 m चलना चाहिए, फिर उसे बाएं मुड़ना चाहिए और 90 m चलना चाहिए, फिर उसे दाएं मुड़ना चाहिए और 100 m चलना चाहिए, और अंत में उसे बाएं मुड़ना चाहिए और 130 m चलना चाहिए। बिंदु B, बिंदु A से कितनी दूर और किस दिशा में है? (सभी मोड़ केवल 90 डिग्री वाले मोड़ हैं)

A. 100 m, उत्तर

B. 130 m, उत्तर

C. 100 m, दक्षिण

D. 130 m, दक्षिण



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Q30 General Intelligence and Reasoning HINDI - no English version saved

निम्नांकित ग्राफ और तालिका तीन परीक्षाओं – परीक्षा 1, परीक्षा 2 और परीक्षा 3 में तीन व्यक्तियों – A, B और C द्वारा प्राप्त अंकों को दर्शाते हैं। ग्राफ एवं तालिका का अध्ययन करें, और पूछे गए प्रश्न का उत्तर दें।



(संदर्भ – Test – परीक्षा)

यदि परीक्षा 1 और परीक्षा 2, दोनों के लिए पूर्णांक 80 हैं, और परीक्षा 3 के लिए पूर्णांक 100 हैं, तो सभी तीनों परीक्षाओं के प्रदर्शन को देखते हुए, A ने C से कितने प्रतिशत अधिक अंक प्राप्त किए?

- A. 8.2%
- B. 7.69%
- C. 6.92%
- D. 5.56%

Q31 General Intelligence and Reasoning

Based on the given statement, two conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $Z > R \geq Y > P = Q \leq N < S$

Conclusions:

1. $P > S$
2. $Z < Q$

- A. Only conclusion 1 is true
- B. Only conclusion 2 is true
- C. Both conclusions 1 and 2 are true
- D. Neither conclusion 1 nor 2 is true



Q32 General Intelligence and Reasoning HINDI - no English version saved

दिविज, पलक, रवनीत, सेजल और तपन एक वृत्ताकार मेज के परितः मेज के केंद्र की ओर मुख करके बैठे हैं। रवनीत और तपन के बीच में केवल पलक बैठी है। तपन, सेजल के दाईं ओर दूसरे स्थान पर है। रवनीत और दिविज के बीच में केवल सेजल है। तपन के बाईं ओर ठीक बगल में कौन बैठा/बैठी है?

A. दिविज



B. पलक

C. रवनीत

D. सेजल

Q33 General Intelligence and Reasoning

If 15 March 2022 was a Tuesday, what day of the week was 15 March 2020?

A. Saturday

B. Monday

C. Friday

D. Sunday



Q34 General Intelligence and Reasoning

S, T, U, V, W and X live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 6.

V lives on the lowermost floor. X and U each live on an even numbered floor. T lives exactly between U and W. W lives on floor number 2. Who lives on floor number 5?

A. T

B. X

C. U

D. S



Q35 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(12, 15, 18)

(45, 35, 25)

A. (14, 28, 14)

B. (13, 10, 17)

C. (15, 20, 25)



D. (19, 18, 1)

Q36 General Intelligence and Reasoning HINDI - no English version saved

निम्न संख्या श्रेणी के आधार पर पूछे गए प्रश्न का उत्तर दीजिए।

5 1 2 6 3 8 6 5 3 6 5 3 2 5 6 9 5 1 7 2

उपरोक्त श्रेणी में ऐसी कितनी संख्याएं हैं, जिनमें से प्रत्येक के ठीक पहले एक सम संख्या है, और ठीक बाद भी एक सम संख्या है?

A. 2



B. 3

C. 5

D. 4

Q37 General Intelligence and Reasoning

P, Q, R, S, T, U and V live on seven different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is number 2, and so on till the topmost floor is numbered 7. Q lives on floor number 2. R lives on the floor immediately above U's floor. S is on the floor immediately below V's floor. Only three persons live between the floors of T and P. R lives on the topmost floor. Only one person lives between the floors of R and P. On which floor does P live?

A. Floor 2

B. Floor 3

C. Floor 4

D. Floor 5



Q38 General Intelligence and Reasoning

Seven friends, P, Q, R, S, T, U and V, are sitting around a circular table. All are facing the centre of the table. Only R is sitting between Q and S. Only T is sitting between P and V. V is sitting third to the right of Q. V is third to the left of U. Who is sitting to the immediate right of R?

A. P

B. S

C. T

D. V

Q39 General Intelligence and Reasoning HINDI - no English version saved

निम्न अनुक्रम का ध्यानपूर्वक अध्ययन कीजिए, और उसके आधार पर पूछे गए प्रश्न का उत्तर दीजिए।

(बाएं) 3 ^ % 7 2 4 £ 3 ¥ 4 ¢ @ 8 8 & 6 @ 1 (दाएं)

उपरोक्त अनुक्रम में ऐसी कितनी संख्याएं हैं, जिनमें से प्रत्येक के ठीक बाद एक प्रतीक है, और ठीक पहले भी एक प्रतीक है?

A. 1

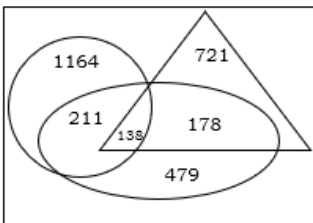
B. 2

C. 3

D. 4

Q40 General Intelligence and Reasoning HINDI - no English version saved

निम्नांकित चित्र में, आयत विद्यार्थियों को निरूपित करता है, वृत्त लड़कियों को निरूपित करता है, अंडाकृति कला संकाय को निरूपित करती है, और त्रिभुज खेलकूद को निरूपित करता है। विभिन्न भागों में दी गई संख्याएं, उस भाग से संबंधित व्यक्तियों की संख्या को दर्शाती हैं। कितनी लड़की-विद्यार्थियों ने कला संकाय का चयन किया है, और वे खेलकूद में भाग नहीं लेती हैं; तथा ऐसे कितने विद्यार्थी हैं, जो खेलकूद में भाग लेते हैं, किंतु वे लड़कियां नहीं हैं, और उन्होंने कला संकाय का चयन किया है?



A. 138 और 178, क्रमशः

B. 211 और 178, क्रमशः

C. 479 और 211, क्रमशः

D. 138 और 479, क्रमशः



Q41 General Intelligence and Reasoning HINDI - no English version saved

उस पद का चयन कीजिए, जो दी गई शृंखला में प्रश्न चिह्न (?) के स्थान पर आकर शृंखला को तार्किक रूप से पूर्ण करेगा?

UCK-4, WFO-9, YIS-19, ALW-39, ?

A. COA-77

B. COA-79



C. CPB-79

D. BOA-76

Q42 General Intelligence and Reasoning HINDI - no English version saved

यदि संख्या 34135278 के प्रत्येक विषम अंक में 2 जोड़ा जाता है, और प्रत्येक सम अंक से 1 घटाया जाता है, तो बाएँ से तीसरे और दाएँ से तीसरे अंकों का योग क्या होगा?

A. 3

B. 7

C. 4



D. 1

Q43 General Intelligence and Reasoning HINDI - no English version saved

O, P, Q, R, S, T और U सात डिब्बे हैं, जिन्हें एक के ऊपर एक रखा गया है, किंतु उनका इसी क्रम में होना अनिवार्य नहीं है। R और P के बीच केवल एक डिब्बा रखा गया है। S और T के बीच केवल एक डिब्बा रखा गया है। P और Q के बीच केवल एक डिब्बा रखा गया है। Q को सबसे नीचे रखा गया है। T को Q के ठीक ऊपर रखा गया है। S और Q के बीच कितने डिब्बे रखे गए हैं?

A. एक

B. दो



C. तीन

D. चार



Q44 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $H > Y \geq S = X = A > W$

Conclusions:

I. $H < S$

II. $A \leq Y$

A. Only conclusion I is true

B. Only conclusion II is true



C. Both conclusions I and II are true

D. Neither conclusion I nor II is true

Q45 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

11, 21, 47, 97, 179, ?

A. 231

B. 281

C. 295

D. 301



Q46 General Intelligence and Reasoning

In a certain code language, 'FUEL' is written as '50' and 'JEER' is written as '44'. How will 'FARE' be written in that language?

A. 40

B. 34

C. 38

D. 36



Q47 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

124, 129, 136, 145, 156, ?

A. 165

B. 169



C. 168

D. 172

Q48 General Intelligence and Reasoning

Select the correct combination of mathematical signs that can sequentially replace * to balance the following equation.

20 * 4 * 6 * 2 * 14 * 18

A. $\div, \times, =, +, +$

B. $+, =, \div, \times, +$

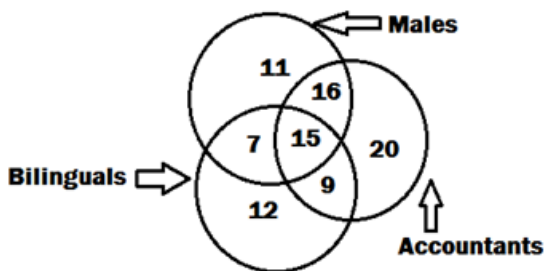
C. $\div, \times, -, =, \times$

D. $\div, \times, +, =, +$



Q49 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such accountants are there who are also bilinguals?

A. 9

B. 15

C. 24



D. 22



Q50 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(35, 12, 29)

(23, 16, 31)

A. (18, 12, 21)

B. (33, 30, 27)

C. (19, 8, 23)



D. (21, 25, 29)

Q51 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

COWBOY : WOCYOB

TANGLE : NATELG

A. PICKLE : CIPLKE

B. CROWDS : ORDWSC

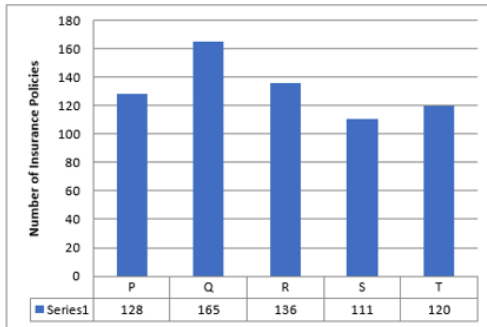
C. MANGLE : NMALEG

D. FLOWER : OLFREW



Q52 General Intelligence and Reasoning

The following chart shows the numbers of insurance policies sold by five salespersons named P, Q, R, S and T. Study the chart and answer the question.



What is the percentage share of insurance policies sold by Q in the total insurance policies sold by all five salespersons?

A. 20%

B. 25%

C. 30%

D. 28%

Q53 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	9	5	3	#	6	&	7	@	%	8	2
Code	L	K	J	H	G	F	D	S	A	P	B

Conditions:

- (i) If the first two elements are numbers and the last is a symbol, then interchange the codes for the second number and the last symbol.
- (ii) If the second element is a symbol and the last is a symbol, then all the symbols are to be coded as C.
- (iii) If the question has any number which is immediately preceded by a prime number, then interchange the codes of the first and last number appearing in the question.

Question: 7 9 & 8 % # 3

A. JLFP AHD

B. SLFP AHJ

C. DL&P%#J

D. DLGPSJJ



Q54 General Intelligence and Reasoning

Suneet walked 10 m towards the north, then he turned left and walked 11 m, then from there he turned right and walked 13 m, and then he turned right again and walked 25 m. In which direction is Suneet facing now?

(All turns are 90 degree turns only)

A. East



B. West

C. North

D. South

Q55 General Intelligence and Reasoning HINDI - no English version saved

एक कथन और उसके बाद दो तर्क I और II दिए गए हैं। कथन और तर्कों का ध्यानपूर्वक अध्ययन कीजिए, और दिए गए विकल्पों में से उचित उत्तर का चयन कीजिए।

कथन:

अपार्टमेंट परिसरों ने सूखे कचरे और गीले कचरे को अलग न करने वाले निवासियों पर भारी जुर्माना लगाने का निर्णय लिया है।

तर्क:

- I. सरकार ने सभी मकान मालिकों के लिए गीले कचरे और सूखे कचरे को अलग करना अनिवार्य कर दिया है।
- II. कचरा पृथक्करण को सुगम बनाने के लिए, सभी अपार्टमेंटों में सूखे कचरे और गीले कचरे के लिए अलग-अलग कूड़ेदान उपलब्ध कराए गए हैं।

A. तर्क I कथन का समर्थन नहीं करता है, जबकि तर्क II कथन का समर्थन करता है

B. तर्क II कथन का समर्थन नहीं करता है, जबकि तर्क I कथन का समर्थन करता है

C. तर्क I और II, दोनों कथन का समर्थन नहीं करते हैं

D. तर्क I और II, दोनों कथन का समर्थन करते हैं

**General Science**

25 Questions • Answer Key

Q56 General Science

Cyclohexane contains _____ C-C bonds and _____ C-H bonds, so total _____ covalent bonds.

A. 6, 10, 16

B. 4, 8, 12

C. 6, 12, 18



D. 4, 12, 16



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Q57 General Science

An object placed at a distance of 25 cm from a converging lens forms a real and inverted image at 30 cm from the lens. The magnification produced by the lens is equal to:

- A. $6/5$
- B. $-6/5$ ✓
- C. $5/6$
- D. $-5/6$

Q58 General Science HINDI - no English version saved

निम्नलिखित में से कौन सा रेडॉक्स अभिक्रिया का उदाहरण नहीं है?

- (i) $\text{ZnO} + \text{C} \rightarrow \text{Zn} + \text{CO}$
- (ii) $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$
- (iii) $4\text{Na} + \text{O}_2 \rightarrow 2\text{Na}_2\text{O}$
- (iv) $\text{AgNO}_3 + \text{NaCl} \rightarrow \text{AgCl} + \text{NaNO}_3$

- A. i
- B. ii
- C. iii
- D. iv ✓

Q59 General Science

The distance between the pole and centre of curvature of a spherical mirror, in terms of its focal length f , is equal to:

- A. f
- B. $2f$ ✓
- C. $f/2$
- D. $f/4$



Q60 General Science

The armature of an electric motor consists of which of the following part/parts?

- (i) Soft iron core
- (ii) Coil
- (iii) Magnets

- A. Only (i)
- B. Only (ii)
- C. Both (i) and (ii) ✓
- D. Both (i) and (iii)

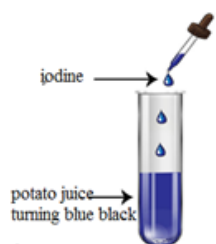
Q61 General Science

A given resistance R is cut into 2 equal parts. The resistance of each part is:

- A. $R/2$ ✓
- B. $R/4$
- C. R
- D. $2R$

Q62 General Science

Study the given diagram carefully. Which option correctly explains the reason for the appearance of the blue black colour?

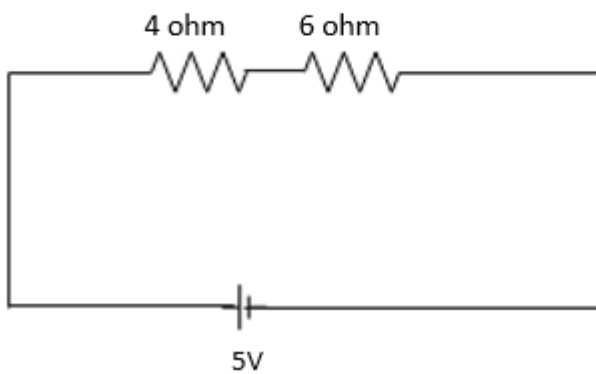


- A. Potato juice contains glucose, which turns blue black with iodine
- B. Potato juice contains proteins, which turn blue black with iodine
- C. Potato juice contains starch, which turns blue black with iodine ✓
- D. Potato juice contains fats, which turn blue black with iodine

मनुष्य के पाचन तंत्र में होने वाली कौन सी क्रिया गंदगी पर साबुन के पायसीकरण की क्रिया के समान होती है?

- A. पित्त रस द्वारा क्षारीय माध्यम प्रदान किया जाना
- B. पित्त लवणों द्वारा बड़ी वसा गोलिकाओं को छोटी गोलिकाओं में विघटित किया जाना ✓
- C. पित्त रस एंजाइमों द्वारा स्टार्च के पाचन में सहायता करना
- D. पित्त रस द्वारा अम्लीय माध्यम प्रदान किया जाना

The potential drop across the $4\ \Omega$ resistor in the given circuit is:



- A. 2 V ✓
- B. 3 V
- C. 5 V
- D. 0.5 V

When chlorination of dry slaked lime takes place, _____ will form as the main product.

- A. quicklime
- B. acetic acid
- C. hydrochloric acid
- D. calcium oxychloride ✓

मृदा अपरदन पर्यावरण के लिए मुख्य खतरों में से एक है। निम्नलिखित में से कौन सा मृदा अपरदन को रोकने में सहायक हो सकता है?

- A. समोच्चरेखीय जुताई ✓
- B. मवेशी चारण
- C. अधिक खेती
- D. सिंचाई के घटिया तरीके

In accordance to Fleming's left hand rule used to find the force on a current carrying conductor placed inside a magnetic field, the thumb and the index finger represent the directions of _____ and _____, respectively.

- A. force, magnetic field ✓
- B. magnetic field, force
- C. field, current
- D. current, field

Which factor(s) led scientists towards the classification of elements?

- (i) Different methods of synthesis of elements
- (ii) Different source of elements
- (iii) Different properties of elements

- A. Only i
- B. Only ii
- C. Only iii
- D. i, ii, iii ✓

Q69 General Science

Any reaction that produces an insoluble precipitate can be called a:

- A. precipitation reaction
- B. displacement reaction
- C. decomposition reaction
- D. redox reaction

Q70 General Science

Which of the following parts helps in exchange of gases in plants?

- A. Cell membrane
- B. Nucleus
- C. Stomata
- D. Guard cells

Q71 General Science

What is the total number of shells involved in electronic configuration of carbon?

- A. One
- B. Two
- C. Three
- D. Four

Q72 General Science

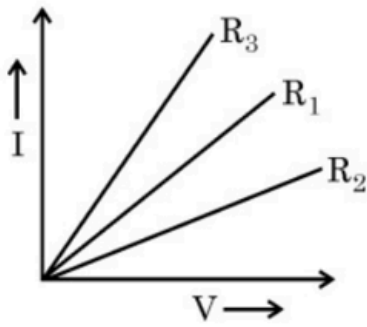
Formation of urine in the kidneys involves the given three processes in which of the following sequences?

- A. Filtration, elimination, selective reabsorption
- B. Selective reabsorption, filtration, elimination
- C. Filtration, selective reabsorption, Elimination
- D. Selective reabsorption, elimination, filtration



Q73 General Science

The I-V graph of three resistances R_1 , R_2 and R_3 is shown in the figure below. The correct relation between R_1 , R_2 and R_3 is:



A. $R_1 > R_2 > R_3$

B. $R_1 < R_2 < R_3$

C. $R_3 < R_1 < R_2$ ✓

D. $R_3 > R_1 > R_2$

Q74 General Science

Consider the below statements and identify the correct answer.

Statement-I: Anhydrous sodium carbonate is used in soda-acid fire extinguishers.

Statement-II: Anhydrous sodium carbonate is dissolved in water and recrystallized to get washing soda crystals containing 10 molecules of water of crystallisation

A. Both the statements are true.

B. Both the statements are false.

C. Statement-I is true, and Statement-II is false.

D. Statement-II is true, and Statement-I is false. ✓

Q75 General Science

During adolescence, several changes occur in the human body. Which of the following changes is associated with sexual maturation only in girls?

A. Growth of hair on different parts of the body

B. Conscious of their looks

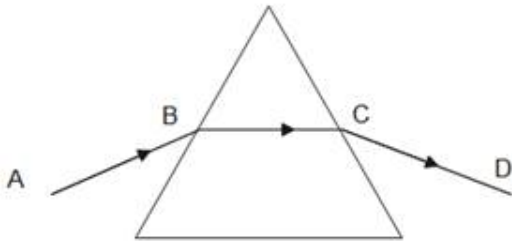
C. Oily skin with pimples

D. Growth of mammary glands ✓



Q76 General Science

In the figure shown below, the incident ray and the emergent ray in the respective order are given by:



- A. AB and BC
- B. BC and CD
- C. AB and CD
- D. CD and AB

Q77 General Science

The presence of which bacteria is an indicator of water pollution?

- A. E. coli Coliform
- B. Mycobacterium tuberculosis
- C. Vibrio cholerae
- D. Salmonella typhi

Q78 General Science

Which of the following is NOT an example of asexual reproduction?

- A. Budding
- B. Binary Fission
- C. Fragmentation
- D. Grafting

Q79 General Science

Which of the following elements has the maximum number of atoms in their molecular form?

- A. S
- B. Ar
- C. Ne
- D. P

Q80 General Science

The distance between the focus and the centre of curvature of a spherical mirror in terms of the radius of curvature R , is equal to:

- A. R
- B. $R/2$ ✓
- C. $2R$
- D. $R/4$

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In December 2021, which state Government inaugurated the 'Pink Force' of Police to enhance safety, security of women and children?

- A. Sikkim
- B. Goa ✓
- C. Meghalaya
- D. Kerala

Q82 General Awareness and Current Affairs HINDI - no English version saved

अनुच्छेद 279A इनमें से किस संवैधानिक निकाय से संबंधित है?

- A. वित्त आयोग
- B. वस्तु एवं सेवा कर परिषद ✓
- C. यूपीएससी
- D. भारत निर्वाचन आयोग

Q83 General Awareness and Current Affairs

Which of the following 'state – major language' pairs has been INCORRECTLY matched?

- A. Meghalaya – Khasi
- B. Kerala – Kannada ✓
- C. Andhra Pradesh – Telugu
- D. Manipur – Meitei



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Q84 General Awareness and Current Affairs

The Sangai deer is an endemic species found in which of the following Indian states?

- A. Kerala
- B. Manipur
- C. Rajasthan
- D. Telangana

Q85 General Awareness and Current Affairs HINDI - no English version saved

1876 में, भारत की राष्ट्रीय आय का प्रथम प्राक्कलन किसने तैयार किया था?

- A. दादाभाई नौरोजी
- B. विलियम डिग्बी
- C. पीसी महालनोबिस
- D. वीकेआरवी राव

Q86 General Awareness and Current Affairs HINDI - no English version saved

2021 में जारी रिपोर्ट के अनुसार, संयुक्त राष्ट्र विकास कार्यक्रम (UNDP) द्वारा तैयार मानव विकास सूचकांक, 2020 में भारत का स्थान कौन सा है?

- A. 128वां
- B. 131वां
- C. 135वां
- D. 161वां

Q87 General Awareness and Current Affairs

Mawsynram is the wettest place on earth and it is situated in _____.

- A. Rajmahal Hills
- B. Lushai Hills
- C. Khasi Hills
- D. Mahadeo Hills



नवरोज़ त्यौहार किस धार्मिक समुदाय से संबंधित है?

A. सिख

B. बौद्ध

C. पारसी



D. जैन

निम्नलिखित में से किस वर्ष में भारतीय संग्रहालय अधिनियम पारित किया गया था?

A. 1910



B. 1921

C. 1909

D. 1915

निम्नलिखित में से किस खेल में उत्कृष्ट योगदान के लिए टीपी ओसेफ (TP Ouseph) को 2021 के द्रोणाचार्य पुरस्कार से सम्मानित किया गया?

A. मुक्केबाजी

B. भारोत्तोलन

C. टेबल टेनिस

D. एथलेटिक्स



Q91 General Awareness and Current Affairs

In January 2022, GAIL started India's maiden project of blending hydrogen into natural gas system at which place?

A. Bhopal

B. Indore



C. Gwalior

D. Ujjain

Q92 General Awareness and Current Affairs

In May 2022, which of the following state Chief Minister Basavaraj Bommai has launched a new health and wellness scheme app AAYU?

A. Kerala

B. Tamil Nadu

C. Andhra Pradesh

D. Karnataka



Q93 General Awareness and Current Affairs

The famous Haji Ali Dargah is located in which of the following cities?

A. Ajmer

B. Delhi

C. Hyderabad

D. Mumbai



Q94 General Awareness and Current Affairs HINDI - no English version saved

सेंटर फॉर मॉनिटरिंग द इंडियन इकोनॉमी के आंकड़ों के अनुसार, जनवरी 2022 में किस राज्य में सर्वाधिक बेरोजगारी दर देखी गई है?

- A. राजस्थान
- B. हरियाणा ☒
- C. पंजाब
- D. हिमाचल प्रदेश

Q95 General Awareness and Current Affairs

Which part of the Indian Constitution has only one Article 51-A, which deals with the Code of 11 Fundamental Duties for the Citizens?

- A. Part IV-A ☒
- B. Part V
- C. Part IXA
- D. Part VII

Q96 General Awareness and Current Affairs

What fraction of the positions in all panchayat institutions is reserved for women?

- A. $\frac{1}{2}$
- B. $\frac{1}{3}$ ☒
- C. $\frac{1}{4}$
- D. $\frac{1}{5}$



Q97 General Awareness and Current Affairs

Sandhya Gurung received the Dronacharya Award, 2021, for coaching in the field of _____.

- A. Kabaddi
- B. Boxing
- C. Shooting
- D. Swimming



Q98 General Awareness and Current Affairs

In context of Consumer Rights, what is the full form of COPRA?

- A. Consumer Protection Act
- B. Consumer Protection Agency
- C. Consumer Protection Association
- D. Consumer Protection Alliance



Q99 General Awareness and Current Affairs

Bharat Heavy Electricals Limited was registered as Heavy Electricals (India) Limited (HE(I)L) in the Public Sector under the Ministry of Industry and Commerce on 29th August, _____.

- A. 1952
- B. 1956
- C. 1962
- D. 1969



Q100 General Awareness and Current Affairs

Which of the following rivers originates from Amarkantak Hills?

- A. Sutlej
- B. Godavari
- C. Teesta
- D. Narmada



Mathematics

25 Questions • Answer Key

Q1 Mathematics

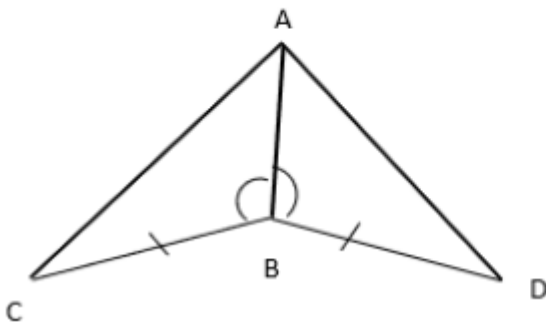
The HCF of two numbers is 7 and their LCM is 434. If one of the numbers is 14, find the other.

- A. 48
- B. 52
- C. 217
- D. 146



Q2 Mathematics

In the given figure $\angle ABC = \angle ABD$, $BC = BD$ then $\triangle CAB \cong \triangle$ -----



- A. ABD
- B. DBA
- C. ADB
- D. DAB



Q3 Mathematics

The age of a father six years ago was six times the then age of his daughter. Three years hence, the father will be thrice as old as his daughter. What is the present age of the daughter?

- A. 12 years
- B. 15 years
- C. 17 years
- D. 20 years



Q4 Mathematics

If $2^x \times 4^{12} \times 8^3 = 16^{11}$, then the value of x is:

A. 12

B. 11



C. 13

D. 14

Q5 Mathematics

A can finish painting a sari in 11 days, B in 20 days and C in 55 days, if they work independently. In how many days can the work be completed if A is assisted by B on every odd numbered day and by C on every even numbered day till the work completes?

A. 12 days

B. 8 days



C. 9 days

D. 18 days

Q6 Mathematics

A man invested ₹75,000 at the rate of $7\frac{1}{2}\%$ per annum simple interest for 6 years. Find the amount he will receive after 6 years.

A. ₹69,600

B. ₹1,08,750



C. ₹75,000

D. ₹1,12,500

Q7 Mathematics

The sum of the roots of the quadratic equation $4x^2 + 7x - 21 = 0$ is:

A. -21

B. $-\frac{21}{4}$

C. $-\frac{7}{4}$



D. $\frac{7}{4}$



Q8 Mathematics

What is the area of an equilateral triangle whose each side is 14 cm long?

A. $14\sqrt{3} \text{ cm}^2$

B. $35\sqrt{3} \text{ cm}^2$

C. $49\sqrt{3} \text{ cm}^2$ ✓

D. $21\sqrt{3} \text{ cm}^2$

Q9 Mathematics

A man travelled at a speed of 20 m/min for 100 min, and at a speed of 70 m/min for 50 min. His average speed is

A. $\frac{110}{3} \text{ m/min}$ ✓

B. $\frac{70}{3} \text{ m/min}$

C. 35 m/min

D. 25 m/min

Q10 Mathematics

If θ is an acute angle, find the denominator A, when

$$(\operatorname{cosec} \theta - \cot \theta)^2 = \frac{1 - \cos \theta}{A}$$

A. $1 + \cos \theta$ ✓

B. $1 + \sin \theta$

C. $\cot \theta$

D. $\operatorname{cosec} \theta - 1$

Q11 Mathematics

Aruna has a younger sister whose age is 8 years less than that of Aruna. If Aruna's sister's age is 18 years, then Aruna's age is:

A. 28 years

B. 24 years

C. 26 years ✓

D. 10 years



Q12 Mathematics

A cuboid of dimensions $18.5 \text{ cm} \times 12.5 \text{ cm} \times 10 \text{ cm}$ needs to be painted all over. Find the area to be painted.

- A. 1157.5 cm^2
- B. 984.56 cm^2
- C. 1082.5 cm^2 ✓
- D. 1198 cm^2

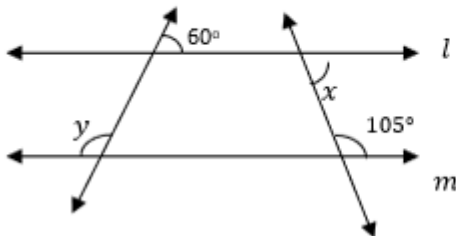
Q13 Mathematics

Venkat brought a second-hand scooter and spent 10% of the cost on its repairs. He sold the scooter for a profit of ₹2,200. How much did he spend on repairs if he made a profit of 20%?

- A. ₹400
- B. ₹750
- C. ₹1,200
- D. ₹1,000 ✓

Q14 Mathematics

In the adjoining figure line l is parallel to m . What is the value of $2x + y$?



- A. 270° ✓
- B. 225°
- C. 150°
- D. 320°

Q15 Mathematics

Find the number of 2-digit numbers divisible by both 2 and 4.

- A. 32
- B. 22 ✓
- C. 12
- D. 42



Q16 Mathematics

The present ages of Shanthi and Keerthi are in the ratio of 7 : 3. After 5 years, Shanthi's age will be 40. How old will Keerthi be after 5 years?

A. 15 years

B. 10 years

C. 20 years



D. 30 years

Q17 Mathematics

If the sum of the roots of the quadratic equation $5x^2 + bx + 4 = 0$ is 9, then find the value of b.

A. 20

B. -25

C. -45



D. 0

Q18 Mathematics

A man travels 80 km in three hours. He further travels for two more hours. Find the distance travelled in the latter two hours, if his average speed for the entire journey is 30 km/h.

A. 150 km

B. 120 km

C. 90 km

D. 70 km



Q19 Mathematics

A shopkeeper sold a book at a loss of 14%. If the selling price had been increased by ₹100, there would have been a gain of 6%. What was the cost price of the book?

A. ₹650

B. ₹970

C. ₹500



D. ₹450



Q20 Mathematics

If $5 + x$, $2x + 7$, $6x + 9$, and y are in proportion when $x = 2$, find the value of y .

A. 28

B. 42

C. 33



D. 45

Q21 Mathematics

The value of $0.1\bar{6} + 0.1\bar{5} - 0.1\bar{3}$ is:

A. $\frac{23}{63}$

B. $\frac{34}{45}$

C. $\frac{19}{99}$

D. $\frac{17}{90}$



Q22 Mathematics

If $a : b = 2 : 3$ and $b : c = 3 : 4$, then $a : b : c = ?$

A. $3 : 2 : 4$

B. $2 : 4 : 3$

C. $2 : 3 : 4$



D. $3 : 4 : 2$

Q23 Mathematics

Ram is 55 years old and Som is 25 years old. How many years ago was Ram three times as old as Som?

A. 5 years

B. 7 years

C. 10 years



D. 15 years



Q24 Mathematics

X and Y can complete a piece of work in 8 days and 12 days, respectively. If they work on alternate days, with X working on the first day, how long will it take the duo to complete the same work?

A. $9\frac{2}{3}$ days

B. $9\frac{1}{2}$ days



C. $9\frac{3}{5}$ days

D. $9\frac{2}{5}$ days

Q25 Mathematics

If $\frac{x}{y} = \frac{3}{2}$, then find $\frac{x^2 + y^2}{x^2 - y^2}$.

A. $\frac{7}{5}$

B. $\frac{9}{5}$

C. $\frac{11}{5}$

D. $\frac{13}{5}$

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

TORPEDO : DEOOPRT

FLICKER : CEFIKLR

A. CLOSURE : OLCERUS

B. PERTAIN : AEINPRT



C. CURTAIN : RUCNIAT

D. CYNICAL : ACCLINY



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Q27 General Intelligence and Reasoning

Four friends Ramniwas, Ramesh, Ramsingh and Raman received their PhD degrees in consecutive months of the same calendar year. Ramniwas received his degree exactly one month prior to Ramsingh. Raman received his degree exactly one month after Ramesh. Ramniwas received his degree in September and Raman did not obtain his degree before Ramniwas. In which month did Ramesh receive his degree?

- A. October
- B. November
- C. December
- D. August

Q28 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the given assumptions is/are implicit in the statement.

Statement:

The demand for smartphones and laptops has increased substantially since the introduction of online classes in schools.

Assumptions:

- I. People are buying smartphones and laptops to enable their children to attend online classes
- II. Desktop computers cannot be used to attend online classes.

- A. Only assumption I is implicit
- B. Only assumption II is implicit
- C. Neither assumption I nor II is implicit
- D. Both assumptions I and II are implicit

Q29 General Intelligence and Reasoning

From point X, a girl walks 70 m towards the north. Then, she takes a left turn and walks 150 m. Then, she takes a left turn and walks 70 m. Then, she takes another left turn and walks 90 m. She then takes a right turn and walks 100 m. Finally, she takes a left turn and walks 60 m to reach point Z. How far and in which direction is point Z from point X? (All turns are 90 degree turns only)

- A. 60 m, North
- B. 60 m, South
- C. 100 m, North
- D. 100 m, South



Q30 General Intelligence and Reasoning

Study the given letter, symbol series and answer the question that follows.

L @ S * E ^ B U # W I < E M @ O \$ # B * H ! A & L < O

If we replace each of the vowels with any consonant and similarly if we replace each of the consonants in the original series with any vowel, then how many consonants will be immediately followed by a symbol in the resultant series thus formed?

A. 4

B. 5



C. 6

D. 7

Q31 General Intelligence and Reasoning

Each of W, X, Y, Z, A, B and C has a wedding to attend on a different day of a week starting from Monday to Sunday of the same week. C has to attend wedding immediately after A. Y has to attend a wedding on one of the days before B and W. Only Z has to attend a wedding before A. X has to attend a wedding on Friday. B does not have to attend a wedding on Sunday. On which day of the week does Y have to attend a wedding?

A. Thursday



B. Saturday

C. Wednesday

D. Sunday

Q32 General Intelligence and Reasoning

Which of the following alphanumeric clusters will replace the question mark (?) in the series to make it logically complete?

1 AZC 2, 3 DYF 4, 7 GXI 8, ?

A. 15 IVK 16

B. 13 IWK 14

C. 13 IJK 14

D. 15 JWL 16



Q33 General Intelligence and Reasoning

Eight friends, A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Four of them are sitting at the corners while the other four are sitting at the exact centre of sides of the table. Both A and C are sitting at the opposite corners. F and D are sitting at the opposite corners. Only G is between A and F. Only B is between A and D. H is to the immediate left of C. G is to the immediate right of F. E is second to right of H. D is second to left of E. Who is sitting second to left of B?

A. E

B. F

C. G



D. H

Q34 General Intelligence and Reasoning

P, Q, R, S and T are sitting in a straight line, facing north. S is an immediate neighbour of both P and R. R is an immediate neighbour of both S and Q. Q is an immediate neighbour of both R and T. Who are the immediate neighbours of Q?

A. S and R

B. R and T



C. S and T

D. P and R

Q35 General Intelligence and Reasoning

If 2 is subtracted from each odd digit and 1 is added to each even digit in the number 83252769, how many digits will occur more than once in the new number thus formed?

A. None

B. One

C. Two



D. Three

Q36 General Intelligence and Reasoning

Gayatri starts walking from her home and goes 100 m towards the south direction. She then turns right and walks 120 m. She then turns right and walks 100 m. She finally turns right again and walks 180 m. How far is she now from the starting point? (All turns are 90 degree turns only)

A. 100 m

B. 50 m

C. 60 m



D. 90 m



Q37 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3, 7, 13, 21, 31, ?

A. 41

B. 42

C. 43



D. 44

Q38 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '-' is interchanged with '×' and '÷' is interchanged with '+'?

$$6 \div 16 \times 4 \div 9 - 8 + 2 \times 7 = ?$$

A. 43

B. 38

C. 47



D. -11

Q39 General Intelligence and Reasoning

In a certain code language, PRECIOUS is written as KIVXRLFH and CLEAR is written as XOVZI. How will DIRTYING be written in the same language?

A. WRIGBRMT



B. WRIFBRMS

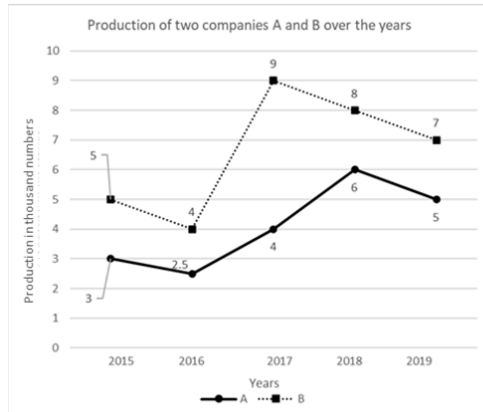
C. VRIGBROT

D. WHSGBRMT



Q40 General Intelligence and Reasoning

Study the following graph carefully and answer the question.



For company A, what is the approximate percentage decrease in production from 2015 to 2016?

A. 25%

B. 20%

C. 15%

D. 22%

Q41 General Intelligence and Reasoning

Study the given letter, symbol series and answer the question that follows.

L @ S * J ^ B U # W R < E @ N \$ # B * H ! A & L < W Q

How many symbols are immediately followed by a consonant and immediately preceded by a vowel?

A. 1

B. 2

C. 3

D. 4



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Q42 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $T > G < E > F = B \leq Z$

Conclusions:

I. $F = Z$

II. $E > B$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true

Q43 General Intelligence and Reasoning

In a certain code language, TRY is written as 63 and NOT is written as 49. How will DUG be written in the same language?

A. 30

B. 32

C. 36

D. 40

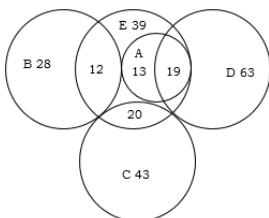
Q44 General Intelligence and Reasoning

Study the diagram and answer the question that follows. A = Academicians, E = Teachers, D = Women, B = Men and C = Doctors. The numbers inside the shapes indicate number of the respective persons. What is the sum total number of the following:

i) women academicians who are teachers

ii) teachers who are doctors and

iii) men who are NEITHER teachers NOR academicians?



A. 67

B. 41

C. 64

D. 63



Q45 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$$8 : 14 :: 12 : 22 :: 21 : ?$$

A. 40



B. 26

C. 42

D. 18

Q46 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

$$14, 14, 17, 85, 92, ?$$

A. 418

B. 628

C. 828



D. 924

Q47 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '÷' means '×' and '×' means '+', what will come in place of the question mark (?) in the following equation?

$$25 \times 35 - 5 + 7 \div 2 = ?$$

A. 14

B. 16

C. 18



D. 19



Q48 General Intelligence and Reasoning

V, W, X, Y, Z and A are six singers who have their concerts in different days of the same month, viz. 12th, 14th, 16th, 21st, 25th and 31st of July.

W has his concert on one of the days before X, but not on 21st. V has his concert on 14th. Only A has his concert after X. Y has his concert before V. Who has the concert on 21st of July?

A. Y

B. A

C. X

D. Z



Q49 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $G \geq P > T \geq S > K = N < D$

A. $G > T$



B. $P > D$

C. $N > T$

D. $G \geq D$

Q50 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statements:

1. All springs are brooks.
2. Some brooks are creeks.
3. No creek is tap.

Conclusions:

- I. Some taps are creeks.
- II. No spring is tap.
- III. Some brooks are springs.

A. Only conclusions I and II follow.

B. Only conclusions II and III follow.

C. Only conclusion I follows.

D. Only conclusions III follows.



Q51 General Intelligence and Reasoning

Amit's son was born on 10 January 2012. On what day of the week was he born?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Thursday

Q52 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

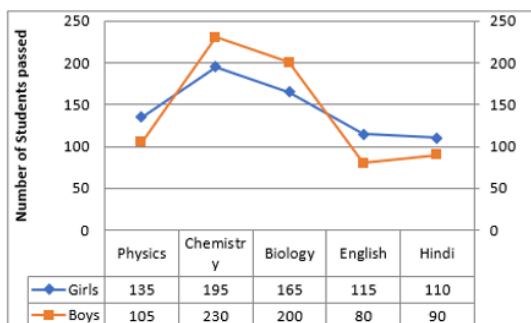
(4, 25, 6)

(3, 28, 9)

- A. (3, 81, 6)
- B. (7, 22, 3)
- C. (14, 55, 4)
- D. (12, 96, 8)

Q53 General Intelligence and Reasoning

The graph and the table below show the number of boys and girls passed in five different subjects i.e. Physics, Chemistry, Biology, English and Hindi.



What is the ratio of the girls who have passed in Physics, Chemistry and Biology respectively?

- A. 9 : 13 : 11
- B. 9 : 15 : 13
- C. 8 : 11 : 14
- D. 9 : 13 : 8



Q54 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) T Y A N E C M K E W A F H E Q A P M N B E D H E K U W S D A N M A W E (Right)

How many such consonants are there in the series which are immediately preceded by a vowel and also immediately followed by a vowel?

- A. Three
- B. Four
- C. Five
- D. Six

**Q55** General Intelligence and Reasoning

Three statements are followed by four conclusions numbered I, II, III and IV. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statements:

1. Some carnations are petunias.
2. All petunias are sunflowers.
3. Some sunflowers are not carnations.

Conclusions:

- I. Some sunflowers are carnations.
- II. All carnations are sunflowers.
- III. All petunias are carnations.
- IV. No sunflower is carnation.

- A. Only conclusions I follows
- B. Only conclusions II and III follow.
- C. Only conclusions I and IV follow.
- D. Only conclusion IV follows.

**General Science**

25 Questions • Answer Key

Q56 General Science

In which organism sex is not determined genetically?

- A. Snail
- B. Butterfly
- C. Sparrow
- D. Moth



Q57 General Science

Two wires A and B are made of same material and have the same length but different cross-sectional areas. If the resistance of wire A is 16 times the resistance of wire B, the ratio of the cross-sectional area of wire A to that of wire B is:

- A. 1 : 4
- B. 4 : 1
- C. 1 : 16
- D. 16 : 1



Q58 General Science

'Save the Narmada' movement originated as a protest against raising the height of Sardar Sarovar Dam. Some disadvantages of building dams are mentioned below. Which one is an advantage?

- A. Many tribals and peasants are displaced
- B. Lot of public money is used
- C. Causes deforestation and loss of biodiversity
- D. Helpful in irrigation and electricity production



Q59 General Science

Arrange the following metals in the decreasing order of reactivity:

K, Na, Zn, Cu, Hg, Ag

- A. $K > Na > Zn > Cu > Hg > Ag$
- B. $K > Na > Zn > Cu > Ag > Hg$
- C. $K > Na > Zn > Hg > Cu > Ag$
- D. $K > Na > Zn > Ag > Hg > Cu$



Q60 General Science

A student focusses a sharp image of sun using a spherical mirror on a sheet of paper, which starts to burn after some time. Which of the following statement/statements about the mirror is/are correct?

- (a) It is concave spherical mirror
- (b) It has positive focal length
- (c) It is a converging mirror

- A. Both (a) and (b)
- B. Both (b) and (c)
- C. Both (a) and (c)**
- D. (a), (b) and (c)



Q61 General Science

Which of the following statements is FALSE?

- A. In the mitochondria, acetic acid is broken down utilising oxygen.**
- B. Oxygen is not necessary for the fermentation process.
- C. In the first stage of respiration, breakdown of glucose takes place.
- D. Pyruvic acid is produced in the first stage of respiration.



Q62 General Science

Which of the following is the commercial unit of electric energy?

- A. Joule
- B. Kilowatt hour**
- C. Calorie
- D. Watt second



Q63 General Science

In Newlands Octaves, the properties of which two elements were found to be the same?

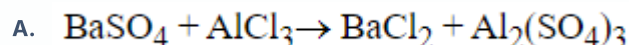
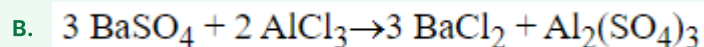
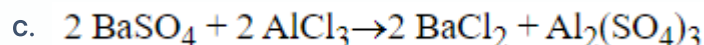
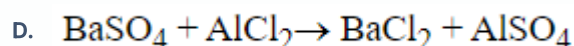
- A. Li, Na**
- B. H, Th
- C. Na, Mg
- D. Ca, Cl



Q64 General Science

The balanced reaction for following chemical reaction is:

Barium sulphate + Aluminium chloride $\rightarrow$ Barium chloride + Aluminium sulphate



Q65 General Science

The bluish colour of water in deep sea is due to:

A. scattering of light ✓

B. reflection of light

C. refraction of light

D. dispersion of light

Q66 General Science

What is the need to balance chemical equations?

A. To indicate the ratio of masses of reactants and products in which these react.

B. To satisfy the law of constant proportions.

C. To indicate the ratio of volumes of reactants and products in which these react.

D. To satisfy the law of conservation of mass. ✓

Q67 General Science

A white precipitate will be formed if we add ammonia solution to:

A. $\text{Ba}(\text{NO}_3)_2$ solution

B. AlCl_3 solution ✓

C. KNO_3 solution

D. $\text{Mg}(\text{NO}_3)_2$ solution



Q68 General Science

Which of the following substances are selectively reabsorbed from the initial filtrate by the tubular portion of the nephron in human kidney?

- A. Glucose, water, amino acids and proteins
- B. Glucose, water, salts and amino acids
- C. Salts, glucose, fats and water
- D. Water, glucose, salts and proteins



Q69 General Science

Which of the following is not the use of bleaching powder?

- (i) to make drinking water free from germs
- (ii) in soda-acid fire extinguishers
- (iii) as an oxidising agent in many chemical industries
- (iv) for baking cakes

- A. i
- B. iii
- C. iv
- D. ii



Q70 General Science

Soil degradation is one of the major environmental problems being faced these days. A wide range of techniques to conserve soil are mentioned below. Select the INCORRECT option.

- A. Crop rotation
- B. Overgrazing
- C. Planting trees
- D. Terrace farming



Q71 General Science

A contraceptive technique that increases phagocytosis of sperms within the uterus is:

- A. use of condoms
- B. use of copper T
- C. use of oral contraceptives
- D. surgery

Q72 General Science

The resistivity of a material is dependent on which of the following factors?

- A. Temperature
- B. Length
- C. Area of cross section
- D. Resistance

Q73 General Science

A convex mirror used as a rear-view mirror of a car has a focal length of 2 m. If a bus is located at a distance of 3 m from the mirror, where will its image be formed?

- A. 1.2 m behind the mirror
- B. 1.2 m in front of the mirror
- C. 0.83 m in front of the mirror
- D. 0.83 m behind the mirror

Q74 General Science

Guard cells are involved in the process of _____.

- A. circulation
- B. transpiration
- C. tropic movements
- D. transport of food



Q75 General Science

Which of the following rules is used to determine the direction of induced current due to the motion of coil at right angle to the magnetic field?

- A. Fleming's left-hand rule
- B. Fleming's right-hand rule
- C. Right-hand thumb rule
- D. Maxwell's corkscrew rule



Q76 General Science

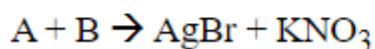
Which of the following has the maximum non-metallic characters in group 16 elements?

- A. Po
- B. Se
- C. O
- D. S



Q77 General Science

What will come in place of A and B, respectively, in the given double displacement reaction?



- A. Ag and HNO_3
- B. HBr and NaOH
- C. $AgNO_3$ and KBr
- D. HBr and NaOH



Q78 General Science

Which of the following is an example of a human cell that has the ability to modify its shape?

- A. Brain cell
- B. Liver cells
- C. WBC
- D. RBC



Q79 General Science

A ray of light is incident on an interface separating two media along the normal to the interface. The angle between the incident ray and refracted ray is equal to:

A. 0°



B. 30°

C. 45°

D. 90°

Q80 General Science

Which of the following situations is/are possible?

(a) Magnetic field lines can be parallel to each other.

(b) Magnetic field lines can be concentric circles.

(c) Magnetic field lines can intersect each other.

A. Only (a)

B. Only (b)

C. Both (a) and (b)



D. Both (a) and (c)

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Who was conferred with Major Dhyan Chand Khel Ratna Award 2021 for his outstanding achievements in Para shooting?

A. Manish Narwal



B. Harman Preet Singh

C. Praveen Kumar

D. Sharad Kumar



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Q82 General Awareness and Current Affairs

A cost incurred in the past and that cannot be recovered in the future is called _____.

- A. sunk cost
- B. floating cost
- C. prime cost
- D. economic cost



Q83 General Awareness and Current Affairs

Identify the personality from among the following who received the Padma Shri 2022 award in the sports field.

- A. Avani Lekhara
- B. Tara Jauhar
- C. Shivnath Mishra
- D. Shaibal Gupta



Q84 General Awareness and Current Affairs

What does the term 'Upa' in the term Upanishad denote?

- A. Happiness
- B. Secret
- C. Totality
- D. Nearness



Q85 General Awareness and Current Affairs

What is the direction of the Inter Tropical Convergence Zone in winter?

A. Southward



B. Northward

C. Eastward

D. Westward

Q86 General Awareness and Current Affairs

Panchayati Raj Institutions in India have been established following the _____ of the Constitution Of India.

A. 42nd Amendment Act

B. 57th Amendment Act

C. 73rd Amendment Act



D. 86th Amendment Act

Q87 General Awareness and Current Affairs

Sohan Singh Bhakna was the first president of the _____ founded by Indians in the United States of America in 1913.

A. Swaraj Party

B. Ghadar Party



C. Swatantra Party

D. India Revolutionary party



Q88 General Awareness and Current Affairs

How many participants from India won the gold medal in the 14th International Olympiad on Astronomy and Astrophysics (IOAA) 2021?

A. 3

B. 4



C. 5

D. 6

Q89 General Awareness and Current Affairs

Which day of the calendar year is acknowledged as the 'Rare Disease Day'?

A. 08 February

B. 18 February

C. 28 February



D. 28 March

Q90 General Awareness and Current Affairs

As of July 2022, under the Pradhan Mantri Shram Yogi Maan-Dhan Yojana (PM-SYM) (Old Age Protection), what percentage of monthly contribution is payable by the beneficiary?

A. 25%

B. 30%

C. 40%

D. 50%



Q91 General Awareness and Current Affairs

Which of the following features says that people of India have a direct role in electing their representatives?

A. Parliamentary Form of Government



B. Separation of Powers

C. Secularism

D. Fundamental Rights

Q92 General Awareness and Current Affairs

In which year was Steel Authority of India incorporated?

A. 1973



B. 1979

C. 1982

D. 1987

Q93 General Awareness and Current Affairs

The 'Mango Showers' phenomena in India is related to which season?

A. Autumn

B. Summer



C. Winter

D. Rainy



Gosikhurd National Irrigation Project is related to which of the following states?

A. West Bengal

B. Uttar Pradesh

C. Maharashtra



D. Punjab

On which day is a major national festival celebrated every year to commemorate the enactment of the Constitution of India, which declared India to be a sovereign, democratic and republic state?

A. 26th January



B. 23rd March

C. 15th August

D. 2nd October

In March 2022, which bank did RBI direct to stop onboarding new customers?

A. Airtel Payment Bank

B. Paytm Payments Bank



C. AU Small Finance Bank

D. Ujjivan Small Finance Bank



Q97 General Awareness and Current Affairs

Which of the following is NOT a direct tax in India?

- A. Excise Tax
- B. Income Tax
- C. Capital Gain tax
- D. Corporate tax



Q98 General Awareness and Current Affairs

KK Venugopal, the 15th Attorney General of India, received the first extension in his tenure in which of the following years?

- A. 2021
- B. 2022
- C. 2020
- D. 2019



Q99 General Awareness and Current Affairs

In February 2022, which state launched open-air classroom 'Paray Shikshalaya'?

- A. Haryana
- B. Punjab
- C. West Bengal
- D. Kerala



Which of the following is the prominent language spoken by 8.03% population of India as per 2011 census?

A. Punjabi

B. Gujarati

C. Marathi

D. Bengali



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A motor car starts with a speed of 60 km/h and increases its speed after every two hours by 15 km/h. In how much time will it cover a distance of 360 km?

A. 2 hours

B. 5 hours

C. 7 hours

D. 9 hours

Q2 Mathematics

A can count 100 eggs in 4 minutes while B can count the same number of eggs in 5 minutes. How much time will be required if they work together to count 450 eggs?

A. 5 min

B. 10 min

C. 15 min

D. 20 min

Q3 Mathematics

If three numbers are in the ratio 5 : 6 : 8 and the sum of their squares is 1250, then the product of those numbers is:

A. 2400

B. $2400\sqrt{10}$

C. 1200

D. $1200\sqrt{10}$

Q4 Mathematics

Find the area of a triangle whose sides are 12 m, 14 m and 16 m.

A. $21\sqrt{15} m^2$ B. $2\sqrt{15} m^2$ C. $7\sqrt{15} m^2$ D. $\sqrt{15} m^2$ 

Q5 Mathematics

Two boxes have chocolates in the ratio 7 : 5. If the difference in the number of chocolates is 28, find the number of chocolates in the box with larger numbers.

A. 98



B. 91

C. 84

D. 77

Q6 Mathematics

An item costs ₹2,000 less than ₹5,000. The dealer offers a discount of 10% and the retailer further offers a discount of 5% on its CP. The final SP for the customer is:

A. ₹2,565



B. ₹3,454

C. ₹2,878

D. ₹1,987

Q7 Mathematics

My father is presently 25 years older than me. The sum of our ages 5 years ago was 39 years. Find my present age.

A. 20 years

B. 15 years

C. 13 years

D. 12 years

**Q8 Mathematics**

One of the roots of the equation $x^2 - 12x + k = 0$ is $x = 3$. The other root is _____.

A. $x = -4$

B. $x = 9$



C. $x = 4$

D. $x = -9$



Q9 Mathematics

The area (in square units) of the quadrilateral ABCD, formed by the vertices A (0, -2), B (2, 1), C (0, 4), and D (-2, 1) is:

A. 12



B. 13

C. 14

D. 15

Q10 Mathematics

A group of class IX students conducted a survey for the number of family members in a household on 40 households in a locality, which resulted in the given frequency table. What is the mode of the data?

Family size	Number of families
2-4	10
4-6	8
6-8	12
8-10	6
10-12	4

A. 6.8



B. 6.6

C. 6.7

D. 6.9

Q11 Mathematics

If two parallel lines are intersected by a transversal, then which of the options below is not necessarily correct?

A. A pair of alternate interior angles have the same measure.

B. A pair of interior angles on the same side of the transversal have the same measure.



C. A pair of corresponding angles have the same measure.

D. A pair of vertically opposite angles have the same measure.

Q12 Mathematics

If a and b are the roots of $x^2 + x - 2 = 0$, then the quadratic equation in x whose roots are $\frac{1}{a} + \frac{1}{b}$ and ab is:

A. $2x^2 - 3x + 2 = 0$

B. $2x^2 + 5x - 2 = 0$

C. $2x^2 - 5x + 2 = 0$

D. $2x^2 + 3x - 2 = 0$



Q13 Mathematics

If the difference between two numbers is 52 and they are in the ratio 7 : 3, then find the greater of the two numbers.

- A. 65
- B. 70
- C. 84
- D. 91

**Q14** Mathematics

A truck travels at a speed of 60 km/h from city P to city Q and returns to city P by the same route at a speed of 100 km/h. What is the average speed of the truck for the given journey?

- A. 80 km/h
- B. 75 km/h
- C. 70 km/h
- D. 85 km/h

**Q15** Mathematics

In a clearance sale, a sari whose marked price was ₹10,490, is now sold for ₹9,441. What is the discount per cent on the sari?

- A. 12%
- B. 15%
- C. 18%
- D. 10%

**Q16** Mathematics

A television costs ₹35,000 less than a printer. If the cost of the printer is twice the cost of the television, then the cost of the television is:

- A. ₹35,000
- B. ₹53,000
- C. ₹17,500
- D. ₹15,700



Q17 Mathematics

If x and y are the two digits of the number $115xy$ such that this number is divisible by 90, then the value of $x + y$ is:

- A. 6
- B. 3
- C. 5
- D. 2



Q18 Mathematics

The value of $5^3 \times 5^4 \times 5^2 = ?$

- A. 5^6
- B. 5^9
- C. 5^7
- D. 5^5



Q19 Mathematics

The HCF of any set of 10 co-prime numbers is always

- A. 2
- B. 0
- C. 10
- D. 1



Q20 Mathematics

The value of $0.0486 \div 0.002 =$

- A. 18.7
- B. 13.8
- C. 24.3
- D. 21.5



Q21 Mathematics

2.666 ... + 2.77 ... in fraction form is:

A. $\frac{31}{9}$

B. $\frac{29}{9}$

C. $\frac{49}{9}$ ✓

D. $\frac{47}{9}$

Q22 Mathematics

The value of $\sqrt{\frac{1-\cos \theta}{1+\cos \theta}}$ is:

A. $\operatorname{cosec} \theta - \cot \theta$ ✓

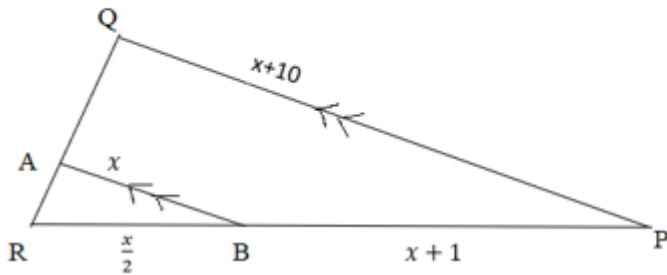
B. $\operatorname{cosec} \theta + \cot \theta$

C. $\sec \theta - \cot \theta$

D. $\sec \theta + \cot \theta$

Q23 Mathematics

In the given figure, $AB \parallel QP$, $AB = x$, $PQ = x + 10$, $RB = \frac{x}{2}$, $BP = x + 1$. Find PQ



A. 4 units

B. 18 units ✓

C. 13 units

D. 12 units



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Q24 Mathematics

The simple interest on ₹1,280 at 5% p.a. for 3 years is:

- A. ₹195
- B. ₹180
- C. ₹192
- D. ₹480

**Q25** Mathematics

If $9 : 12 :: 12 : x$, and $28 : 42 :: 42 : y$, then the value of $2x + y$ is:

- A. 79
- B. 95
- C. 84
- D. 69

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the given assumptions is/are implicit in the statement.

Statement:

Essay writing is an art. It requires an understanding of the subject as well as a command over the language to be able to write a good essay.

Assumptions:

- I. Essays cannot be written without complete mastery over the subject.
- II. Anyone with a good command over the language can write a good essay.

- A. Only assumption I is implicit
- B. Only assumption II is implicit
- C. Neither assumption I nor II is implicit
- D. Both assumptions I and II are implicit



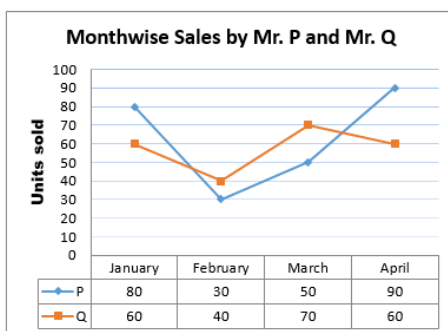
Q27 General Intelligence and Reasoning

Six girls decided to record a video of their talks, one on each separate day of the same week. Sunday will be a rest day. P said Friday will suit her. U will start the process and record on Monday. S will record immediately before T. Q will record on a day exactly between the days of U and S. T selected Thursday. Which day is left for R to record the video?

- A. Monday
- B. Wednesday
- C. Thursday
- D. Saturday

**Q28** General Intelligence and Reasoning

The graph and the table below show the units sold by two salesmen, Mr. P and Mr. Q, in 4 months from January to April. Study the graph and the table and answer the question.



What is the respective ratio of the total units sold by Mr. P and Mr. Q during the 4 months?

- A. 25 : 23
- B. 25 : 27
- C. 24 : 23
- D. 23 : 21

**Q29** General Intelligence and Reasoning

If '+' means ' $\div$ ', '-' means '+', ' $\times$ ' means '-' and ' $\div$ ' means ' $\times$ ', then what will be the value of the following expression?

$$[(23 \times 15) - (1 \div 4)] + (2 - 2) \div 2$$

- A. 4
- B. 6
- C. 8
- D. 10



Q30 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

0, 2, 6, 12, 20, ?

A. 30



B. 35

C. 28

D. 34

Q31 General Intelligence and Reasoning

How many times are the hour and the minute hands of a clock at a right angle in a period of two days?

A. 77

B. 88



C. 92

D. 48

Q32 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $H = W > F \geq S \geq T > Y$

A. $Y < S$



B. $H < F$

C. $W < T$

D. $T \geq F$

Q33 General Intelligence and Reasoning

Eight friends Kriti, Durga, Manasi, Surya, Tahira, Vritti, Ahana and Yoshita are sitting around an square table in such a way that four friends are sitting on the corners of the table while the other four are sitting at the exact centre of sides of the table. All are facing the centre of the table. Surya is sitting at the third place to right of Durga. Only Tahira is between Kriti and Durga. Manasi is second to left of Durga. Only Vritti is sitting between Surya and Yoshita. Yoshita is second to left of Ahana. Vritti is second to left of Manasi. Who is sitting third to left of Tahira?

A. Ahana

B. Manasi



C. Surya

D. Yoshita



Q34 General Intelligence and Reasoning

30 people are standing in a queue facing north. Manoj is standing at the 11th position from the front. Shahin is standing at the 7th position from the back. Neeraj is standing exactly in front of Shahin. How many people are standing between Neeraj and Manoj?

A. 11



B. 12

C. 10

D. 13

Q35 General Intelligence and Reasoning

Given below are three statements and three conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide whether the conclusion/s follow/s the given statements.

Statements:

I. All grasses are shrubs.

II. All roots are fruits.

III. All fruits are flowers.

Conclusions:

I. All grasses are flowers.

II. All roots are flowers.

III. Some flowers are fruits.

A. Only conclusion I follows

B. Conclusions II and III follow



C. Only conclusion III follows

D. All the conclusions follow

Q36 General Intelligence and Reasoning

Anita is standing facing the north direction. Then, she turns 135° anticlockwise. After that, she turns 90° clockwise. In which direction is she facing now?

A. North-west



B. South-west

C. North-east

D. South-east



Q37 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below:

(Left) 158 438 182 325 230 (Right)

If 5 is added to the first digit of every number, in how many numbers will the first digit be exactly divisible by the second digit?

A. 1

B. 2



C. 3

D. 4

Q38 General Intelligence and Reasoning

Among six persons, P, Q, R, S, T and U, each one has a different weight. The weight of Q is more than only two other persons. The weight of P is more than U's weight. The weight of S is more than Q's weight. The weight of R is less than the weight of T. The weight of Q is more than the weight of T. U has the second highest weight among all the six persons. Who has the third highest weight among all six persons?

A. P

B. S



C. R

D. T

Q39 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts, and decide which of the given conclusions logically follow/s from the given statements.

Statements:

All donkeys are zebras.

Some bulls are cats.

Some donkeys are apes.

Conclusions:

(I) Some zebras are bulls.

(II) Some zebras are apes.

(III) Some donkeys are cats.

A. Only conclusion I follows

B. Only conclusion II follows



C. Only conclusion III follows

D. None of the conclusions follow



Q40 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'DIRECT' is arranged in alphabetical order?

A. None

B. One



C. Two

D. Three

Q41 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

BEING : YVRMT :: PRIDE : KIRWV :: CLEAN : ?

A. XPVRM

B. GOVZP

C. XOVMZ



D. XOWZM

Q42 General Intelligence and Reasoning

In a certain code language, 'GLEPK' is written as 'DIBMH' and 'QRYHN' is written as 'NOVEK'. How will 'POTER' be written in that language?

A. LMPOB

B. LMQOB

C. MLPOB

D. MLQBO



Q43 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(1, 8, 3)

(2, 21, 5)

A. (7, 128, 10)

B. (2, 26, 3)

C. (4, 33, 7)



D. (5, 112, 11)

Q44 General Intelligence and Reasoning

Janhvi starts walking from her home and goes 45 m towards the west. She then turns right and walks 32 m. Then, she turns right and walks 88 m. After that, she turns right and walks 50 m. Finally, she turns right again and walks 43 m. How far and in which direction is she now from her home? (All turns are 90 degree turns only)

A. 16 m, South

B. 45 m, North

C. 18 m, North

D. 18 m, South

**Q45** General Intelligence and Reasoning

Which two numbers should be interchanged to make the given equation correct?

$$7 \times 8 + 9 - 6 \div 3 = 59$$

A. 7 and 3

B. 8 and 9

C. 6 and 9



D. 3 and 6



Q46 General Intelligence and Reasoning

Three statements are followed by four conclusions numbered I, II, III and IV. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statements:

1. All couriers are shipments.
2. All shipments are transports.
3. No haul is transport.

Conclusions:

- I. No transport is shipment.
- II. All couriers are transports.
- III. Some transports are shipments.
- IV. No courier is haul.

A. Only conclusions II and IV follow.

B. Only conclusions I and IV follow.

C. Only conclusions II, III and IV follow.



D. All conclusions follow.

Q47 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

11 : 130 :: 7 : 58 :: 15 : ?

A. 216

B. 224

C. 234



D. 248

Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

5, 13, 23, 49, ?, 193

A. 82

B. 95



C. 105

D. 120



Q49 General Intelligence and Reasoning

P, Q, R, S, T, U and V live on seven different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 7. U lives on the top floor. Only two persons live between T and Q. Q is on floor number 3. V lives on the floor immediately above P's floor. S lives on the floor immediately above R's floor. Q lives on the floor immediately below R's floor. Who lives on floor number 6?

A. R

B. S

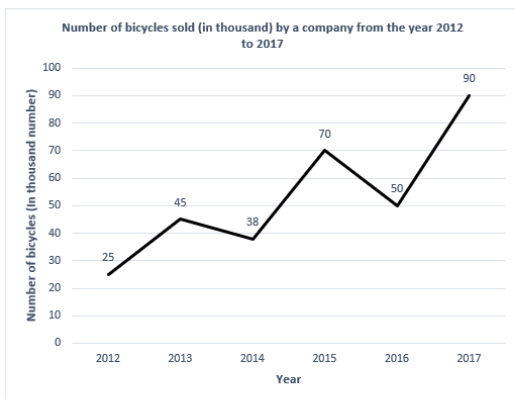
C. T



D. V

Q50 General Intelligence and Reasoning

Study the following line graph carefully and answer the given question.



The number of bicycles sold in 2013 is approximately what percent of the number of bicycles sold in 2017?

A. 100%

B. 10%

C. 50%



D. 45%



Q51 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	5	6	8	3	%	#	7
Codes	U	S	C	K	D	T	A

Conditions:

- (i) If the first element is an odd number and the last element is an even number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the second element is a symbol and the fifth element is an even number, the codes for these two (the second and the fifth elements) are to be interchanged.
- (iii) If the third element is a number and the fourth element is a symbol, both these elements (the third and the fourth elements) are to be coded as W.

Question: 5 # % 6 7 # 3 8

A. UTDSATKC

B. CADSTTKU

C. CTDSATKU



D. CTWWATKU

Q52 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '÷' means '×' and '×' means '÷', what will come in place of the question mark (?) in the following equation?

$$12 \div 6 + 28 - 7 \times 14 = ?$$

A. 72

B. 82



C. 80

D. 78

Q53 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'LAMENT' is arranged in alphabetical order?

A. None

B. One

C. Two



D. Three



Q54 General Intelligence and Reasoning

A, B, C, D, E and F were six friends playing games around a circular table. They were standing facing the centre of the table. E was standing to the immediate left of A. C was second to the left of F. There were exactly two people between D and A. B was at the immediate right of A. Which friend was at the immediate right of F?

A. C

B. A

C. D

D. E



Q55 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

B _ M _ Q _ V M W _ B V M W _ B V _ _ T

A. V W V R S M R

B. V W B R S M W



C. V W V R R M W

D. V W B V S W M

General Science

25 Questions • Answer Key

Q56 General Science

An AC generator works on the principle of:

A. electromagnetic induction



B. force on a current carrying conductor

C. heating effect of electric current

D. electromagnetism

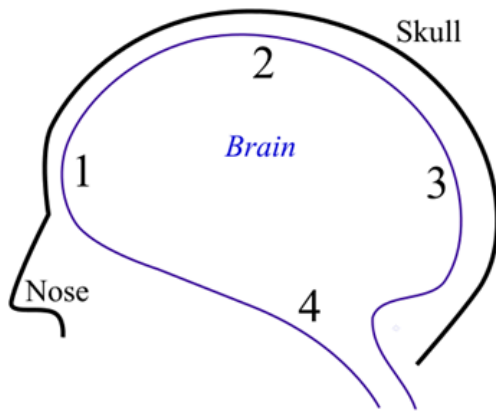


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Q57 General Science

Which of the following numbers indicates the spinal cord's location in the human brain?



A. Number 1

B. Number 2

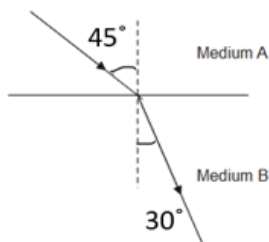
C. Number 3

D. Number 4



Q58 General Science

The path of a ray of light incident on an interface separating two media is shown in the figure below. The refractive index of medium A with respect to medium B is equal to:



A. $\sqrt{2}$



B. $\frac{1}{\sqrt{2}}$

C. $\frac{1}{2\sqrt{2}}$

D. $2\sqrt{2}$



Q59 General Science

Which of the following uses spores to reproduce?

- A. Amoeba
- B. Yeast
- C. Mango
- D. Ferns



Q60 General Science

An object is placed at the principal focus of a concave lens. Which of the following options represents the characteristics of the image formed?

- A. Real and enlarged
- B. Real and diminished
- C. Virtual and enlarged
- D. Virtual and highly diminished



Q61 General Science

Which of the following elements is the most reactive?

- A. Pb
- B. Al
- C. Ca
- D. Mg



Q62 General Science

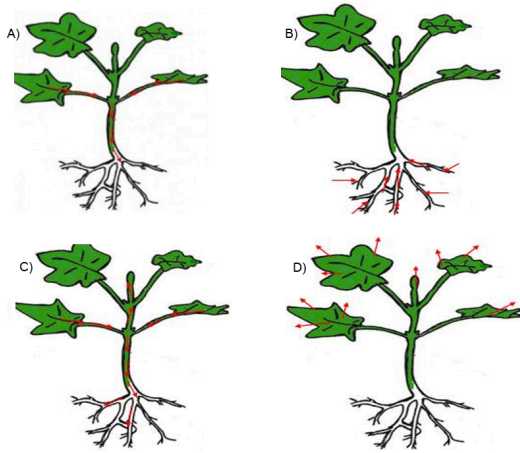
A boy focusses a sharp image of a distant object on a screen using a lens. The distance between the lens and screen is approximately equal to:

- A. f
- B. $f/2$
- C. $f/3$
- D. $2f$



Q63 General Science

Which figure is the correct representation of the movement of food in phloem?



A. A

B. B

C. C



D. D

Q64 General Science

Which of the following statements is/are correct?

- (i) Magnetic field strength is strongest at the centre of a bar magnet.
- (ii) No two magnetic field lines can intersect.
- (iii) Magnetic field lines always form closed continuous curves.

A. Only (i)

B. Only (ii)

C. Both (i) and (ii)

D. Both (ii) and (iii)



Q65 General Science

Which of the following is NOT a possible isomer of hexane?

A. 2-ethyl pentane



B. 2-methyl pentane

C. 3-methyl pentane

D. 2, 2 dimethyl butane



Q66 General Science

Consider the below statements and identify the correct answer.

Statement-I: If a substance loses oxygen during a reaction, it is said to be reduced.

Statement-II: If a substance gains hydrogen during a reaction, it is said to be reduced.

- A. Both the statements are true. ✓
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-I is false, and Statement-II is true.

Q67 General Science

Consider the below statements and identify the correct answer.

Statement I: Dobereiner gave the law of triads.

Statement II: Dobereiner tried to arrange the elements with different properties into groups, having three elements each.

- A. Both statements are correct. Statement II is correct explanation of Statement I.
- B. Both Statements are correct. Statement I is correct explanation of Statement II.
- C. Only Statement I is Correct. ✓
- D. Only Statement II is correct.

Q68 General Science

A wire of a given material has length 'l' and resistance 'R'. Another wire of the same material having three times the length and twice the area of cross section will have a resistance equal to:

- A. $\frac{3}{2}R$ ✓
- B. $\frac{2}{3}R$
- C. $\frac{1}{2}R$
- D. $3R$



Q69 General Science

Which of the following should be done to conserve coal and petroleum?

- A. Avoid using public transportation or joining a carpool.
- B. Do not overuse air conditioning or heating systems. ✓
- C. Solar cookers should be avoided at all costs.
- D. Avoid substituting CFL bulbs for standard incandescent bulbs.

Q70 General Science

The table below shows the differences between the structure and function of plants and animals.

Which option shows the INCORRECT statement?

Sr. no.	Plants	Animals
a.	Do not move	Move in search of food, mate and shelter
b.	Most tissues are dead	Most tissues are living
c.	Need less energy	Need more energy
d.	Growth is limited to certain regions	Growth is limited to certain regions

- A. a
- B. b
- C. c
- D. d ✓

Q71 General Science

Some reasons highlighting the importance of delivering sex education in schools are mentioned below.

Choose the incorrect option.

- A. Knowledge about changes taking place during puberty
- B. Discouraging various myths and misconceptions
- C. Knowing about their body changes, teenagers start making fun of each other ✓
- D. Helps to keep teenagers away from sexual abuse



Q72 General Science

Match the following:

A	B
i. red cabbage leaves	a. olfactory indicator
ii. methyl orange	b. acid base indicator
iii. Onion, clove	c. natural acid base indicator

A. i-a, ii-b, iii-c

B. i-c, ii-b, iii-a

C. i-c, ii-a, iii-b

D. i-a, ii-c, iii-b

Q73 General Science

Identify the correct chemical reaction involved in bleaching powder preparation

A. $\text{Ca(OH)}_2 + \text{Cl}_2 \rightarrow \text{CaOCl}_2 + \text{H}_2\text{O}$

B. $\text{NaCl} + \text{H}_2\text{O} + \text{CO}_2 + \text{NH}_3 \rightarrow \text{NH}_4\text{Cl} + \text{NaHCO}_3$

C. $\text{NaHCO}_3 + \text{H}^+ \rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{Sodium salt of acid}$

D. $2 \text{NaCl (aq)} + 2 \text{H}_2\text{O (l)} \rightarrow 2 \text{NaOH (aq)} + \text{Cl}_2 \text{ (g)} + \text{H}_2 \text{ (g)}$

Q74 General Science

Which of the following properties do covalent compounds generally NOT exhibit?

A. They are not soluble in an organic solvent.

B. They are bad conductors of electricity and heat.

C. They form by sharing of electrons.

D. They do not form ions generally.



Q75 General Science

1 horsepower equals:

- A. 746 J
- B. 746 W
- C. 746 kW
- D. 74.6 J/s



Q76 General Science

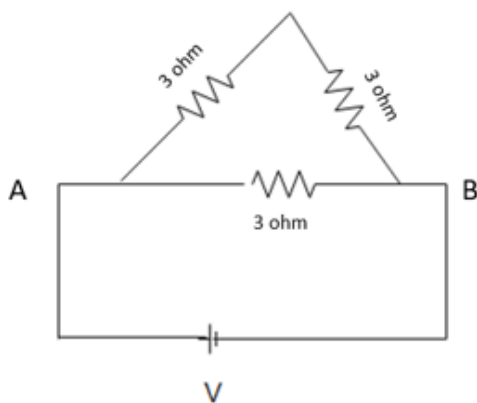
Which of the following is NOT a biotic component of the ecosystem?

- A. Soil
- B. Flower
- C. Insect
- D. Frog



Q77 General Science

The equivalent resistance between points A and B shown in the figure below:



- A. 2Ω
- B. 9Ω
- C. 4.5Ω
- D. 6Ω



Q78 General Science

How and when is oxygen produced as a waste product in plants?

- A. By photosynthesis during the day
- B. By respiration during the day
- C. By photosynthesis during the night
- D. By respiration during the night



Q79 General Science

What was the achievement of Dobereiner's triads?

- A. First attempt to relate the properties of elements with atomic mass.
- B. First attempt to study the atomicity of molecules.
- C. First attempt to study the colour of elements.
- D. First attempt to study the size of atoms.



Q80 General Science

Which of the following statements are correct?

- (a) For a lens the first principal focus is the position of the object whose image is at infinity
- (b) For a lens the first principal focus is the position of the object whose image is formed at twice the focal length.
- (c) For a lens the second principal focus is the position of the real image whose object is at infinity
- (d) For a lens the second principal focus is the position of the object whose image is formed at twice the focal length

- A. Both (a) and (b)
- B. Both (b) and (c)
- C. Both (a) and (c)
- D. Both (b) and (d)



Q81 General Awareness and Current Affairs

Which of the following is worshipped by people during the festival of Pongal?

- A. The Sun
- B. The Moon
- C. God Shiva
- D. Maa Durga



Q82 General Awareness and Current Affairs

According to the 'World Economic Outlook-April 2022' report, raised India's GDP growth estimate to 9% for 2022-23 and for 2023-24 it forecast the economy to grow by 7.1%. Who released this report?

- A. World Bank
- B. Ministry of Finance of India
- C. Reserve Bank of India
- D. International Monetary Fund (IMF)



Q83 General Awareness and Current Affairs

Which Amendment of the Constitution of India envisages the Gram Sabha as the foundation of the Panchayat Raj System to perform functions and powers entrusted to it by the State Legislatures?

- A. 54th
- B. 63rd
- C. 71st
- D. 73rd



Q84 General Awareness and Current Affairs

In India, Mangrove Forests are majorly found in which of the following states?

- A. Maharashtra
- B. Telangana
- C. West Bengal
- D. Nagaland



Q85 General Awareness and Current Affairs

In March 2022, which state has become the first to start 'Air Health Service' in rural areas?

- A. Tamil Nadu
- B. Gujarat
- C. Odisha
- D. Bihar



Q86 General Awareness and Current Affairs

India launched a commemorative logo to mark her 30th anniversary of diplomatic ties with which of these countries?

- A. Israel
- B. Canada
- C. Spain
- D. America



Q87 General Awareness and Current Affairs

Which of the following falls under Article 51A of the Indian Constitution?

- A. Fundamental rights
- B. Fundamental Duties
- C. Cultural and Education Rights
- D. Promotion of International peace and security

Q88 General Awareness and Current Affairs

Pankaj Advani bagged his 41st title by defeating whom, to lift his 8th title at the Asian 100 UP Billiards Championship 2022?

- A. Aditya Mehta
- B. Dhruv Sitwala
- C. Sourav Kothari
- D. Manan Chandra

Q89 General Awareness and Current Affairs

Which social reformer founded the 'Brahmo Samaj' in 1828 and became famous for his pioneering role in advocating education and opposing practices like Sati, child marriage and social division?

- A. Swami Dayanand Saraswati
- B. Raja Ram Mohan Roy
- C. Ishwarchandra Vidyasagar
- D. Swami Vivekananda



Q90 General Awareness and Current Affairs

In how many states was the first round of Mission Indradhanush (IMI) 4.0 organised by the Union Ministry of Health and Family Welfare in February 2022, with an aim to increase full immunisation coverage?

A. 8

B. 11



C. 14

D. 16

Q91 General Awareness and Current Affairs

In January 2022, Paytm Money launched India's first intelligent messenger called _____.

A. Cops

B. Pops



C. Pay Money

D. PayU

Q92 General Awareness and Current Affairs

According to the Economic Survey 2021-22, what is the rank of India (Globally) in average annual net gain in forest area?

A. 1st

B. 2nd

C. 3rd



D. 4th



Q93 General Awareness and Current Affairs

Under which five-year plan was Bharat Nirman started by the Government of India to upgrade rural infrastructure?

- A. Sixth Five Year Plan
- B. Eighth Five Year Plan
- C. Ninth Five Year Plan
- D. Tenth Five Year Plan



Q94 General Awareness and Current Affairs

Who among the following is considered as the founder of Islam?

- A. Prophet Yusuf
- B. Prophet Noah
- C. Prophet Muhammad
- D. Prophet Abraham



Q95 General Awareness and Current Affairs

Identify the long jumper of India who won a silver medal at the U-20 World Athletics Championships in the year 2021.

- A. Mercy Kuttan
- B. Shaili Singh
- C. Nayana James
- D. Seema Punia



Q96 General Awareness and Current Affairs

Which of the following ministries introduced The Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Amendment Bill, 2022, in the Lok Sabha on 5 April 2022?

- A. Ministry of Law and Justice
- B. Ministry of External Affairs
- C. Ministry of Defence
- D. Ministry of Home Affairs



Q97 General Awareness and Current Affairs

How many languages are there in the 8th Schedule of the Indian Constitution as on June 2022?

A. 15

B. 19

C. 22



D. 25

Q98 General Awareness and Current Affairs

Which of the following places is a harnessing site for geothermal energy in India?

A. Manikaran



B. Tarapur

C. Bokaro

D. Kolkata

Q99 General Awareness and Current Affairs

Which of the following is NOT included in the financial budget of India?

A. Fiscal deficit

B. Primary deficit

C. Revenue deficit

D. Credit control



Q100 General Awareness and Current Affairs

The original Constitution of 1950 envisaged a Supreme Court with a Chief Justice and _____ puisne Judges - leaving it to Parliament to increase this number.

A. 11

B. 7



C. 14

D. 17



Mathematics

25 Questions • Answer Key

Q1 Mathematics

In how many years will a sum of ₹10,000 become ₹13,310 at 10% compound interest per annum, compounded annually?

A. 2

B. 3



C. 4

D. 5

Q2 Mathematics

The fraction equivalent to 0.474747... is:

A. $\frac{27}{100}$ B. $\frac{27}{9}$ C. $\frac{11}{27}$ D. $\frac{47}{99}$ 

Q3 Mathematics

If $a + b = 56$ and $(a - b)^2 = 496$, find the value of product of a and b.

A. 660



B. 560

C. 760

D. 460

Q4 Mathematics

A and B invest ₹42,000 and ₹56,000 respectively, in a business. At the end of the year they make a profit of ₹87,220. Find B's share in the profit.

A. ₹49,840



B. ₹48,480

C. ₹45,620

D. ₹47,240



Q5 Mathematics

If each interior angle of a regular polygon is 135° , then the number of sides that polygon has is:

A. 8



B. 10

C. 12

D. 15

Q6 Mathematics

The area (in square units) of the triangle formed by the vertices (0,2), (2,3) and (3,1) is:

A. 5.5

B. 4.4

C. 3.5

D. 2.5



Q7 Mathematics

A class of 30 students appeared in a test. The average score of 12 students is 80, and that of the rest is 75. What is the average score of the class?

A. 87

B. 67

C. 56

D. 77



Q8 Mathematics

If $x^2 + 2x + 9 = (x - 2)(x - 3)$, then the resultant equation is:

A. a quadratic equation

B. a cubic equation

C. not a quadratic equation



D. a cubic polynomial



Q9 Mathematics

Two pipes X and Y can fill a cistern in 21 hours and 24 hours, respectively. The pipes are opened simultaneously and it is found that due to a leakage in the bottom it takes 48 minutes more to fill the cistern. When the cistern is full, in how much time will the leak empty it if no pipe is open during that time?

- A. 120 hours
- B. 168 hours
- C. 144 hours
- D. 130 hours

**Q10 Mathematics**

Which of the following is the greatest number that divides 72 and 119 and leaves 3 and 4 as respective remainders?

- A. 23
- B. 19
- C. 21
- D. 17

**Q11 Mathematics**

If $3x - 2y = 10$ and $xy = 11$, the value of $27x^3 - 8y^3$ is _____

- A. 2980
- B. 3170
- C. 2569
- D. 3336

**Q12 Mathematics**

A vendor sold 25 laptops at a profit of 12% and 15 laptops at a profit of 20%. If he had sold all the 40 laptops at a profit of 18%, his profit would have increased by ₹30,000. What is the cost price of each laptop, if the cost price of all the 40 laptops is the same?

- A. ₹28,000
- B. ₹27,000
- C. ₹26,000
- D. ₹25,000



Q13 Mathematics

If $\sec 4A = \operatorname{cosec} (3A - 50^\circ)$, where $4A$ and $3A$ are acute angles, find the value of $A + 75$.

A. 78°

B. 67°

C. 105°

D. 95°



Q14 Mathematics

The sum of ages of P and Q is 15 years more than the sum of ages of Q and R. How many years younger is R as compared to P?

A. 12

B. 13

C. 15



D. 19

Q15 Mathematics

How many seconds will a boy take to run one complete round around a square field of side 38 metres, if he runs at a speed of 6 km/h?

A. 50.1

B. 61.2

C. 71.2

D. 91.2



Q16 Mathematics

The smallest natural number that must be added to 1212 to make it a perfect square is:

A. 13



B. 24

C. 27

D. 18



Q17 Mathematics

Two angles are complementary. The larger angle is 6° less than thrice the measure of the smaller angle. What is the measure of the larger angle?

A. 54°

B. 57°

C. 63°

D. 66° ✓

Q18 Mathematics

If $AB = x + 3$, $BC = 2x$ and $AC = 4x - 5$, then for what value of 'x' does B lie on AC?

A. 2

B. 3

C. 5

D. 8 ✓

Q19 Mathematics

The diagonal and one side of a rectangular plot are 65 m and 63 m, respectively. What is the perimeter of the rectangular plot?

A. 256 m

B. 225 m

C. 196 m

D. 158 m ✓

Q20 Mathematics

If 10% of 24% of x is 240, then $x = ?$

A. 100

B. 10000 ✓

C. 1000

D. 100000



Q21 Mathematics

Which of the following pairs of numbers are co-primes?

A. 12 and 18

B. 34 and 35



C. 7 and 14

D. 17 and 170

Q22 Mathematics

Find the smallest number by which 6300 must be multiplied to make it a perfect square.

A. 6

B. 7



C. 12

D. 15

Q23 Mathematics

A man buys 15 identical articles for a total of ₹15. If he sells each of them for ₹1.23, then his profit percentage is:

A. 23%



B. 8%

C. 32%

D. 50%

Q24 Mathematics

Find the mode of the data 2, 2, 3, 5, 15, 15, 15, 20, 21, 23, 25, 15, 23, 25.

A. 21

B. 15



C. 23

D. 25



Q25 Mathematics

Find the roots of $\frac{6}{x} - \frac{2}{x-1} - \frac{1}{x-2} = 0$.

A. $\frac{4}{3}$ and $\frac{3}{2}$

B. $\frac{4}{5}$ and 3

C. $\frac{4}{3}$ and 3



D. $\frac{4}{5}$ and $\frac{3}{2}$

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

2, 14, 70, 210, ?

A. 410

B. 630

C. 210



D. 420

Q27 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$26.52 \times 3.89 - 7.79 \times 2 + 27.39 = ?$$

A. 119



B. 136

C. 82

D. 181



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Q28 General Intelligence and Reasoning

L, K, J, H, G, F, D and S live on eight different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 8. L lives exactly one floor above K and exactly one floor below G. Only K lives between H and L, whereas H lives exactly one floor above J. Only D lives between S and J. F lives on the 8th floor, while S lives on the 1st floor.

On which floor does K live?

A. 7th

B. 5th



C. 4th

D. 3rd

Q29 General Intelligence and Reasoning

Q started from a point and walked towards the south for 42 m, then from there he turned right and walked 2 m, then he turned right again and walked 30 m, and then turned left and walked 10 m. In which direction is Q facing now?

(All turns are 90 degree turns only)

A. East

B. West



C. North

D. South

Q30 General Intelligence and Reasoning

Which of the following alphanumeric clusters will replace the question mark (?) in the series to make it logically complete?

BE 2, GJ 3, LO 5, QT 7, ?

A. VY 6

B. VY11



C. WX 6

D. WX 7



Q31 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. Some avalanches are precipitations.
2. Some cataclysms are avalanches.
3. All avalanches are storms.

Conclusions:

- I. Some storms are cataclysms.
II. No precipitation is storms.

- A. Only conclusion I follows ✓
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow

Q32 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(12, 51, 5)

(5, 36, 7)

- A. (19, 44, 3)
- B. (13, 10, 7)
- C. (14, 120, 16)
- D. (11, 51, 6) ✓

Q33 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $K = U = R > N > E > G < W$

A. $K < N$

B. $G < R$



C. $W < N$

D. $K = N$

Q34 General Intelligence and Reasoning

P, Q, R, S and T are sitting in a straight row, facing north. Neither Q nor S sit at the exact central position of the row. R is adjacent to S, while P and T are sitting at the extreme ends of the row. Who is sitting at the exact central position of the row?

A. R



B. Q

C. S

D. T

Q35 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing the north. Only 7 persons sit between F and U. F is at one of the extreme ends of the row. Only 9 persons sit between H and U. Only 12 persons sit between E and H. E is at the extreme right end. H is at the 19th position from the extreme left end. H is 14th from the extreme right end. If no other person is sitting in the row, what is the total number of persons seated?

A. 31

B. 32



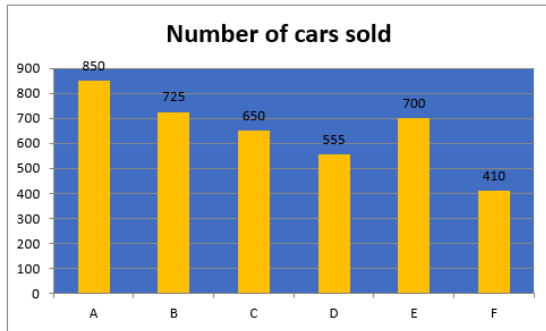
C. 33

D. 34



Q36 General Intelligence and Reasoning

The following chart shows the numbers of cars sold by a company at its six branches named A, B, C, D, E and F. Study the chart and answer the question.



For how many branches was the sale of the cars above the average sale for all six branches?

- A. Two
- B. Three
- C. Four
- D. Five

**Q37** General Intelligence and Reasoning

In a certain code language, 'LEFT' is written as 'VGFN' and 'DESK' is written as 'MTFF'. How will 'HELP' be written in that language?

- A. QMFJ
- B. RMFJ
- C. RNFJ
- D. SMFJ

**Q38** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

13, 21, 33, 54, 91, ?

- A. 153
- B. 162
- C. 175
- D. 183



Q39 General Intelligence and Reasoning

Based on the given statement, two conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $B \geq M > G$, $S < G \geq Y = L$

Conclusions:

1. $B > Y$

2. $M = L$

A. Only conclusion 1 is true



B. Only conclusion 2 is true

C. Both conclusions 1 and 2 are true

D. Neither conclusion 1 nor 2 is true

Q40 General Intelligence and Reasoning

G, H, I, J, K and L live on six different floors of the same building. The lowermost floor in the building is numbered 6, the floor above it is numbered 5, and so on till the topmost floor is numbered 1.

J lives on an even numbered floor. G and K each live on an odd numbered floor. I lives on floor number 2. H lives on an odd numbered floor, immediately above L and immediately below I. G does not live on the topmost floor. Who lives on the lowermost floor?

A. J



B. L

C. G

D. K



Q41 General Intelligence and Reasoning

The table given below shows the record of the number of students who got selected in the entrance exam of M.Phil. in a particular central university from five different states of India over the years. Study the table and answer the question.

States \ Years	Kashmir	Bihar	MP	Punjab	Delhi
2017	300	440	250	350	280
2018	400	400	280	400	320
2019	450	350	240	260	260
2020	500	380	400	320	400
2021	430	420	540	280	350

The number of students who got selected in 2020 from Bihar was approximately what percentage of the total number of students who got selected from Delhi for all the years together?

A. 15.5%

B. 23.6%



C. 20.5%

D. 15.0%

Q42 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

3 : 12 :: 25 : 78 :: 21 : ?

A. 63

B. 66



C. 42

D. 48

Q43 General Intelligence and Reasoning

In a certain code language, TRIP is written as WULS and SOME is written as VRPH. How will CLAN be written in the same language?

A. FPDQ

B. FOEQ

C. FODQ



D. FODR



Q44 General Intelligence and Reasoning

How many such pairs of letters are there in the word 'CAPITAL' (in both forward and backward directions) each of which have as many letters between them in the word as there are in the English alphabetical order?

A. 1

B. 2



C. 3

D. 4

Q45 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statements is true, decide which of the given conclusions logically follow(s) from the statement.

Statement:

Cyclone Sepa is expected to make landfall by 3 p.m. today on the Balasore coast. Rough seas, heavy rain and strong winds are expected to lash Balasore from 11 a.m. onwards. Power supply in Balasore is likely to be affected from 2 p.m. to 9 p.m.

Conclusions:

- I. There could be power cuts in Balasore after 3 p.m. today.
- II. It would be unsafe for fishermen to venture out into the sea today, till the cyclone passes.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follows

D. Both conclusions I and II follow



Q46 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts, and decide which of the given conclusions logically follow/s from the given statements.

Statements:

All toys are plastics.

All plastics are disposables.

Some toys are fibres.

Conclusions:

(I) Some fibres are plastics.

(II) Some disposables are fibres.

(III) No fibre is a disposable.

A. Only conclusions I and II follow



B. Only conclusions II and III follow

C. Either conclusion I or conclusion III follows

D. None of the conclusions follow

Q47 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$48.9 \times 3.95 - 2.97 + 17.86 = ?$$

A. 140

B. 125

C. 211



D. 250

Q48 General Intelligence and Reasoning

Study the given letter, symbol series and answer the question that follows.

L @ S O J ^ B U # W R < E M @ N U # B * H ! A & L E W % H & G A * S A # L D

How many consonants are immediately preceded by a symbol and immediately followed by a vowel?

A. 5

B. 4

C. 6



D. 3



Q49 General Intelligence and Reasoning

What is the angle traced by the hour hand in 23 minutes?

A. 11.5°



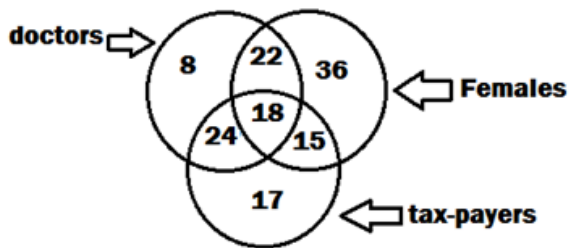
B. 12°

C. 12.5°

D. 13°

Q50 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such females are there who are also tax-payers but NOT doctors?

A. 18

B. 15



C. 33

D. 40

Q51 General Intelligence and Reasoning

Study the given letter series and answer the question that follows.

K I O X J E T R U L E B A C K J M N

How many such vowels are there each of which is immediately followed by atleast two consonants appearing together in the above series?

A. 1

B. 2

C. 3



D. 4



Q52 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$8 - 13 + 18 \div 9 \times 3 = ?$$

A. 33

B. -33



C. 32

D. -32

Q53 General Intelligence and Reasoning

What is the angle traced by the hour hand in 18 minutes?

A. X

B. Y

C. B

D. Z



Q54 General Intelligence and Reasoning

Vikas took a bus from a bus stop. The bus travelled 50 m towards the west. Then, it took a right turn and travelled 70 m. Then, it took a left turn and travelled 15 m. Then, it took a left turn and travelled 30 m. Then, it took a left turn and travelled 35 m. Then, it took a right turn and travelled 10 m. Finally, it took a left turn and travelled 30 m to reach the school. How far and in which direction is the bus stop from the school ? (All turns are 90 degree turns only)

A. 30 m, South



B. 30 m, North

C. 40 m, South

D. 40 m, East

Q55 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

SMILE : ELIMS :: MASTE : ETSAM :: STARV : ?

A. SRVAT

B. VRTAS

C. VTARS

D. VRATS



Q56 General Science

To connect a number of resistors in parallel can be considered equivalent to:

- A. increasing cross sectional area of the conductor ✓
- B. decreasing cross sectional area of the conductor
- C. increasing length of the conductor
- D. increasing resistance of the conductor

Q57 General Science

Oral contraceptive pills work by stopping _____.

- A. ovulation and implantation
- B. fertilisation and implantation
- C. ovulation and fertilisation ✓
- D. ovulation

Q58 General Science

Which of the following is NOT a part of the 5 R's needed to be followed for sustainable development?

- A. Refuse
- B. Regeneration ✓
- C. Repurpose
- D. Recycle

Q59 General Science

A metallic wire having resistivity ρ is cut into four equal parts. The resistivity of each part is:

- A. $\rho/2$
- B. $\rho/4$
- C. ρ ✓
- D. 4ρ



Q60 General Science

An optical device Y has positive focal length. Y is:

- A. either a concave lens or a concave mirror
- B. either a convex lens or a convex mirror
- C. either a convex lens or a concave mirror
- D. either concave lens or a convex mirror

Q61 General Science

Mendeleev's Periodic Law states that:

- A. the properties of elements are the periodic function of their atomic numbers
- B. the properties of elements are the periodic function of their colour
- C. the properties of elements are the periodic function of their atomic masses
- D. the properties of elements are the periodic function of their magnetic properties

Q62 General Science

Caustic soda is generally NOT used in the _____.

- A. paper and pulp industry
- B. manufacture of ammonia
- C. fabric industry
- D. detergent industry

Q63 General Science

A spherical mirror forms an erect and diminished image. Identify the correct statement(s) about the spherical mirror.

- (A) The mirror is concave.
- (B) The mirror forms a virtual image.
- (C) The mirror has positive focal length.

- A. Only A
- B. Only B
- C. Both A and B
- D. Both B and C



Q64 General Science

_____ is represented by the root apex's constantly dividing cells.

- A. Meristematic growth
- B. Germination
- C. Increase hormonal level
- D. Maturation

Q65 General Science

Which of the following reactions represents symbolic combination reaction?

- A. $A + B \rightarrow C$
- B. $XY \rightarrow X + Y$
- C. $PQ + R \rightarrow PR + Q$
- D. $AB + CD \rightarrow AC + BD$

Q66 General Science

All the compounds of which of the following sets belongs to the same homologous series?

- A. C_2H_6 , C_2H_4 , C_2H_2
- B. C_4H_8 , C_5H_8 , C_6H_{10}
- C. C_3H_8 , C_4H_{10} , C_5H_{12}
- D. C_6H_{10} , C_6H_{12} , C_6H_{14}

Q67 General Science

How many autosomes will be present in a sexually reproducing organism with the chromosome number $2n = 18$?

- A. 16
- B. 17
- C. 15
- D. 18



Q68 General Science

The apparent position of a star keeps on changing slightly because:

- A. the physical conditions of the atmosphere keep changing ✓
- B. the physical conditions of the atmosphere are stationary
- C. the atmosphere consists of a mixture of gases
- D. the atmosphere scatters star light

Q69 General Science

The magnetic field produced due to a circular coil carrying a current having six turns will be how many times that of the field produced due to a single circular loop carrying the same current?

- A. 2 times
- B. 4 times
- C. 6 times ✓
- D. 8 times

Q70 General Science

Calcium sulphate dihydrate is the chemical name of:

- A. gypsum ✓
- B. plaster of Paris
- C. washing soda
- D. baking powder

Q71 General Science

The formation of water from hydrogen and oxygen is an example of _____.

- A. combination reaction ✓
- B. decomposition reaction
- C. displacement reaction
- D. oxidation and reduction



Q72 General Science

Which of the following events takes place during diastole in the human heart?

- A. Blood enters the lungs
- B. Blood leaves the ventricle
- C. Blood enters the aorta
- D. Blood enters the ventricle



Q73 General Science

Three of the following statements pertaining to non-biodegradable plastics indicate their implications on animals, plants and our surrounding. Choose the odd one out.

- A. Reduce the fertility of the soil
- B. Plastic bags are durable carry bags
- C. Can prove fatal when eaten by animals
- D. Choke the drains



Q74 General Science

Which of the following is the most electropositive element?

- A. Ca
- B. Cs
- C. Mg
- D. Na



Q75 General Science

Identify the FALSE statement.

- A. The sunflower is a phototropic plant.
- B. Hydrotropism is the tendency to grow in moist areas, i.e., the movement of roots towards high humidity.
- C. Geotropism is demonstrated by the downward migration of roots.
- D. The growth of pollen tubes towards ovules is an example of geotropism



Q76 General Science

A magnet, when moved near a coil, produces an induced current. Which of the following method(s) can be used to increase the magnitude of the induced current?

- (i) Increasing the number of turns in the coil
- (ii) Increasing the speed of the magnet
- (iii) Increasing the resistivity of the wire of the coil

A. Only (i)

B. Only (iii)

C. Both (i) and (ii)



D. Both (ii) and (iii)

Q77 General Science

The first and second members, respectively, of the ketone homologous series are:

A. methanone, ethanone

B. ethanone, propanone

C. propanone, butanone



D. butanone, propanone

Q78 General Science

Magnification produced by a lens is equal to:

A. $-v/u$

B. v/u



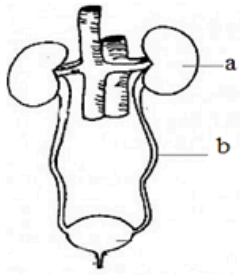
C. $-u/v$

D. u/v



Q79 General Science

The diagram of the human excretory system is given below. Select the option that correctly shows the functions of parts 'a' and 'b'.



- A. a - Formation of urine, b - Throwing urine outside the body
- B. a - Formation of urine, b - Carrying urine for storage
- C. a - Collection of urine, b - Formation of urine
- D. a - Formation of urine, b - Collection of urine

Q80 General Science

Two wires A and B are made of same material and have the same length but different cross-sectional areas. If the resistance of wire A is 9 times the resistance of wire B, the ratio of the radius of wire A to that of wire B is:

- A. 1 : 9
- B. 9 : 1
- C. 1 : 3
- D. 3 : 1

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following was the guest nation at the Hyderabad Literary Festival 2022?

- A. Canada
- B. United Kingdom
- C. Australia
- D. China



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Q82 General Awareness and Current Affairs

As per NITI Aayog National Multidimensional Poverty Index – 2021, which state is the poorest?

- A. Jharkhand
- B. Chhattisgarh
- C. Bihar
- D. Himachal Pradesh



Q83 General Awareness and Current Affairs

Which Article deals with protection of life and personal liberty?

- A. Article 31
- B. Article 21
- C. Article 22
- D. Article 12



Q84 General Awareness and Current Affairs

As of January 2022, which country has become the world's top exporter of cucumber?

- A. Canada
- B. China
- C. India
- D. America



Q85 General Awareness and Current Affairs

Safflower, shisham, khair, arjun and mulberry are the main trees of which vegetation?

- A. Tropical Deciduous Forests
- B. Montane Forests
- C. Mangrove Forests
- D. Tropical Evergreen Forests



Q86 General Awareness and Current Affairs

Select the correct group of scientists who are the recipients of the Shanti Swarup Bhatnagar Prize for Science and Technology, 2021.

- A. Dr. Amit Singh, Dr. Kanishka Biswas and Dr. Anish Ghosh
- B. Dr. Vatsasla Thirumalai, Dr. Abhijit Mukharjee and Dr. Subi Jacob George
- C. Dr. Bushra Ateeq, Dr. Ritesh Agarwal and Dr. Surajit Dhara
- D. Dr. Subimal Ghosh, Dr. Neena Gupta and Dr. Dhiraj Kumar



Q87 General Awareness and Current Affairs

The country's first commercial-scale biomass-based hydrogen plant is coming up in which district of Madhya Pradesh?

- A. Khandwa
- B. Betul
- C. Anuppur
- D. Agar Malwa



Q88 General Awareness and Current Affairs

The rate of increase in ex-ante consumption due to a unit increment in income is called _____.

- A. marginal propensity to save
- B. average propensity to save
- C. marginal propensity to consume
- D. average propensity to consume



Q89 General Awareness and Current Affairs

Which of the following established by Raja Rammohan Roy was a precursor in socio-religious reforms in Bengal?

- A. Dharma Sabha
- B. Atmiya Sabha
- C. Arya Samaj
- D. Prarthana Samaj



Q90 General Awareness and Current Affairs

In which of the following years was The Indian Official Language Act passed?

- A. 1953
- B. 1973
- C. 1963
- D. 1936



Q91 General Awareness and Current Affairs

The Asiatic lion population largely resides in the protected park area of _____.

- A. Balphakram National Park
- B. Anamudi Shola National Park
- C. Gir National Park
- D. Bhitarkanika National Park



Q92 General Awareness and Current Affairs

Which team won the Santosh Trophy 2021-22, the 75th edition of the Football tournament?

- A. Karnataka
- B. West Bengal
- C. Kerala
- D. Meghalaya



Q93 General Awareness and Current Affairs

Which of the following was the first city planned by Mughal Empire?

- A. Fatehpur Sikri
- B. Islamabad
- C. Agra
- D. Delhi



Q94 General Awareness and Current Affairs

Who is the Chief Election Commissioner of India as on March 2022?

- A. Anup Chandra Pandey
- B. Rajiv Kumar
- C. Sushil Chandra
- D. KK Menon



Q95 General Awareness and Current Affairs

Which of the following medicinal plants is the best remedy to treat blood pressure?

A. Sarpagandha



B. Navmallika

C. Rajnigandha

D. Alukam

Q96 General Awareness and Current Affairs

The Panchayati Raj Institutions DO NOT exist in which of the following states as on June 2022?

A. Tripura

B. Manipur

C. Nagaland



D. Arunachal Pradesh

Q97 General Awareness and Current Affairs

Who is the Controller General of Accounts (CGA) as on 15th June 2022?

A. Deepak Das

B. Soma Roy

C. Girraj Prasad Gupta

D. Sonali Singh



Q98 General Awareness and Current Affairs

About 85% of the Indian population of colonial India depended on which of the following sector of the economy?

- A. Agriculture ☒
- B. Handicraft industries
- C. Transport
- D. Hospitality and real estate

Q99 General Awareness and Current Affairs

Which Indian Badminton Player won a silver medal in the All England Badminton Championships 2022 in Birmingham?

- A. Lakshya Sen ☒
- B. PV Sindhu
- C. Kidambi Srikanth
- D. Saina Nehwal

Q100 General Awareness and Current Affairs

What is the assistance to be given to the elderly, per person per month, after the age of 60 years, under the 'Jiyo Parsi' Scheme with effect from 22 October 2021?

- A. ₹10,000 ☒
- B. ₹15,000
- C. ₹20,000
- D. ₹25,000



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A group of people contains men, women and children. If 40% of them are men, 35% are women and rest are children, and their average weights are 70 kg, 60 kg and 30 kg, respectively. The average weight of the group is:

A. 56.5 gm

B. 45.5 gm

C. 45.5 kg

D. 56.5 kg



Q2 Mathematics

A shadow of a tower standing on a level ground is found to be $40\sqrt{3}$ meters longer when the Sun's altitude is 30° than when it is 60° . The height of the tower is:

A. 40 m

B. 60 m

C. 50 m

D. 70 m



Q3 Mathematics

A sum, when invested at $12\frac{1}{2}\%$ simple interest per annum, amounts to ₹8,250 after 2 years. What is the simple interest?

A. ₹1,650

B. ₹1,700

C. ₹1,820

D. ₹1,910



Q4 Mathematics

Simplify: $6(x^3 - 2x^2 + 3x) - (x^3 + 2x - 3)$.

A. $5x^3 - 12x^2 + 16x + 3$ B. $5x^3 - 12x^2 + 16x - 3$ C. $5x^3 + 12x^2 + 16x + 3$ D. $5x^3 + 12x^2 + 16x - 3$ 

Q5 Mathematics

The sum of two numbers is 32 and one of them exceeds the other by 18. Find the greater number.

A. 24

B. 28

C. 27

D. 25

**Q6 Mathematics**

If $40 : 35 :: 35 : x$, find the value of x .

A. $\frac{49}{16}$

B. $\frac{245}{8}$



C. $\frac{49}{14}$

D. $\frac{49}{8}$

Q7 Mathematics

Simplify $\frac{8^2 \times 3^3}{\sqrt{64} \times \sqrt{81}}$.

A. 27

B. 72

C. 64

D. 24

**Q8 Mathematics**

Raju and Raman can complete a piece of work in 12 days and 16 days, respectively. If they work on alternate days, starting with Raju, in how many days will the work be completed?

A. $13\frac{1}{3}$ days

B. $13\frac{2}{3}$ days



C. $14\frac{1}{3}$ days

D. $14\frac{2}{3}$ days



Q9 Mathematics

The sum of the present ages of a father and his daughter is 80 years. Eight years ago, the father's age was seven times the age of his daughter. Eight years from now, what will be the daughter's age?

A. 24 years



B. 22 years

C. 20 years

D. 18 years

Q10 Mathematics

The difference between the selling price on a discount of 32% and two successive discounts of 20% each on a certain bill is ₹25. Find the actual amount of the bill.

A. ₹200

B. ₹425

C. ₹625



D. ₹576

Q11 Mathematics

A car can cover 275 km in 5 hours. If its speed is reduced by 5 km/h, then how much time will the car take to cover a distance of 250 km?

A. 4 hr 30 min

B. 5 hr



C. 5 hr 30 min

D. 6 hr

Q12 Mathematics

What is the nature of the roots of the quadratic equation $x^2 - 5x + 7 = 0$?

A. Not real



B. Real, irrational, unequal

C. Real, rational, unequal

D. Real, rational, equal



Q13 Mathematics

Which of the following pairs is NOT coprime?

A. (15, 17)

B. (11, 13)

C. (17, 23)

D. (17, 34) ✓

Q14 Mathematics

The total surface area of a cylinder of diameter 10 cm is 330 square centimeters. Find the height of the cylinder?

A. 2.5 cm

B. 5.5 cm ✓

C. 6.5 cm

D. 10.5 cm

Q15 Mathematics

Find the roots of the equation $6p^2 - 5p - 6 = 0$.

A. $-\frac{2}{3}$ and $\frac{3}{2}$ ✓

B. $\frac{2}{3}$ and $\frac{2}{3}$

C. $\frac{3}{4}$ and $\frac{3}{2}$

D. $-\frac{1}{3}$ and $\frac{4}{3}$

Q16 Mathematics

Find the number of sides in a regular polygon if its each interior angle is 160° .

A. 14

B. 15

C. 17

D. 18 ✓



Q17 Mathematics

A shopkeeper sells an item at a profit of 25% and dishonestly uses a weight that is 30% less than the actual weight. Find his total profit%.

A. 65.75%

B. 42%

C. 23%

D. 78.57%

**Q18** Mathematics

Mohit's salary is ₹15,000 per month. He spends ₹5,000 on house rent, ₹2,000 on bills and rest of the amount is his monthly savings. Find his savings in a year, if in the month of his birthday he spent his complete monthly saving for birthday celebration.

A. ₹88,000



B. ₹96,000

C. ₹8,000

D. ₹17,000

Q19 Mathematics

If $d^2 + \frac{1}{d^2} = 18$, and $d > \frac{1}{d}$ then the value of $d^3 - \frac{1}{d^3}$ is:

A. 76



B. 81

C. 91

D. 64

Q20 Mathematics

Simplify $\left(\frac{1}{3}\right)^{-3} + \left(\frac{1}{5}\right)^{-4} + \left(\frac{1}{15}\right)^{-2}$.

A. 777

B. 877



C. 756

D. 856



Q21 Mathematics

Find the value of $325 \times 5 + 31 \times 21 - 22 \times (63 - 52)$.

A. 2034



B. 2044

C. 2024

D. 2014

Q22 Mathematics

Find the median class of:

CI	0-50	50-100	100-150	150-200
F	12	15	13	10

A. 0-50

B. 50-100



C. 100-150

D. 150-200

Q23 Mathematics

The parallel sides of a trapezium and its height are in an arithmetic progression with a common difference of 4. If the height is the highest term and the area of the trapezium is 160 sq. units, find the ratio of length of greatest parallel side to that of the smallest parallel side.

A. 5: 1

B. 1: 5

C. 3: 2



D. 2: 3

Q24 Mathematics

The HCF of 108 and 144 is _____

A. 36



B. 12

C. 24

D. 16



Q25 Mathematics

How many spherical solid marbles, each having a radius of 0.3 cm, can be made from a solid sphere having a radius of 6 cm?

A. 9000

B. 8500

C. 8000



D. 7500

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	4	%	7	3	#	*	9	@	6
Code	X	N	B	J	H	L	Y	F	R

Conditions:

- (i) If the first element is an even number and the last a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last an even number, the first and last elements are to be retained as it is (i.e first and last elements won't get coded).

Question: 7 * % 3 @ 6

A. BLNJFR

B. 7YNJF6

C. BLN3FR

D. 7LNJF6

**Q27 General Intelligence and Reasoning**

From point X, a person walks 45 m towards the east. He then takes a left turn and walks 40 m. He then takes a right turn and walks 90 m. He then takes a right turn and walks 60 m. Finally, he takes a right turn and walks 135 m to reach point Y. How far and in which direction is point X from point Y? (All turns are 90 degree turns only)

A. 20 m, South

B. 20 m, North



C. 15 m, South

D. 15 m, North



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Q28 General Intelligence and Reasoning

Seven boxes, A, B, C, D, E, F and G, are kept one over the other but not necessarily in the same order. Only two boxes are kept between G and B. B is kept at the bottom. C is kept on one of the positions above D. F is kept immediately above D. A is kept fifth from the bottom. E is kept at the top. How many boxes are kept between D and A?

A. One

B. Two

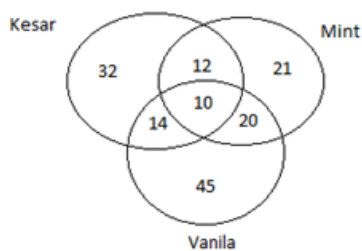


C. Three

D. Four

Q29 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of people who like different flavours of ice-cream.



How many people like Mint but NOT Kesar flavoured ice-cream?

A. 21

B. 33

C. 41



D. 51



Q30 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the given assumptions is/are implicit in the statement.

Statement:

Due to the failure of the main grid, power supply to many parts of the city was affected.

Assumptions:

- I. The main grid is responsible for transmission of power to different parts of the city.
- II. Most people have backup power installations at their homes to manage during times when power supply is disrupted.

- A. Only assumption I is implicit ☒
- B. Only assumption II is implicit
- C. Neither assumption I nor II is implicit
- D. Both assumptions I and II are implicit

Q31 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

PORTUGAL : UTRPOLGA : : URANUS : UUSRNA : : AMRITSAR : ?

- A. TSMIRRAA
- B. AATTRSMI
- C. TRRSMIAA
- D. TSRRMIAA ☒

Q32 General Intelligence and Reasoning

Six friends, K, L, M, N, O and P, are sitting around a circular table facing the centre of the table. O is second to the left of N. P is second to the right of K. M is to the immediate right of L. N and L are immediate neighbours. Who is sitting to the immediate right of P?

- A. O
- B. L
- C. K
- D. N ☒



Q33 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '+' means '×' and '×' means '+', what will come in place of the question mark (?) in the following equation?

$$18 - 3 \times 14 \div 2 + 12 = ?$$

A. 19

B. 21

C. 22



D. 24

Q34 General Intelligence and Reasoning

In a certain code language, 'SIGMA' is written as 'FVTZN' and 'FNYRQ' is written as 'SALED'. How will 'ARJUN' be written in that language?

A. NEWHA



B. BPWAH

C. EWNAH

D. WENAH

Q35 General Intelligence and Reasoning

In a queue of travellers at the emigration counter facing north, Pankaj is 9th from the extreme left end and Puja is 17th from extreme right end. If the positions of Pankaj and Puja are interchanged, then the new position of Pankaj will be 15th from the extreme left end. Find the number of travellers between Puja and Pankaj.

A. 4

B. 5



C. 6

D. 3

Q36 General Intelligence and Reasoning

Five friends A, B, C, D and E are sitting in a straight row, facing north. A is not at the exact centre position of the row. C is second from one extreme end, while fourth from the other extreme end. B and D sit at the extreme ends of the row. Who sits at the exact centre position of the row?

A. E



B. A

C. C

D. D



Q37 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $J \leq H \leq G = R > Z = E > D$

A. $Z < D$

B. $D > R$

C. $H > R$

D. $J \leq G$



Q38 General Intelligence and Reasoning

Study the given number series and answer the question that follows.

2 6 7 4 9 3 6 5 1 9 5 2 4 5 9 4 2 3 7 1

How many even numbers are immediately preceded by an odd number and immediately followed by a prime number?

A. 1

B. 2



C. 3

D. 4

Q39 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 are not allowed.)

(80, 16, 20)

(144, 36, 24)

A. (122, 12, 6)

B. (512, 25, 16)

C. (189, 49, 27)



D. (224, 36, 40)



Q40 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All jokers are circuses.
2. All circuses are equestrians.
3. Some jokers are spectacles.

Conclusions:

- I. Some equestrians are spectacles.
II. Some circuses are jokers.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow ✓

Q41 General Intelligence and Reasoning

Each vowel in the word 'EXPLAIN' is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter, thus formed, is arranged in alphabetical order, which letter will be third from the right end?

- A. M ✓
- B. O
- C. Q
- D. Y

Q42 General Intelligence and Reasoning

Which of the following number will replace the question mark (?) and complete the given number series?

4, 5, 12, 39, 160, ?

- A. 850
- B. 805 ✓
- C. 800
- D. 804



Q43 General Intelligence and Reasoning

If '+' means '×', '×' means '+', '÷' means '−', and '−' means '÷', what will come in place of the question mark (?) in the following equation?

$$13 - 17 + 24 \div 54 \times 18 + 28 \times 14 = ?$$

A. 225

B. 380

C. 415



D. 510

Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

17, 30, 44, 59, 75, ?

A. 85

B. 92



C. 102

D. 111

Q45 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$$64 : 81 :: 121 : 144 :: 169 : ?$$

A. 216

B. 200

C. 225

D. 196



Q46 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

B _ X T _ _ H Y _ M B _ Z _ M

A. MHBHTT

B. TMHBHT

C. HMBTHT



D. BMHHTT



Q47 General Intelligence and Reasoning

Umesh is standing facing the south-west direction. He then takes a 90° clockwise turn. After that, he takes a 135° clockwise turn. He finally takes a 90° anticlockwise turn. In which direction is he facing now?

- A. North-east
- B. North-west
- C. North
- D. West

Q48 General Intelligence and Reasoning

This question is based on the following 3-digit numbers.

543 769 552 342 245

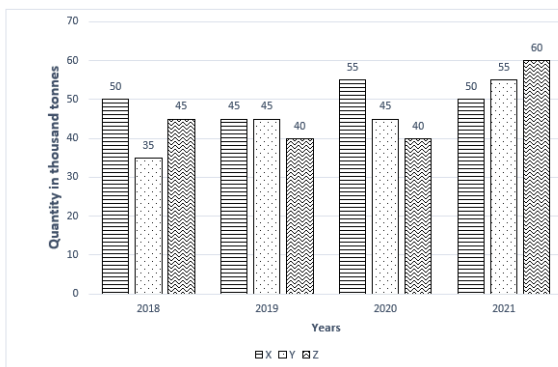
(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

If in each of the numbers, 1 is added to the first digit of every number, in how many numbers will the first digit be exactly divisible by the third digit of the same number?

- A. Two
- B. Three
- C. Four
- D. Five

Q49 General Intelligence and Reasoning

The bar graph given below shows the data on the production of milk products (in thousand tonnes) by three branches, X, Y and Z, of a dairy product company over the years. Study the graph and answer the question.



For which branch(es) of the dairy product company was the average production for the given 4 years the minimum?

- A. Branch X
- B. Branch Y
- C. Branch Z
- D. Branches Y and Z



Q50 General Intelligence and Reasoning

If '+' means '÷', '-' means '×', '×' means '+', '÷' means '-', what will come in place of the question mark (?) in the following equation?

$$9 \times 8 + 4 - 8 \div 5 = ?$$

A. 35

B. 18

C. 23

D. 20



Q51 General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $Y < O \leq G \leq K = U > L > P$

A. $O = P$

B. $Y > L$

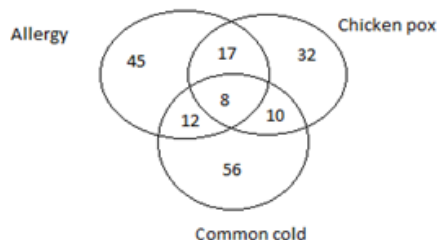
C. $K > P$



D. $G = Y$

Q52 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons who have suffered from different diseases.



How many people have suffered from both Allergy and Chicken pox but NOT Common cold?

A. 25

B. 17



C. 32

D. 45



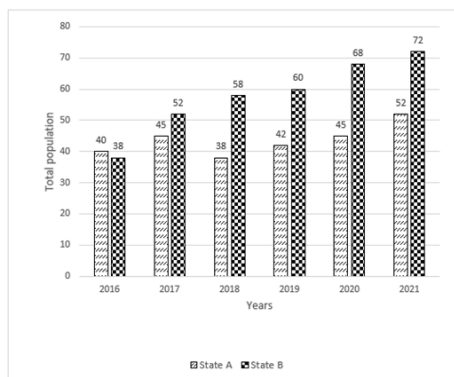
Q53 General Intelligence and Reasoning

If 1 January 2011 was a Saturday, then what day of the week was 31 December 2011?

- A. Friday
- B. Saturday
- C. Sunday
- D. Monday

Q54 General Intelligence and Reasoning

The bar graph given below shows the population of two states, A and B, (in lakhs) over the years. Study the graph and answer the question.



What is the approximate average population of state B for all the given years?

- A. 65 lakhs
- B. 58 lakhs
- C. 62 lakhs
- D. 70 lakhs

Q55 General Intelligence and Reasoning

All 72 students of a class are standing in a row facing the north. Shalabh is standing at the extreme left end of the row. Only 8 students are standing between Shalabh and Kimaya. Virali is 26th from the extreme right end of the row. How many students are standing between Virali and Kimaya?

- A. 35
- B. 36
- C. 37
- D. 38



Q56 General Science

Select the INCORRECT option with reference to the Chipko Andolan.

- A. It forced the government to rethink their priorities in the use of forest produce
- B. People realised that forests are needed to maintain the quality of soil
- C. It involved the community in forest conservation efforts
- D. It was a violent movement to save the trees



Q57 General Science

Which of the following is the storage carbohydrate in plants?

- A. Glucose
- B. Starch
- C. Sucrose
- D. Glycogen



Q58 General Science

Which of the following is NOT a unit of heat energy?

- A. Joule
- B. Watt second
- C. Calorie
- D. Kilowatt



Q59 General Science

Which of the following has the largest atomic radius?

- A. Fluorine
- B. Oxygen
- C. Chlorine
- D. Iodine



Q60 General Science

The current through horizontal straight wire flows from west to east. The direction of the magnetic field lines as viewed from the east end will be:

- A. clockwise in a plane perpendicular to the wire
- B. anticlockwise in a plane perpendicular to the wire ✓
- C. clockwise in the plane of the wire
- D. anticlockwise in the plane of the wire

Q61 General Science

Which of the following rules is used to determine the force on a current carrying conductor kept inside a magnetic field ?

- A. Fleming's right-hand rule
- B. Maxwell's corkscrew rule
- C. Fleming's left-hand rule ✓
- D. Right hand thumb rule

Q62 General Science

How will the plant be affected if the rate of respiration becomes more than the rate of photosynthesis?

- A. Plant growth will increase due to more energy produced.
- B. Plant growth will slow down.
- C. More food will be oxidised than that produced, and plant will starve and die. ✓
- D. Plants will store a lot amount of food

Q63 General Science

The _____ DOES NOT function as an excretory organ in humans.

- A. skin
- B. lungs
- C. small intestine ✓
- D. large intestine



Q64 General Science

The property/properties that must be possessed by a material to be chosen for making heating element of heating devices is/are:

- (i) high melting point
- (ii) high resistivity
- (iii) low resistance

A. Only (i) and (ii)



B. Only (ii) and (iii)

C. Only (i) and (iii)

D. (i), (ii), (iii)

Q65 General Science

The magnification produced by a spherical mirror is -0.5 . The image formed by the mirror is:

A. real, inverted and enlarged

B. real, inverted and diminished



C. virtual, erect and enlarged

D. virtual, erect and diminished

Q66 General Science

Some plants can also produce new plants from their roots. An example of such a plant is _____.

A. Sweet Potato



B. Cactus

C. Ginger

D. Bryophyllum

Q67 General Science

Which of the following chemical reactions represents the chlor-alkali process?

A. $\text{Ca(OH)}_2 + \text{Cl}_2 \rightarrow \text{CaOCl}_2 + \text{H}_2\text{O}$

B. $\text{NaCl} + \text{H}_2\text{O} + \text{CO}_2 + \text{NH}_3 \rightarrow \text{NH}_4\text{Cl} + \text{NaHCO}_3$

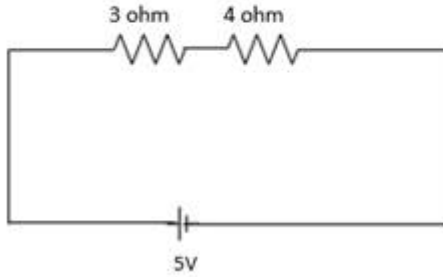
C. $\text{NaHCO}_3 + \text{H}^+ \rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{Sodium salt of acid}$

D. $2 \text{NaCl (aq)} + 2 \text{H}_2\text{O (l)} \rightarrow 2 \text{NaOH (aq)} + \text{Cl}_2 \text{ (g)} + \text{H}_2 \text{ (g)}$



Q68 General Science

The current across the 3 ohm resistance in the given circuit is:



A. $7/5$ A

B. $5/7$ A



C. $3/5$ A

D. $5/3$ A

Q69 General Science

Which of the following line(s) act as a normal to a spherical mirror?

- (i) Line joining the pole and centre of curvature
- (ii) Line joining the centre of curvature and point of incidence
- (iii) Line joining focus and point of incidence

A. Both (i) and (ii)



B. Both (ii) and (iii)

C. Both (i) and (iii)

D. (i), (ii) and (iii)

Q70 General Science

_____ aid (s) in the emulsification of fat.

A. Pepsin

B. HCl

C. Bile salts



D. Vit- K Trypsin



Q71 General Science

Some effects of large production of biodegradable waste are mentioned below. Choose the **INCORRECT** statement.

- A. Amount of waste sent to landfills increases ✓
- B. Gives out foul smell
- C. Replenishment of soil nutrients
- D. Act as breeding ground for mosquitoes and spread diseases

Q72 General Science

Carbon is able to form stable compounds because of:

- A. its smaller atomic size ✓
- B. Its ability to form covalent bond
- C. the presence of p-orbital
- D. its allotropic forms

Q73 General Science

Planets do not twinkle because

- A. they scatter less light
- B. they act as extended source of light ✓
- C. they act as a point source of light
- D. they scatter more light

Q74 General Science

A magnesium ribbon burns with a dazzling flame in air (oxygen) and changes into a white substance 'X'. The X is:

- A. MgO ✓
- B. Mg(OH)_2
- C. MgCO_3
- D. Mg



Q75 General Science

Compounds C_2H_6 and C_3H_8 are differ by _____ unit and belong to _____ series.

- A. CH_3 , heterogeneous
- B. CH_2 , heterogeneous
- C. CH_2 , homologous
- D. CH_3 , homologous

Q76 General Science

Some features of genes are mentioned below. Which option states the INCORRECT feature of genes?

- A. They are segments of DNA.
- B. They control traits by producing proteins.
- C. They do not undergo any change.
- D. Each germ cell has one gene set.

Q77 General Science

Consider the below statements and identify the correct answer.

Statement I: Metallic character decreases across a period as we move from left to right.

Statement II: The effective nuclear charge acting on the valence shell electrons increases across a period, the tendency to lose electrons will decrease.

- A. Both statements are correct. Statement II is correct explanation of Statement I.
- B. Both statements are correct. Statement I is correct explanation of Statement II.
- C. Only Statement I is correct.
- D. Only Statement II is correct.



Q78 General Science

Match the following:

Substance	pH
i. Lemon juice	a. 14
ii. Gastric juice	b. 1.2
iii. Milk of magnesia	c. 2.2
iv. Sodium hydroxide solution	d. 10

A. i-a, ii-b, iii-c, iv-d

B. i-c, ii-b, iii-d, iv-a



C. i-c, ii-b, iii-a, iv-d

D. i-d, ii-b, iii-c, iv-a

Q79 General Science

What happens when sodium metal reacts with water?

A. Hydrogen gas and sodium hydroxide solution are produced.



B. Chlorine gas and sodium hydroxide solution are produced.

C. No reaction takes place.

D. Only sodium hydroxide solution is produced.

Q80 General Science

The focal length of a diverging lens is 50 cm. The power of the lens is:

A. 5 D

B. -5 D

C. 2 D

D. -2 D



Q81 General Awareness and Current Affairs

India is the third largest country in South Asia, with _____ of Earth's land area.

- A. 6.5%
- B. 5.7%
- C. 4.3%
- D. 2.3%



Q82 General Awareness and Current Affairs

Article 243E of the Indian Constitution is related to which feature of Panchayat?

- A. Reservation of seat
- B. Constitution of Panchayats
- C. Composition of Panchayats
- D. Duration of Panchayat



Q83 General Awareness and Current Affairs

As of July 2022, PM-VIKAS is aligned to the 15th Finance Commission cycle period up to _____ and is a Central Sector (CS) scheme under the Ministry of Minority Affairs.

- A. 2022-23
- B. 2025-26
- C. 2024-27
- D. 2021-23



Q84 General Awareness and Current Affairs

Who has developed the Tamanna tool related to education in India?

- A. Central Board of Secondary Education (CBSE) and National Council of Educational Research and Training (NCERT) ✓
- B. University Grants Commission
- C. All India Council for Technical Education
- D. Indian Certificate of Secondary Education

Q85 General Awareness and Current Affairs

When was Bandhan Bank formed?

- A. 2011
- B. 2013
- C. 2015 ✓
- D. 2017

Q86 General Awareness and Current Affairs

The 36th National Games of India will take place in _____ cities of Gujarat between 27 September and 10 October 2022.

- A. four
- B. six ✓
- C. eight
- D. five

Q87 General Awareness and Current Affairs

In which of the following years was the first Republic Day of India celebrated?

- A. 1947
- B. 1948
- C. 1949
- D. 1950 ✓



Q88 General Awareness and Current Affairs

Which Article of the Constitution of India deals with duties of Prime Minister as respects the furnishing of information to the President, etc.?

A. Article 62

B. Article 69

C. Article 73

D. Article 78



Q89 General Awareness and Current Affairs

Which two banks have merged with Punjab National Bank in 2020?

A. Syndicate Bank and Allahabad Bank

B. Oriental Bank of Commerce and United Bank of India



C. Dena Bank and Vijaya Bank

D. Andhra Bank and Corporation Bank

Q90 General Awareness and Current Affairs

The Scheme of Assistance to National Sports Federations (NSFs) has been extended to train and field national teams for national and international competitions between:

A. 2022 and 2026



B. 2022 and 2025

C. 2022 and 2024

D. 2021 and 2025

Q91 General Awareness and Current Affairs

The bends formed in the river when river water erodes its banks on the outside of the channel are known as:

A. Tributaries

B. Distributaries

C. Braided channels

D. Meanders



Q92 General Awareness and Current Affairs

Which of the following famous churches of India is INCORRECTLY matched with its location?

A. St. Paul Cathedral - Kolkata

B. Basilica of Bom Jesus - Goa

C. Santa Cruz Basilica - Kochi

D. St. John in the Wilderness Church - Pondicherry



Q93 General Awareness and Current Affairs

Ramakrishna Mission was founded in 1897 by _____.

A. Ramkrishna Paramhansa

B. Swami Vivekanand



C. Dayanand Saraswati

D. Raja Ram Mohan Roy

Q94 General Awareness and Current Affairs

Which languages are to be used for all or any of the official purposes of the State of Tripura as per the Tripura Official Languages Act, 1964?

A. Bengali and Kokborok



B. Telugu and Lepcha

C. Konkani and English

D. Hindi and Bengali



Q95 General Awareness and Current Affairs

In which of the following years was a joint venture signed between the Government of India and Suzuki Motor Corporation, to launch the Maruti 800 car for the first time in India?

A. 1998

B. 1978

C. 1986

D. 1982



Q96 General Awareness and Current Affairs

The Constitution of India has _____ parts and _____ schedules.

A. 10; 22

B. 22; 10

C. 12; 25

D. 25; 12



Q97 General Awareness and Current Affairs

Which of the following is an independent financial institution established in 1990 under an Act of the Indian Parliament, with the objective of assisting in the growth and development of Micro, Small and Medium Enterprises (MSMEs) sector?

A. FSDC

B. MSS

C. NBFC

D. SIDBI



Q98 General Awareness and Current Affairs

Which state has become India's first state to launch AVGC (Animation, Visual Effects, Gaming, and Comics) Centre of Excellence?

- A. Kerala
- B. Jharkhand
- C. Karnataka ✓
- D. Haryana

Q99 General Awareness and Current Affairs

Where was the first Biosafety Level-3 (BSL-3) Containment Mobile Laboratory inaugurated in February 2022 to strengthen the healthcare infrastructure of South Asia?

- A. Nagpur
- B. Pune
- C. Nashik ✓
- D. Mumbai

Q100 General Awareness and Current Affairs

The Dam Rehabilitation and Improvement Project was started in which year?

- A. 2002
- B. 2012 ✓
- C. 2021
- D. 2009



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Rani borrowed an amount of ₹2,00,000 from the bank to start a business. How much simple interest will she pay at the rate of 7% per annum after 2 years?

- A. ₹26,000
- B. ₹24,000
- C. ₹28,000
- D. ₹28,500



Q2 Mathematics

The diagonal of a quadrilateral is 32 m long, and its two offsets are 6 m and 10 m long. The area of the quadrilateral is

- A. 220 m^2
- B. 250 m^2
- C. 256 m^2
- D. 276 m^2



Q3 Mathematics

Find the nature of the roots of $x^2 - 14x + 49 = 0$

- A. No real roots
- B. Real and equal roots
- C. Distinct roots
- D. Imaginary roots



Q4 Mathematics

Simplify: $3x(x - 6) + x^2 + 6x - 9 + 24 - x^3$.

- A. $15 + 12x + 4x^2 - x^3$
- B. $15 - 12x + 4x^2 - x^3$
- C. $15 + 12x + 4x^2 + x^3$
- D. $15 - 12x + 4x^2 + x^3$



Q5 Mathematics

A father is presently 3 times his daughter's age. After 10 years he will be twice as old as her. Find the daughter's present age.

- A. 5 years
- B. 10 years
- C. 15 years
- D. 20 years

**Q6 Mathematics**

A number, when divided by the sum of 335 and 265, gives three times the difference between 335 and 265 as the quotient and 35 as the remainder. What is that number?

- A. 124535
- B. 128235
- C. 126035
- D. 127535

**Q7 Mathematics**

Two numbers are in the ratio 5: 7. If their HCF is 17, then find the numbers.

- A. 68, 85
- B. 85, 102
- C. 102, 136
- D. 85, 119

**Q8 Mathematics**

Find the value of $2\sec^2 A + 4\operatorname{cosec}^2 A - 2\tan^2 A - 4\cot^2 A$.

- A. 2
- B. 4
- C. 6
- D. 8



Q9 Mathematics

Simplify: $6^2 + 7^2 + \sqrt{16}$

A. 98

B. 89

C. 94

D. 80

Q10 Mathematics

In $\triangle ABC$ and $\triangle DEF$, $\angle A = 40^\circ$, $\angle B = 55^\circ$, $\angle D = 55^\circ$, $\angle E = 85^\circ$ and $m(\overline{AB}) = m(\overline{FD})$. Then which of the options below is correct?

A. $\triangle ABC \cong \triangle FDE$

B. $\triangle ABC \cong \triangle DFE$

C. $\triangle ABC \cong \triangle FED$

D. $\triangle ABC \cong \triangle EDF$

Q11 Mathematics

Simplify $1.\overline{24}$ as an improper fraction.

A. $\frac{41}{33}$

B. $\frac{124}{99}$

C. $\frac{123}{90}$

D. $\frac{91}{90}$

Q12 Mathematics

Ravi started a business by investing ₹50,000. After six months Raju joined him and invested an amount of ₹1,00,000. In one year since Ravi invested, they earned a profit of ₹63,000. What is Raju's share of the profit?

A. ₹31,500

B. ₹32,500

C. ₹32,000

D. ₹31,000



Q13 Mathematics

A student scored 80/80 marks in term 1 and 75/90 marks in term 2. What will be his percentage of final score, if the weightage given to the terms is 40% and 60%, respectively. (correct to the nearest integer)

A. 70%

B. 95%

C. 90% ☒

D. 85%

Q14 Mathematics

The population of a town is 2,24,375. If it increases at the rate of 4% per annum, what will be its population 2 years hence?

A. 2,32,846

B. 2,36,864

C. 2,40,468

D. 2,42,684 ☒**Q15** Mathematics

A triangle has sides of length 5 cm, 7 cm and 10 cm. Find the area of the triangle (in cm^2).

A. 25

B. $2\sqrt{66}$ ☒C. $7\sqrt{10}$

D. 350



Q16 Mathematics

The value of $\left(a + \frac{1}{b}\right)^r \left(a - \frac{1}{b}\right)^s \div \left(b + \frac{1}{a}\right)^r \left(b - \frac{1}{a}\right)^s$ is:

A. $\left(\frac{a}{b}\right)^{r+s}$



B. $\left(\frac{b}{a}\right)^{r+s}$

C. $(ab)^{r+s}$

D. $\frac{a^r}{b^s}$

Q17 Mathematics

A blanket is sold for ₹1,148, which results in a loss of 30%. For how much should it be sold to gain 5%?

A. ₹1,734

B. ₹1,423

C. ₹1,543

D. ₹1,722



Q18 Mathematics

Kohli is younger than Rohit by 3 years. If the ages of Kohli and Rohit are in the ratio 7 : 8, how old is Kohli?

A. 18 years

B. 27 years

C. 21 years



D. 24 years

Q19 Mathematics

For a trip of 800 km, a truck travels the first 300 km at a speed of 50 km/h. At what speed should it cover the remaining distance, so that the average speed is 60 km/h?

A. $\frac{600}{13}$ km/h

B. 52 km/h

C. $\frac{750}{11}$ km/h



D. 72 km/h



Q20 Mathematics

If two angles of a triangle measure 60° and 80° , respectively, then the measure of the third angle of this triangle is:

A. 40°



B. 50°

C. 60°

D. 70°

Q21 Mathematics

The price of an article is increased by 20% and then two successive discounts of 5% each are allowed. The selling price of the article is _____ above its cost price.

A. 9.2%

B. 6.9%

C. 7.8%

D. 8.3%

**Q22** Mathematics

Find the quadratic equation that has $(1 + \sqrt{3})$ as one of its roots.

A. $x^2 + \sqrt{3}x + 1 = 0$

B. $x^2 - 2x - 2 = 0$



C. $x^2 + 2x + 1 = 0$

D. $x^2 + 2x + 2 = 0$

Q23 Mathematics

A 210 m long train crosses a man walking at a speed of 4.5 km/h in the opposite direction in 12 seconds. What is the speed (in km/h) of the train?

A. 58.5



B. 59.5

C. 60.5

D. 61.5



Q24 Mathematics

A 91 cm-long wire is cut into two pieces so that one piece length is three-fourth of the other. Find the length of the shorter piece.

A. 39 cm



B. 36.23 cm

C. 42.17 cm

D. 38 cm

Q25 Mathematics

Two trains of equal speed are running in opposite directions. If their lengths are 120 metres and 140 metres and they cross each other in 10 sec, then find the speed of each train.

A. 10 m/s

B. 13 m/s



C. 14 m/s

D. 16 m/s

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Mahesh started from a point facing towards the west, turned left and walked for X m, then turned right and walked for 22 m, then turned left and walked for 11 m, and then turned left again and walked for 22 m. He is exactly 21 m away from the starting point. What is the value of X which was covered in the first leg of his journey?

(All turns are 90 degree turns only)

A. 10 m



B. 11 m

C. 12 m

D. 21 m

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Q27 General Intelligence and Reasoning

Answer the following question which is based on the given four letter clusters.

STED, LAYM, JOEK, CLDP

If in each of the clusters, each letter is changed to the next letter in the English alphabetical order, how many letter clusters thus formed will have no vowel?

A. Three

B. Two



C. One

D. None

Q28 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$(\sqrt{360} + 12 \div 6 \times 3 - \sqrt{170}) \div 2 = ?$$

A. 4

B. 6



C. 8

D. 5

Q29 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

PARTS : RDVYY

CLOSE : EOSXX

A. TEMPO : PQOFU

B. RHINO : TKMSU



C. CLASS : EODVV

D. MANGO : ODRTS



Q30 General Intelligence and Reasoning

Study the given letter, number, symbol series and answer the question that follows.

T % N 9 * M \$ 3 U = L 8 Y @ G & 3 E > W

Find out the total number of letters that are immediately followed by a symbol and immediately preceded by a number.

A. 1

B. 2

C. 3



D. 4

Q31 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	7	8	5	&	6	%	2
Codes	S	D	M	U	T	L	A

Conditions:

- (i) If the first element is an odd number and the last element is an even number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the second element is a symbol and the fifth element is an even number, the codes for these two (the second and the fifth elements) are to be interchanged.
- (iii) If the third element is a number and the fourth element is a symbol, both these elements (the third and the fourth elements) are to be coded as Y.

Question: 7 6 & 5 8 % 6 2

A. ATYYDLTS

B. ADUMTLTS

C. ATUMDLTS



D. STUMDLTA



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Q32 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $T = S \geq N = A \leq U > P < Q$

Conclusions:

I. $S > Q$

II. $A \leq T$

A. Only conclusion I is true

B. Only conclusion II is true



C. Both conclusions I and II are true

D. Neither conclusion I nor II is true

Q33 General Intelligence and Reasoning

Six students P, Q, R, S, T and U sit in a straight line, facing north. P and S are sitting at the extreme ends of the line. T is sitting adjacent to P, while U is sitting adjacent to S. Only one person sits between Q and S. Who is sitting adjacent to Q apart from R?

A. S

B. R

C. U



D. T

Q34 General Intelligence and Reasoning

Seven boxes, P, Q, R, S, T, U and V, are kept one over the other but not necessarily in the same order. R is kept just below T. V is kept just above Q, which is just above S. Only three boxes are kept between V and U. V is the topmost box. Which is the correct position of Box P?

A. Second box from the top

B. Immediately below S



C. Immediately above Q

D. Immediately below U



Q35 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

In spite of all apartments having the same square foot area, rents of the apartments above the 6th floor are higher in most high-rise apartment buildings.

Arguments:

- I. It is riskier to live on higher floors, since the dependence on lifts is much more critical than the lower floors which can be accessed by stairs.
- II. Air pollution is several times lower on higher floors than on the lower floors.

A. Argument I weakens, while argument II strengthens the statement



B. Argument II weakens, while argument I strengthens the statement

C. Both arguments I and II weaken the statement

D. Both arguments I and II strengthen the statement

Q36 General Intelligence and Reasoning

Starting from a point X, Shekhar walks 70 m towards the north. Then, he takes a left turn and walks 150 m. Then, he takes a left turn and walks 70 m. Finally, he takes a left turn and walks 90 m to reach point Y. How far and in which direction is point X from point Y? (All turns are 90 degree turns only)

A. 60 m, West

B. 50 m, South

C. 60 m, East



D. 50 m, West

Q37 General Intelligence and Reasoning

Six students, P, Q, R, S, T and U each are of different heights. P is taller than only two students. T is taller than only one student but shorter than exactly four students. S is taller than only four students but is not the tallest. Q is taller than none of the students. R is not the tallest. Who is the tallest student?

A. S

B. T

C. U



D. P



Q38 General Intelligence and Reasoning

At a function, the chief guest was accompanied by some people, and all were sitting in the audience gallery facing towards the west. P sits second to the left of the chief guest, Q sits fourth to the right of P. The number of people sitting to the right of Q is exactly one less than the number of people sitting to the left of Q. No one sits to the left of P. How many total people were sitting in the audience gallery?

A. 9

B. 8



C. 7

D. 10

Q39 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

12 : 145 :: 9 : 82 :: 11 : ?

A. 123

B. 122



C. 121

D. 120

Q40 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' is interchanged with '-', and '÷' is interchanged with '×'?

$7 \times 7 \div 8 - 12 \times 6 + 17 - 14 - 100 = ?$

A. 125

B. 132

C. 99

D. 107



Q41 General Intelligence and Reasoning

Eight lawyers with the initials A, K, L, M, N, O, P and Q were sitting around a square table and were facing the centre. Four of them were sitting at the corners, while the other four were at the exact centre of the sides. L, at a corner, was to the immediate right of M and was diagonally opposite to A. Q, sitting at a corner, was next to both M and K. P was second to the left of A. N was not sitting diagonally opposite to M. Which lawyer was second to the left of K?

A. O



B. N

C. P

D. L

Q42 General Intelligence and Reasoning

When the minute hand covers a distance of 2 hours and 20 minutes, then what is the angular distance covered by it?

A. 480°

B. 590°

C. 720°

D. 840°



Q43 General Intelligence and Reasoning

This question is based on the following 3-letter words.

RAT DOT FRY CUT

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel?

A. None

B. One



C. Two

D. Three



Q44 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All tigers are lions.
2. No cat is lion.
3. Some jaguars are cats.

Conclusions:

- I. Some jaguars are lions.
- II. No jaguar is tiger.
- III. Some lions are tigers.

A. Only conclusions I follows

B. Only conclusions II and III follow.

C. Only III follows



D. Only conclusions I and II follow.

Q45 General Intelligence and Reasoning

P, Q, R, S, T and U live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 6. Exactly three persons live between the floors of R and Q. T lives on the floor immediately above P's floor. U lives on the floor immediately above Q's floor. R lives on the floor immediately below S's floor. T lives on floor number 4. Q does not live on floor number 5. Who lives on floor number 6?

A. U

B. P

C. R

D. S



Q46 General Intelligence and Reasoning

The following table shows the number of male and female students studying in different streams (i.e. Arts, Science, Commerce and Law) of a college. Study the table and answer the question.

Streams	Male	Female
Arts	202	112
Science	260	280
Commerce	116	190
Law	78	65
Total	656	647

What is the percentage of female Commerce students in the total students of the college?

A. 13.28%

B. 14.58%



C. 15.95%

D. 16.46%

Q47 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete ?

D6W, G7T, M11N, V20E, ?

A. H34S

B. H36S



C. G36S

D. H36T

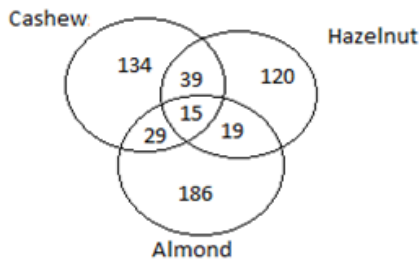


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Q48 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons who like different dry fruits during snack time.



How many people like Hazelnut but NOT Cashew?

- A. 15
- B. 39
- C. 120
- D. 139



Q49 General Intelligence and Reasoning

In a certain code language, 'ACADEMY' is written as 'FSJHDEB' and 'BARRIER' is written as 'YKNVUCC'. How will 'ATTEMPT' be written in that language?

- A. AVRIWVB
- B. AVRMWVB
- C. AVRNWVB
- D. BVWMRVA



Q50 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 are not allowed.)

(24, 12, 72)

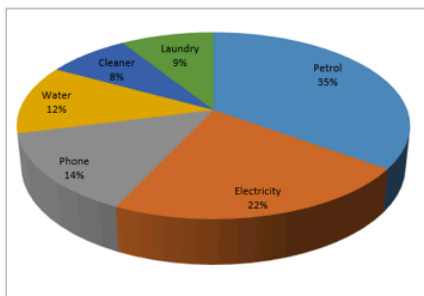
(15, 16, 60)

- A. (20, 24, 120)
- B. (18, 12, 56)
- C. (30, 40, 156)
- D. (17, 20, 65)



Q51 General Intelligence and Reasoning

The following chart shows the percentage of expenditure of Mr. Kumar on various heads in a month. The total monthly expenditure of the house is Rs. 1,12,000 (Rupees One lac twelve thousand only). Study the chart and answer the question.



What is the total expenditure of Mr. Kumar on Petrol and Water taken together during this month?

A. Rs. 51600

B. Rs. 52220

C. Rs. 52640



D. Rs. 54440

Q52 General Intelligence and Reasoning

Which two signs should be interchanged to make the given equation correct?

$$28 - 28 \div 14 + 7 \times 2 = 16$$

A. $\times$ and $-$

B. $\times$ and $\div$

C. $+$ and $\div$

D. $+$ and $-$



Q53 General Intelligence and Reasoning

Three statements are given followed by four conclusions I, II, III and IV. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statements:

1. Some pamphlets are copies.
2. All copies are readers.
3. All readers are scrolls.

Conclusions:

- I. All pamphlets are scrolls.
- II. All copies are scrolls.
- III. Some readers are copies.
- IV. Some scrolls are pamphlets.

A. Only conclusions I and III follow.

B. Only conclusions II, III and IV follow. ☒

C. Only conclusions I, III and IV follow.

D. Only conclusions II and IV follow.

Q54 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

7, 20, 37, 56, 79, 108, ?

A. 122

B. 126

C. 136

D. 139 ☒

Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

45, 65, 90, 125, 180, ?

A. 275 ☒

B. 280

C. 270

D. 285



Q56 General Science

The ratio of a field produced due to a current carrying circular coil of n turns, to that of a field produced due to a single circular loop of the same radius carrying the same current is:

A. $n : 1$ B. $1 : n$ C. $1 : n^2$ D. $1 : 1$

Q57 General Science

Elements of which of the following groups have the tendency to form acidic oxide?

A. 1

B. 2

C. 13

D. 16



Q58 General Science

Yeast is used in making _____.

A. curd

B. wine



C. cheese

D. antibiotics

Q59 General Science

An element A reacts with water to form a solution which turns phenolphthalein solution pink. The element A is most likely to be:

A. S

B. Mg



C. C

D. Ag



Q60 General Science

A concave mirror forms a real, inverted and same sized image of an object. Where is the object placed?

- A. At C
- B. Between f and C
- C. Between f and pole
- D. At infinity

Q61 General Science

Metal oxides are generally _____ in nature.

- A. acidic
- B. basic
- C. neutral
- D. sweet

Q62 General Science

Humans have _____ pairs of autosomes.

- A. 22
- B. 23
- C. 46
- D. 2

Q63 General Science

To investigate the conduction of electric current, Ravi performed an experiment. He took different aqueous solutions or liquids (as electrolyte) and tried to pass electricity and connected the circuit with a bulb. In the presence of which of the following, will the bulb NOT glow?

- A. Sodium chloride (aq)
- B. Octane (l)
- C. Calcium chloride (aq)
- D. Copper sulphate (aq)

Q64 General Science

The speed of light in two transparent media A and B are 2×10^8 m/sec and 2.25×10^8 m/sec. The refractive index of medium A with respect to medium B is equal to:

A. 1.125



B. 0.89

C. 4.25

D. 4.50

Q65 General Science

Alcohols react with sodium leading to the evolution of which of the following gases?

A. Oxygen

B. Carbon dioxide

C. Hydrogen



D. No evolution of Gas

Q66 General Science

Movement in most of the animals is a co-ordinated activity of which of the following system/systems?

A. Muscular, skeletal and nervous systems



B. Only skeletal and nervous systems

C. Only muscular system

D. Only nervous system

Q67 General Science

The process of producing an induced current by a changing magnetic field is called:

A. electromagnetism

B. electromagnetic induction



C. electric conduction

D. electromagnetic radiation



Q68 General Science

A metallic wire of resistance $100\ \Omega$ is bent into a circle having circumference equal to the length of the wire. The equivalent resistance between two diametrically opposite points of the circle is:

A. $25\ \Omega$



B. $50\ \Omega$

C. $75\ \Omega$

D. $100\ \Omega$

Q69 General Science

In today's scenario, which change seen in human attitude has helped in decreasing the production of non-biodegradable waste to some extent?

A. Improvement in lifestyle

B. Use of Plastic in Packaging

C. Use and throw attitude

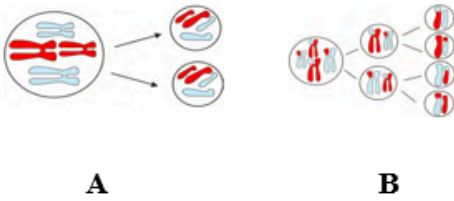
D. Use of jute bags



Q70 General Science

Two types of cell divisions, A and B, are shown in the figure below. Which option provides the correct answer for:

- Types of cell division
- When and where does division B take place?



- A.** i. A - Mitosis, B - Meiosis
ii. Meiosis takes place in reproductive cells for the formation of gametes
- B.** i. A - Meiosis, B - Mitosis
ii. Meiosis takes place in reproductive cells for the formation of gametes
- C.** i. A - Mitosis, B - Meiosis
ii. Meiosis takes place in body cells for growth
- D.** i. A and B – Meiosis
ii. Meiosis takes place in body cells for growth

Q71 General Science

Newlands Octaves start with _____ and end with _____, respectively.

- A.** Li; Na
- B.** H; Th
- C.** Mg; Ca
- D.** He; Ar

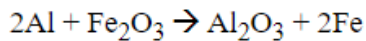
Q72 General Science

Which reproductive parts of the flower contain the germ cells?

- A.** Sepals and stamen
- B.** Anther and sepals
- C.** Petals and style
- D.** Stamens and pistils

Q73 General Science

In the given chemical reaction, which of the following chemical species acts as an oxidising agent and as a reducing agent, respectively?



- A. Fe and Al
- B. Al_2O_3 and Fe
- C. Al and Fe
- D. Fe_2O_3 and Al



Q74 General Science

The resistance of a conductor is NOT dependent on:

- A. current flowing through the conductor
- B. temperature of the conductor
- C. length of the conductor
- D. area of cross section of the conductor



Q75 General Science

Colourless plastids are called _____.

- A. chloroplasts
- B. chromoplasts
- C. leucoplasts
- D. apicoplasts



Q76 General Science

The refractive index of a given transparent medium is 1.5. The speed of light in the medium is equal to:

- A. $2 \times 10^8 \text{ m/sec}$
- B. $3 \times 10^8 \text{ m/sec}$
- C. $4.5 \times 10^8 \text{ m/sec}$
- D. $0.5 \times 10^8 \text{ m/sec}$



Q77 General Science

A potential difference of 5 V when applied across a conductor produces a current of 2.5 mA. The resistance of the conductor (in Ω) is:

- A. 2
- B. 20
- C. 200
- D. 2000



Q78 General Science

Consider the below statements and identify the correct answer.

Statement- I: Human stomach produces nitric acid.

Statement-II: Hydrochloric acid helps in the digestion of food without harming the stomach.

- A. Both statements are correct. Statement II is correct explanation of Statement I.
- B. Both Statements are correct. Statement I is correct explanation of Statement II.
- C. Only Statement I is correct.
- D. Only Statement II is correct.



Q79 General Science

The magnification 'm' produced by a convex lens when the object is placed at a distance $2f$ from the lens is given by:

- A. $m = +1$
- B. $m = -1$
- C. $m = +2$
- D. $m = -2$



Q80 General Science

_____ is a type of water collection system found in Madhya Pradesh.

- A. Bundhis
- B. Surangams
- C. Kattas
- D. Kulhs



Q81 General Awareness and Current Affairs

As of July 2022, which of the following states has set up Bharosa Centres – a one-stop facility to aid women and children subjected to sexual assaults and violence?

- A. Odisha
- B. Telangana
- C. Kerala
- D. Gujarat

**Q82** General Awareness and Current Affairs

Which of the following sports events was hosted by India from 20 January 2022 in Mumbai, Navi Mumbai and Pune?

- A. Asian Champions Trophy
- B. FIFA Women's World Cup
- C. AFC Women's Asian Cup
- D. Asian Track & Para-Cycling Championships

**Q83** General Awareness and Current Affairs

Bhawna Jat, Ravina and Munita Prajapati's combined effort won India a bronze medal in the team category of the women's 20 km race walk event at the World Race Walking Team Championships 2022 in: _____.

- A. Norway
- B. United Arab Emirates
- C. Oman
- D. Sweden



Q84 General Awareness and Current Affairs

How many subjects are entitled and listed in the Indian Constitution for Panchayat?

A. 25

B. 19

C. 33

D. 29



Q85 General Awareness and Current Affairs

The Regional Rural Banks Act was passed in which year by the Government of India?

A. 1966

B. 1976

C. 1986

D. 1996



Q86 General Awareness and Current Affairs

In which state will India's first graphene innovation centre be established?

A. Maharashtra

B. Kerala

C. Haryana

D. Punjab



Q87 General Awareness and Current Affairs

Which of the following is a sacred text related to Buddhism?

- A. Hadith
- B. Agama
- C. Tripitaka
- D. Tanakh



Q88 General Awareness and Current Affairs

Who immediately succeeded Raja Ram Mohan Roy as leader of the Brahmo Samaj?

- A. Dwarkanath Tagore
- B. Debendra Nath Tagore
- C. Ravindra Nath Tagore
- D. Dr. Atma Ram



Q89 General Awareness and Current Affairs

Which of the following features is associated with deserts?

- A. Alluvial fan
- B. Barchans
- C. Moraines
- D. Tarn pools



Q90 General Awareness and Current Affairs

Prasanta Chandra Mahalanobis founded which of the following?

- A. Miranda House
- B. Indian Statistical Institute
- C. University of Lucknow
- D. Bhartiya Vidya Bhavan



Q91 General Awareness and Current Affairs

Which is the most popular festival among the Garos tribe of Meghalaya?

- A. Wangala Festival
- B. Yaoshang Festival
- C. Porag Festival
- D. Nuakhai Festival



Q92 General Awareness and Current Affairs

With whom did the Indian Army sign a contract worth ₹3131.82 crore for manufacture and supply of missiles?

- A. Bharat Dynamics Limited
- B. Troop Comforts Limited
- C. Yantra India Limited
- D. India Optel Limited



Q93 General Awareness and Current Affairs

In which of the following cities is 'The Central Institute of Indian Languages (CIIL)' located?

A. Bengaluru

B. Mysuru



C. Mangaluru

D. Hubli

Q94 General Awareness and Current Affairs

Who has been honoured with the Padma Bhushan award in Science and Engineering in January 2022?

A. Sanjaya Rajaram



B. Subbanna Ayyappan

C. Sirpi Balasubramaniam

D. Buddhadeb Bhattacharjee

Q95 General Awareness and Current Affairs

The Chhota Nagpur Plateau can be found in which of the following Indian states?

A. Rajasthan

B. Karnataka

C. Jharkhand



D. Assam



Q96 General Awareness and Current Affairs

Which of the following Acts legally guarantees 100 days of wage employment in a financial year to adult members of a rural household, who are seeking employment and willing to do unskilled manual work?

- A. Indira National Rural Employment Guarantee Act
- B. Mahatma Gandhi National Rural Employment Guarantee Act ✓
- C. Ambedkar National Rural Employment Guarantee Act
- D. Nehru National Rural Employment Guarantee Act

Q97 General Awareness and Current Affairs

Which of the following terms refers to a climatic condition in the marine environment that results in a period of warming of the water body?

- A. El Nino ✓
- B. La Nina
- C. El Mino
- D. La Mino

Q98 General Awareness and Current Affairs

The Goods and Services Tax, which includes both goods and services, was introduced by the Government of India with effect from _____.

- A. 28 February 2016
- B. 1 April 2015
- C. 1 July 2017 ✓
- D. 1 March 2018

Q99 General Awareness and Current Affairs

Who has the executive authority to advise the State Government on legal matters and to perform other duties of legal character?

- A. Advocate-General ✓
- B. Comptroller and Auditor General
- C. Attorney General
- D. Solicitor General



Which feature of the Indian Constitution refers to the existence of governments at the state level and at the centre?

A. Parliamentary form of government

B. Federalism



C. Fundamental rights

D. Secularism



Mathematics

25 Questions • Answer Key

Q1 Mathematics

If $(x + \frac{1}{x}) = k$, find the value of $x^3 + \frac{1}{x^3}$.

A. $k^3 + 3k$

B. $k^3 - 3k$ ✓

C. $3k - k^3$

D. k^3

Q2 Mathematics

The value of $\frac{\sin^2 10^\circ + \sin^2 20^\circ + \sin^2 30^\circ + \sin^2 40^\circ + \sin^2 50^\circ + \sin^2 60^\circ + \sin^2 70^\circ + \sin^2 80^\circ + \sin^2 90^\circ}{\cos^2 20^\circ + \cos^2 40^\circ + \cos^2 50^\circ + \cos^2 70^\circ + \cot^2 45^\circ}$ is:

A. $\frac{5}{3}$ ✓

B. $\frac{3}{4}$

C. $\frac{6}{5}$

D. $\frac{4}{3}$

Q3 Mathematics

The equation $x^2 + 7x + 6 = 0$ can be written as:

A. $(x - 1)(x + 6) = 0$

B. $(x + 1)(x - 6) = 0$

C. $(x - 1)(x - 6) = 0$

D. $(x + 1)(x + 6) = 0$ ✓



Q4 Mathematics

The volume of a cylinder is 5500 m^3 . Find its diameter if the cylinder is 70 m high.

- A. 5 m
- B. 8 m
- C. 10 m
- D. 12 m

**Q5 Mathematics**

The equivalent fraction of $4.2222\ldots$ is:

- A. $\frac{38}{9}$
- B. $\frac{38}{100}$
- C. $\frac{422}{99}$
- D. $\frac{42}{99}$

**Q6 Mathematics**

Two numbers are in the ratio 5: 3. If difference between the numbers is 54, then find the smaller number.

- A. 135
- B. 91
- C. 115
- D. 81

**Q7 Mathematics**

Simplify $3(3x - 2) + x\left(\frac{4x}{2}\right) + 15 - 12$.

- A. $2x^2 + 9x + 3$
- B. $2x^2 + 6x - 3$
- C. $2x^2 + 9x + 6$
- D. $2x^2 + 9x - 3$



Q8 Mathematics

A shop which sells sarees had offers going on wherein customers could buy 3 sarees and get 2 free. What is the discount that the customer gets?

A. 40%



B. 50%

C. 60%

D. 30%

Q9 Mathematics

51 men can complete a work in 12 days. Four days after they started working 6 more men joined them. How many days will they now take to complete the remaining work?

A. $5\frac{9}{19}$ days

B. $7\frac{3}{19}$ days



C. $8\frac{1}{19}$ days

D. $6\frac{7}{19}$ days

Q10 Mathematics

The sum of double of the largest two-digit prime number and triple of the largest three-digit prime number is equal to _____

A. 3029

B. 3185



C. 2195

D. 6523

Q11 Mathematics

Which of the following is NOT a true statement?

A. All rectangles are parallelograms.

B. Opposite sides of a rectangle are congruent and parallel.

C. Diagonals of a rectangle do not bisect each other.



D. Sum of any pair of adjacent angles of a rectangle is 180° .



Q12 Mathematics

The mean proportional between the numbers p and q is 8. Which of the following pairs of numbers can be the values of p and q ?

- A. 10 and 6
- B. 12 and 3
- C. 16 and 4
- D. 12 and 16



Q13 Mathematics

A starts from X at 9:00 a.m. and reaches Y at 1:00 p.m., on the same day, B also starts from Y at 9:00 a.m. and reaches X at 3 p.m on the same day, following the same route as A. At what time do the two meet?

- A. 10:00 hrs
- B. 11:12 hrs
- C. 11:30 hrs
- D. 11:24 hrs



Q14 Mathematics

The mean proportional of 16 and 144 is

- A. 44
- B. 48
- C. 34
- D. 36



Q15 Mathematics

The average of the first twelve multiples of 11 is:

- A. 71.5
- B. 70.5
- C. 69.5
- D. 68.5



Q16 Mathematics

From the numbers 51, 52, 53,100, find the sum of the smallest and the greatest prime numbers as given.

A. 154

B. 123

C. 139

D. 150

**Q17** Mathematics

3 pencils and 5 pens together cost ₹81, whereas 5 pencils and 3 pens together cost ₹71. The cost of 1 pencil and 2 pens together is:

A. ₹31

B. ₹26

C. ₹35

D. ₹29

**Q18** Mathematics

For a grouped data, if X_i is the class mark and f_i is the corresponding frequency, then by direct method, mean x is given by:

A. $\frac{\sum f_i x_i}{\sum x_i}$ B. $\frac{\sum x_i}{\sum f_i}$ C. $\frac{\sum f_i x_i}{\sum f_i}$ D. $\sum f_i x_i$ **Q19** Mathematics

In a right-angled triangle, if the hypotenuse is 4 units greater than one side and 8 units greater than the other, then find the area of the triangle.

A. 32 sq. units

B. 100 sq. units

C. 16 sq. units

D. 96 sq. units



Q20 Mathematics

Simplify $234 \times [8 - (6 + 2) \times 3] + 4234$.

A. 423

B. 324

C. 490



D. 940

Q21 Mathematics

The product of the roots of $x^2 - 7x + 12 = 0$ is _____.

A. 7

B. 12



C. -7

D. -12

Q22 Mathematics

By selling an item at a 10% profit a seller makes a profit of ₹777.70. Find the cost price of the item.

A. ₹7,707

B. ₹7,777



C. ₹7,177

D. ₹7,277

Q23 Mathematics

The value of

$$\{4 - 3 \times [7 - 8 \times (2 \times 4 - 10)]\} =$$

A. -65



B. -25

C. 65

D. 73



Q24 Mathematics

At what rate of per cent per annum will ₹1,300 give ₹520 as simple interest in 5 years?

- A. 4%
- B. 5%
- C. 7%
- D. 8%



Q25 Mathematics

The total surface area of a cylinder of radius 70 m and height 140 m, is:

- A. $82,500 \text{ m}^2$
- B. $92,400 \text{ m}^2$
- C. $61,524 \text{ m}^2$
- D. 5124 m^2



General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Based on the given statement, two conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $C < D$, $E \geq B$, $B > D$

Conclusions:

1. $B > C$
2. $E < D$

- A. Only conclusion 1 is true
- B. Only conclusion 2 is true
- C. Both conclusions 1 and 2 are true
- D. Neither conclusion 1 nor 2 is true



Q27 General Intelligence and Reasoning

If each of the digits in the number given below is arranged in the descending order from left to right, what will be the product of the digits that are third from the left and fourth from the right in the new number thus formed?

(Left) 521987624 (Right)

A. 36

B. 35

C. 28



D. 21

Q28 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. P is to the immediate left of Z. Only one person sits between G and D. G is to the left of D. H is fifth to the left of G. K is to the immediate right of D. P is third to the right of K. If no other person is sitting in the row, what is the total number of persons seated?

A. 10

B. 11

C. 12

D. 13



Q29 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 are not allowed.)

(11, 57, 8)

(12, 63, 9)

A. (12, 54, 11)

B. (15, 75, 7)

C. (12, 45, 8)

D. (10, 64, 6)



Q30 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

FAST: JDUU :: SLOW : WOQX :: JUMP : ?

A. NXOQ



B. NOXQ

C. QXON

D. XNOQ

Q31 General Intelligence and Reasoning

Given below are three statements and three conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide whether the conclusion/s follow/s from the given statements.

Statements:

I. All chairs are desks.

II. All desks are chalks.

III. All chalks are boards.

Conclusions:

I. Some boards are desks.

II. Some chalks are chairs.

III. Some boards are chairs.

A. Conclusions I and II follow

B. Conclusion I and III follow

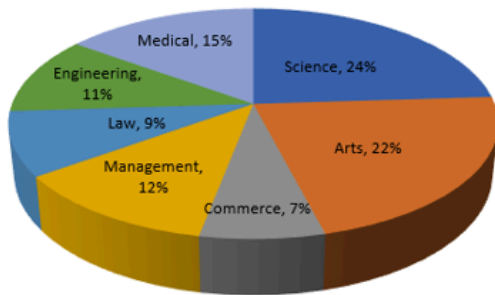
C. Conclusion II and III follow

D. All the conclusions follow



Q32 General Intelligence and Reasoning

The following chart shows the percentage of students enrolled in different streams in a university. The total number of students enrolled in the university is 15200. Study the chart and answer the question.



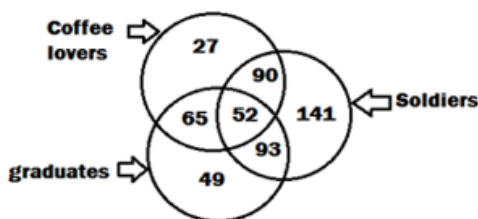
How many students are enrolled in Medical, Engineering and Law streams taken together?

- A. 4680
- B. 5210
- C. 5320
- D. 5420



Q33 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



Which of the following statements is correct on the basis of the above diagram?

- A. The number of soldiers who are neither coffee lovers nor graduates is 193.
- B. The number of graduates who are also coffee lovers but not soldiers is 65.
- C. The number of coffee lovers who are both graduates and soldiers is 90.
- D. The number of soldiers who are also coffee lovers is 27.



Q34 General Intelligence and Reasoning

Seven surgeons, W, X, Y, Z, A, B and C, were sitting around a square table, facing the centre. Four of them are sitting at the corners while three are sitting at the exact centre of the sides. One of the centre of sides was empty. C, at one of the corners, was immediately next to both B and Y. Z was immediately next to both B and X. A was at the immediate right of X. Which surgeon was third to the right of W?

A. Y

B. B



C. X

D. C

Q35 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

8, 9, 20, 63, 256, ?

A. 1280

B. 1285



C. 1284

D. 1286

Q36 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 are not allowed.)

(36, 78, 13)

(121, 77, 7)

A. (9, 56, 18)

B. (64, 85, 12)

C. (49, 63, 9)



D. (36, 72, 10)



Q37 General Intelligence and Reasoning

Starting from his house, Varun walks 60 m towards the north. He then takes a right turn and walks 30 m. He then takes a right turn and walks 90 m. Finally, he takes another right turn and walks 30 m. How far and in which direction is Varun now from his house ? (All turns are 90 degree turns only)

- A. 25 m, East
- B. 30 m, North
- C. 30 m, South
- D. 25 m, South



Q38 General Intelligence and Reasoning

What is the angle traced by the minute hand in 48 minutes?

- A. 190°
- B. 288°
- C. 372°
- D. 420°



Q39 General Intelligence and Reasoning

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 53478231, what will be the sum of the digits that are second from the left and second from the right?

- A. 4
- B. 6
- C. 8
- D. 10



Q40 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing the north. M is sitting at the extreme left end. K is to the immediate right of M. G is to the immediate right of K. Only five persons are sitting between G and D. D is at the 6th position from the extreme right end. G is at some place towards the left of D. If no other person is sitting in the row, what is the total number of persons seated?

- A. 12
- B. 13
- C. 14
- D. 15



Q41 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Last year, only 30 percent of girl students in district X joined under-graduate courses after school, while 95 percent boys joined under-graduate courses.

Arguments:

- I. The state government has increased the number of scholarships for girl students in undergraduate courses in government colleges.
- II. Many girl students prefer to join vocational courses after school rather than undergraduate courses.

A. Argument I weakens, while argument II strengthens the statement



B. Argument II weakens, while argument I strengthens the statement

C. Both arguments I and II weaken the statement

D. Both arguments I and II strengthen the statement

Q42 General Intelligence and Reasoning

In a certain code language, 'PTEJAD' is written as 'OUEIAE' and 'FHNOI' is written as 'EIMOI'. How will 'TUPAI' be written in that language?

A. UVPAH

B. VUPHI

C. SUQAI



D. PUHVA

Q43 General Intelligence and Reasoning

Which of the following interchanges of signs would make the given equation correct?

$$12 \div 6 \times 18 + 16 - 15 = 5$$

A. +, -

B. +, ×

C. ×, ÷



D. -, ÷



Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

28, 29, 31, 35, 43, ?

A. 55

B. 53

C. 59



D. 61

Q45 General Intelligence and Reasoning

Stepping out from a flower shop, Jaya walks 100 m towards the north. She then takes a right turn and walks 45 m. She then takes right turn and walks 175 m. She then takes a left turn and walks 50 m. She then takes a left turn and walks 75 m to reach a tea stall. How far and in which direction is the flower shop from the tea stall ? (All turns are 90 degree turns only)

A. 105 m, North

B. 105 m, West

C. 95 m, East

D. 95 m, West

**Q46** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	6	5	&	@	?	9	<	#	2	%	!	3	=	7
Code	M	L	R	T	U	P	H	Y	A	V	C	X	D	G

Conditions:

- (i) If the first element is a number and the last, a symbol, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last, an even number, the first and last elements are to be coded as Ø.
- (iii) If both second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '6 < % 2 #' be coded?

A. MHVAY

B. YHVAM



C. ØYCAØ

D. YYVAM



Q47 General Intelligence and Reasoning

Refer to the following number series and answer the question.

2 5 6 9 8 0 3 8 6 7 2 5 2 2 6 8 3 6 5 3

How many such numbers are there in the series each of which is immediately preceded by an even number and immediately followed by an odd number?

A. 2

B. 3

C. 4



D. 5

Q48 General Intelligence and Reasoning

Six boys, Prateek, Kartik, Yash, Himmat, Dev and Nihit, are sitting in a straight line. All are facing the north direction. Prateek sits second to the left of Kartik. Dev is sitting at one of the extreme ends. Only Prateek is sitting between Yash and Himmat. Kartik sits to the immediate left of Nihit. Himmat sits third to the right of Dev. Who is sitting to the immediate left of Kartik?

A. Yash

B. Himmat



C. Prateek

D. Dev

Q49 General Intelligence and Reasoning

Some people are playing on a football ground. Only two are wearing red coloured T-shirts. Exactly three are wearing yellow-coloured T-shirts. The one who is wearing a red T-shirt passed the ball to the only individual wearing a saffron coloured T-shirt. The person wearing a white coloured T-shirt tackled the person wearing the saffron coloured T-shirt, and then passed the ball to the player who is wearing the green coloured T-shirt. No other individual is playing on the ground.

How many total players are playing football on the ground?

A. 8



B. 9

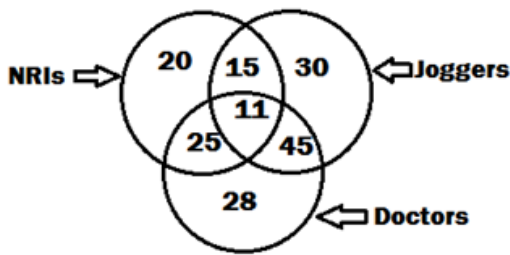
C. 10

D. 7



Q50 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such doctors are there who are also joggers but NOT NRIs?

A. 45



B. 56

C. 28

D. 75

Q51 General Intelligence and Reasoning

The following question is based on the given six, 4-digit numbers.

(Left) 8347, 5486, 9627, 4913, 8721, 6418 (Right)

(For example, 2456: 6 = digit in unit's place, 5 = digit in ten's place, 4 = digit in hundred's place, 2 = digit in thousand's place)

NOTE - All operations to be done from left to right.

What will be the resultant if the digit in hundred's place of the largest number is added to the digit in thousand's place of the smallest number?

A. 7

B. 8

C. 10



D. 9



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Q52 General Intelligence and Reasoning

The following table shows the number of male and female employees working in four departments of an organization i.e. HR, Production, Marketing and Operations. Study the table and answer the question.

Departments	Male	Female
HR	35	65
Production	160	155
Marketing	176	140
Operations	128	142

What is the ratio of the total number of employees in Production (both male and female taken together) and the total number of employees in Operations (both male and female employees taken together), respectively?

A. 7 : 6



B. 7 : 3

C. 6 : 5

D. 8 : 5

Q53 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'ACQUIRE' is arranged in alphabetical order?

A. 1

B. 2

C. 3



D. 4

Q54 General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is NOT true based on the statement.

Statement: $A < B < C \leq D = E > F > G$

A. $C \leq E$

B. $A > E$



C. $E > B$

D. $D > G$



Q55 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

EHT-13, HKW-17, LOA-22, QTF-28, WZL-35,?

- A. CGT-41
- B. DHR-43
- C. DGT-44
- D. DGS-43



General Science

25 Questions • Answer Key

Q56 General Science

The direction of a magnetic field due to a straight current carrying conductor can be determined using:

- A. right hand thumb rule
- B. left hand thumb rule
- C. Fleming's right-hand rule
- D. Fleming's left-hand rule



Q57 General Science

Which of the following elements shows maximum valence electrons?

- A. Al
- B. H
- C. N
- D. F



Q58 General Science

Consider the below statements and identify the correct answer.

Statement-I: On heating, the surface of copper powder becomes coated with black copper (II) oxide.

Statement-II: If hydrogen gas is passed over this heated material (CuO), the black coating on the surface turns brown.

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and statement-II is false.
- D. Statement-I is false, and statement-II is true.



Q59 General Science

Which of the following devices is/are based on heating effect of electric current?

- (i) Incandescent lamp
- (ii) Electric geyser
- (iii) Electric generator

- A. Only (i)
- B. Only (ii)
- C. Both (i) and (ii)
- D. Both (i) and (iii)



Q60 General Science

Five solutions A, B, C, D and E, when tested with universal indicator, showed pH as 4, 1, 11, 7 and 9, respectively. The pH in increasing order of H^+ ion concentration for these solutions is:

- A. $C < D < E < A < B$
- B. $C < E < D < A < B$
- C. $D < C < E < A < B$
- D. $C < D < E < B < A$



Q61 General Science

Which aspect of large dams has NOT been criticised?

- A. Social
- B. Economic
- C. Environmental
- D. Psychological



Q62 General Science

To cook some foods faster we can use _____.

- A. baking powder
- B. ammonium chloride
- C. sodium chloride
- D. bleaching powder



Q63 General Science

The resistance of a conductor is directly proportional to:

- A. area of cross section of the conductor
- B. length of the conductor ✓
- C. current flowing through the conductor
- D. potential difference applied across the conductor

Q64 General Science

A convex lens having power 5 D is placed in contact with a concave lens having power -3 D. The focal length of the combination will be:

- A. 50 cm ✓
- B. -50 cm
- C. 0.5 cm
- D. -0.5 cm

Q65 General Science

What will be the fourth next member of the homologous series of the compound propene?

- A. C_2H_4
- B. C_4H_8
- C. C_7H_{14} ✓
- D. C_6H_{12}



Q66 General Science

Which of the following statements is/are true for a DC motor?

- (i) The function of the split rings is to reverse the flow of current.
- (ii) Maximum force is experienced by arms of the coil aligned parallel to the magnetic field
- (iii) Reversing current after every half rotation leads to continuous rotation of coil.

A. Only (i)

B. Only (ii)

C. Both (i) and (ii)

D. Both (i) and (iii)



Q67 General Science

To which of the following organisms is the Cell Theory given by Schleiden and Schwann NOT applicable?

A. Viruses



B. Animals

C. Fungi

D. Algae

Q68 General Science

Ramesh wants to choose a material for making filament of a bulb. The chosen material should possess which of the following properties?

- (i) Low melting point
- (ii) Ability to glow at high temperatures
- (iii) High resistance

A. Only (i)

B. Only(ii)

C. Both (i) and (ii)

D. Both (ii) and (iii)



Q69 General Science

The amount of _____ in a plant cell alters its structure in order to facilitate movement.

- A. electro-chemical impulses
- B. protein
- C. water
- D. hormones



Q70 General Science

Carbon is unable to form C^{4+} ion because _____.

- A. it gains electrons easily
- B. it has tetra valency
- C. its formation requires a large amount of energy
- D. it shows catenation property



Q71 General Science

We can prepare eco-friendly carry bags with _____.

- A. paper
- B. plastic
- C. rubber
- D. glass



Q72 General Science

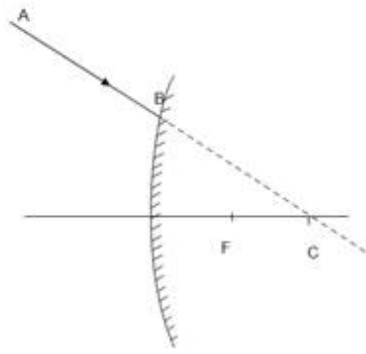
What is the correct order of elements according to their valence shell electrons?

- A. $Li > O > C > F$
- B. $F > O > C > Li$
- C. $Ne > N > F > Be$
- D. $B > C > O > F$



Q73 General Science

A light ray AB is incident on a convex mirror as shown in the figure. What will be the angle of reflection?



A. 0°



B. 30°

C. 45°

D. 90°

Q74 General Science

For a ray of light undergoing refraction through a triangular glass prism, the angle of deviation is the angle between:

A. the incident ray and the refracted ray

B. the incident ray and the normal at the point of incidence

C. the incident ray and the emergent ray



D. the refracted ray and the emergent ray

Q75 General Science

Many scientists before Mendel had started studying the inheritance of traits in peas and other organisms, but Mendel succeeded in giving the laws of Inheritance. Some reasoning for Mendel's success are mentioned below. All are correct except one. Select the INCORRECT reasoning?

A. He blended his knowledge of Science and Mathematics.

B. He studied the inheritance of one character at a time, whereas scientists before him had considered the organism as a whole.

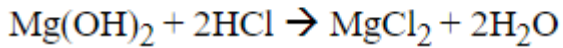
C. He kept a count of individuals of a particular trait in each generation.

D. He worked with a small sample size.



Q76 General Science

The following reaction is an example of _____.



- A. decomposition reaction
- B. combination reaction
- C. neutralisation reaction
- D. precipitate reaction



Q77 General Science

Which of the following foods is high in iron?

- A. Jaggery
- B. Milk
- C. Butter
- D. Rice



Q78 General Science

The radius of curvature of a given spherical mirror is -20 cm. The focal length of the mirror is:

- A. -10 cm
- B. -40 cm
- C. 10 cm
- D. 40 cm



Q79 General Science

The phloem is the plant's vascular tissue that transports _____.

- A. water
- B. nutrients
- C. Gases
- D. oxygen



Q80 General Science

'Double Circulation' CANNOT be observed in _____.

- A. fish
- B. frog
- C. snake
- D. eagle



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Every year, 'Parakram Divas' is celebrated on the birth anniversary of which Indian Nationalist?

- A. Rani Lakshmi Bai
- B. Lala Lajpat Rai
- C. Bhagat Singh
- D. Netaji Subhash Chandra Bose



Q82 General Awareness and Current Affairs

Geomorphology, the branch of Physical Geography is devoted to the study of which of the following fields?

- A. Study of atmosphere
- B. Study of landforms
- C. Study of soil
- D. Study of water



Q83 General Awareness and Current Affairs

In March 2022, which state government presented 'Children's Budget' for the first time as part of its annual financial plan?

A. Andhra Pradesh

B. Madhya Pradesh



C. Himachal Pradesh

D. Uttar Pradesh

Q84 General Awareness and Current Affairs

In which state is St. Thomas Cathedral Basilica Church located?

A. Goa

B. Kerala

C. Maharashtra

D. Tamil Nadu



Q85 General Awareness and Current Affairs

Which of the following steps have NOT been taken by the government to attract foreign companies to invest in India?

A. Special Economic Zones are being set up.

B. SEZs setup production units do not have to pay taxes for an initial period of five years.

C. Flexibility in the labour laws.

D. Flexibility in the taxation system.



Q86 General Awareness and Current Affairs

In February 2022 India won a record-extending fifth U-19 World Cup title, beating which country by four wickets in the final?

A. England



B. Canada

C. Pakistan

D. Australia

Q87 General Awareness and Current Affairs

In January 2022, the Government of India launched which portal to share key performance indicators of the coal sector?

A. Koyla Darpan



B. Koyla Data

C. Koyla Gyan

D. Koyla Bit



Q88 General Awareness and Current Affairs

The Fundamental Duties were added in the Indian Constitution by the recommendation of which of the following committees?

- A. Union Power Committee
- B. Swaran Singh Committee
- C. Provincial Constitution Committee
- D. Union Constitution Committee



Q89 General Awareness and Current Affairs

Which State Government has in March 2022 launched the 'Dalit Bandhu' welfare scheme for empowering Dalit families of the state and enabling entrepreneurship among them through a ₹10 lakh direct benefit transfer per family?

- A. Odisha
- B. Uttarakhand
- C. Telangana
- D. Punjab



Q90 General Awareness and Current Affairs

In March 2022, in which state has India's first Virtual Smart Grid Knowledge Centre been inaugurated?

- A. Jharkhand
- B. Himachal Pradesh
- C. Haryana
- D. Punjab



Q91 General Awareness and Current Affairs

In which part of the Indian Constitution is Panchayati Raj described?

- A. Part VI
- B. Part VII
- C. Part VIII
- D. Part IX



Q92 General Awareness and Current Affairs

What is the name of the phenomenon of wearing down of relief variations of the surface of the Earth through erosion?

- A. Germination
- B. Eruptions
- C. Gradation
- D. Solidification



Q93 General Awareness and Current Affairs

As of July 2022, who among the following is the Chairman of 15th Finance Commission of India?

- A. Ashok Lahiri
- B. Arvind Mehta
- C. Anoop Singh
- D. NK Singh



Q94 General Awareness and Current Affairs

Sindhu Darshan festival is celebrated in which part of India?

- A. Punjab
- B. Uttar Pradesh
- C. Sikkim
- D. Ladakh



Q95 General Awareness and Current Affairs

Name the firm that has acquired neo bank Avail Finance in March 2022?

- A. Paytm
- B. Ola
- C. Uber
- D. Phonepay



Q96 General Awareness and Current Affairs

Which scheme has been introduced by the Department of Biotechnology, Government of India, for awarding writers for writing original books in Hindi on the subjects related to Biotechnology?

- A. Dr. Jagdish Chandra Bose Hindi Granth Lekhan Puraskar Yojna
- B. Dr. Raman Bose Hindi Granth Lekhan Puraskar Yojna
- C. Dr. Hargobind Khurana Hindi Granth Lekhan Puraskar Yojna
- D. Dr. Aryabhatta Hindi Granth Lekhan Puraskar Yojna



Q97 General Awareness and Current Affairs

Which flower of Himalaya has antiseptic properties and hence can help in the healing of bruises?

- A. Brahma Kamal
- B. Datura
- C. Parthenium
- D. Ricinus



Q98 General Awareness and Current Affairs

Who among the following was the Team India Flag Bearer at the 2022 Commonwealth Games opening ceremony in Birmingham?

A. Lovlina Borgohain

B. PV Sindhu



C. Mirabai Chanu

D. Aditi Ashoke

Q99 General Awareness and Current Affairs

How many languages as on June 2022 have the status of 'classical language' in India?

A. 3

B. 4

C. 5

D. 6



Q100 General Awareness and Current Affairs

In April 2022 the Lok Sabha passed the Constitution (Scheduled Castes and Scheduled Tribes) Orders (Second Amendment) Bill, 2022 which seeks to amend the Constitution to include Gonds and associated tribes in the Scheduled Tribes category in certain districts of _____.

A. Assam

B. Himachal Pradesh

C. Sikkim

D. Uttar Pradesh



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The value of $\frac{(4x^2 - 9y^2)^3 + (9y^2 - 49z^2)^3 + (49z^2 - 4x^2)^3}{(2x - 3y)^3 + (3y - 7z)^3 + (7z - 2x)^3}$ is:

- A. $(2x - 3y)(3y - 7z)(7z - 2x)$
- B. $(2x + 3y)(3y + 7z)(7z + 2x)$ ✓
- C. $42xyz (2x + 3y)(3y + 7z)(7z + 2x)$
- D. $42xyz (2x - 3y)(3y - 7z)(7z - 2x)$

Q2 Mathematics

A cosmetic product is available at 75% discount. If the shopkeeper charges ₹1,874, what is its marked price?

- A. ₹8,342
- B. ₹7,496 ✓
- C. ₹6,145
- D. ₹5,674

Q3 Mathematics

The sum of the digits in a two-digit number is 9. If the value of the number is 6 more than 5 times the digit in the ones' place, then the number is:

- A. 45
- B. 18
- C. 27
- D. 36 ✓

Q4 Mathematics

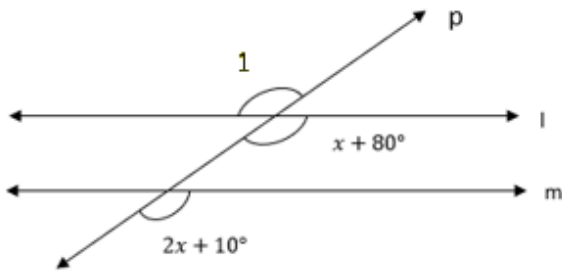
A shopkeeper bought 12 dozen eggs at the rate of ₹5 per egg. 12 eggs broke in transit. He sold the remaining eggs at the rate of ₹6 per egg. Find his percentage of profit.

- A. 5%
- B. 10% ✓
- C. 20%
- D. 15%



Q5 Mathematics

In the given figure line l is parallel to m and p is the transversal. Find the measure of the angle 1.



A. 140°

B. 150° ✓

C. 300°

D. 200°

Q6 Mathematics

Ramesh invested ₹1,232 at 5% p.a. rate of simple interest in a bank. What amount will he get after 3 years?

A. ₹1,848.80

B. ₹1,285.80

C. ₹2,145.80

D. ₹1,416.80 ✓

Q7 Mathematics

Mr. Sharma, Mr. Gupta and Ms Sinha invested ₹4,000, ₹8,000 and ₹6,000, respectively, in a business. Mr. Sharma left after 6 months. If after 8 months, there was a gain of ₹34,000, then what will be the share of Mr. Gupta?

A. ₹12,000

B. ₹14,000

C. ₹16,000 ✓

D. ₹20,000



Q8 Mathematics

If $3^{x-2} + 3^x = 7290$, then the value of x is:

A. 6

B. 7

C. 8



D. 9

Q9 Mathematics

Two pipes A and B can fill a cistern in 36 minutes and 48 minutes, respectively. Both the pipes are opened at the same time and pipe B is closed after some time. If the cistern gets filled in half an hour, then after how many minutes was pipe B closed?

A. 5

B. 8



C. 9

D. 10

Q10 Mathematics

The monthly incomes of two friends Anuj and Mathew, are in the ratio 5 : 7 and each of them saves ₹10,000 every month. If the ratio of their expenditure is 2 : 3, find the income of Anuj.

A. ₹15,000

B. ₹20,000

C. ₹50,000



D. ₹5,000

Q11 Mathematics

The equation $x^2 - 6x + 9 = 0$ can be written as:

A. $(x + 3)^2 = 0$

B. $(x - 2)(x - 3) = 0$

C. $(x - 2)(x - 3)^2 = 0$

D. $(x - 3)^2 = 0$



Q12 Mathematics

A boat starting from point P goes downstream to point Q in 3 hours and returns back from point Q to the point P in 4 hours. If the speed of the water is 3 km/h, find the speed of the boat in still water.

A. 12 km/h

B. 21 km/h



C. 32km/h

D. 20 km/h

Q13 Mathematics

The value of $\frac{1}{(1+\cot^2 x)^2} + \frac{\tan^2 x}{(1+\tan^2 x)^2} + \frac{1}{1+\tan^2 x}$ is:

A. 5

B. 4

C. 3

D. 1

**Q14** Mathematics

If the radius of a sphere is increased by 2 cm, then its surface area increases by 704 cm^2 . Using $\pi = \frac{22}{7}$, find the radius of the sphere before the increase.

A. 13 cm



B. 14 cm

C. 15 cm

D. 16 cm

Q15 Mathematics

The product of two numbers is 1472 and their HCF is 8. Find their LCM.

A. 144

B. 184



C. 108

D. 176



Q16 Mathematics

Hariteja walked to his school at a speed of 4 km/h and returned on a scooter at 20 km/h. His average speed during the two-way journey is:

A. 12 km/h

B. $\frac{20}{3}$ km/h



C. 6 km/h

D. 8 km/h

Q17 Mathematics

The sum of the first 8 prime numbers divided by 7 is equal to _____

A. 11



B. 10

C. 13

D. 14

Q18 Mathematics

Find the value of $7 + \{4 + 3 \text{ of } 4 - (5 + 3 - 6 \div 2)\}$.

A. 18



B. 21

C. 15

D. 17

Q19 Mathematics

Simplify: $\frac{3}{2}x^2 + 2x - \frac{3}{2} + \frac{x^2}{2} - 6x + \frac{1}{2}$.

A. $2x^2 - 4x + 1$

B. $2x^2 - 4x - 1$



C. $2x^2 + 4x - 1$

D. $2x^2 + 4x + 1$



Q20 Mathematics

A and B together complete a work in 8 days. If B is 25% more efficient than A, then in how many days will A alone complete the same work?

A. 12 days

B. 18 days



C. 24 days

D. 6 days

Q21 Mathematics

Which of the following is a quadratic equation whose roots are $\frac{7}{3}$ and $\frac{12}{5}$?

A. $15x^2 - 70x + 84 = 0$

B. $15x^2 - 72x + 84 = 0$

C. $x^2 - 71x + 84 = 0$

D. $15x^2 - 71x + 84 = 0$

**Q22** Mathematics

A cuboidal block, 12 cm by 24 cm by 30 cm, is cut up into an exact number of identical cubes. The least possible number of such cubes is:

A. 55

B. 50

C. 45

D. 40

**Q23** Mathematics

Find the value of $\sqrt{\frac{0.030625}{0.001225}}$.

A. 5



B. 15

C. 25

D. 20



Q24 Mathematics

Which of the following is NOT a property of similar triangles?

- A. Ratio of corresponding sides = Ratio of corresponding perimeters
- B. Ratio of corresponding sides = Ratio of corresponding medians
- C. Ratio of corresponding sides = Ratio of corresponding altitudes
- D. Ratio of any two angles = Ratio of any two medians ✓

Q25 Mathematics

Find x, if the median is 28.5.

CI	0-10	10-20	20-30	30-40	40-50	50-60
F	5	X	20	15	7	5

- A. 2
- B. 4
- C. 8 ✓
- D. 7

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

What are the two signs to be interchanged for making the following equation correct?

$$[(44 + 36) - (4 \times 4)] \div (1 - 5) \times 2 = 8$$

- A. +, ÷
- B. ×, ÷
- C. +, ×
- D. +, - ✓



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Q27 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	4	6	7	\$	#	@	2
Codes	H	F	M	E	T	P	Z

Conditions:

- (i) If the first element is an even number and the last element is also an even number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the second element is an even number and the fifth element is a symbol, the codes for these two (the second and the fifth elements) are to be interchanged.
- (iii) If the fourth element is a symbol and the sixth element is also a symbol, both these elements (the fourth and the sixth elements) are to be coded as N.

Question: 4 6 \$ 7 4 # @ 2

A. Z F E M H T P H



B. H F E M H T P Z

C. Z H E M F T P H

D. Z F E N H N P H

Q28 General Intelligence and Reasoning

Which of the following interchanges of signs would make the given equation correct?

$$5 \times 4 \div 10 - 8 + 2 = 8$$

A. +, -



B. ×, ÷

C. +, ×

D. +, ÷

Q29 General Intelligence and Reasoning

Which of the following alphanumeric clusters will replace the question mark (?) in the series to make it logically complete?

ACE 9, BDF 12, GIK 27, HJL 30, ? , NPR 48, SUW 63

A. MOQ 45



B. MNO 42

C. OPQ 48

D. NOP 42



Q30 General Intelligence and Reasoning

Few birds (One each of Orange, Yellow, Black, Green, Grey, Red colour and three White coloured) were sitting in a row facing north. The black bird was an immediate neighbour of both, the red and the grey bird. The yellow bird was sitting to the immediate right of the green bird. Only three birds were sitting between the orange and the red bird and all these three birds were white. The yellow bird sat third to the right of the black bird. Which colour birds were sitting at the leftmost and rightmost ends of the row respectively?

- A. Yellow (Left) and White (Right)
- B. White (Left) and Orange (Right)
- C. Orange (Left) and Yellow (Right) ✓
- D. Grey (Left) and Red (Right)

Q31 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some beds are tables.

Some tables are cupboards.

Some cupboards are chairs.

Conclusions:

I. Some chairs are beds.

II. Some beds are cupboards.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Both conclusions I and II follow
- D. Neither conclusion I nor II follows ✓

Q32 General Intelligence and Reasoning

L, G, K, P, H and Z live on eight different floors of the same multistorey building with 2 floors being vacant. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 8. H lives on floor No. 1, K on No. 2, and P on No. 8. One immediate floor above and one immediate floor below Z are vacant. G's floor is immediately above the floor on which L lives and G's floor is also immediately below P's floor. Who lives on floor No. 4?

- A. L
- B. Z ✓
- C. H
- D. G



Q33 General Intelligence and Reasoning

Which of the following number will replace the question mark (?) and complete the given number series?

45, 52, 61, 73, 90, ?

A. 116

B. 112

C. 114



D. 115

Q34 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 are not allowed.)

(11, 64, 3)

(17, 36, 11)

A. (24, 169, 11)



B. (21, 144, 32)

C. (26, 56, 8)

D. (30, 49, 11)

Q35 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

16, 18, 27, 55, 120, ?

A. 230

B. 246



C. 240

D. 510



Q36 General Intelligence and Reasoning

Shyam walked 10 m towards the north and then turned left and walked 11 m. He then turned right and walked for 13 m, turned right again and walked for 10 m. He then turned left and walked 14 m, and then finally turned right and walked 1 m. How far is Shyam from the starting point?

(All turns are 90 degree turns only)

A. 34 m

B. 35 m

C. 33 m

D. 37 m



Q37 General Intelligence and Reasoning

Study the given letter series and answer the question that follows.

Q I O M J E S T R U L E B A C K J M N

How many consonants are immediately preceded by a consonant and immediately followed by a vowel?

A. 1

B. 2

C. 3

D. 4



Q38 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. D is to the immediate right of H. A is third to the left of C. Only three people sit between H and L. L is fifth to the right of C. D is at the extreme right end of the row. If no other person is sitting in the row, what is the total number of persons seated?

A. 12

B. 14

C. 16

D. 18



Q39 General Intelligence and Reasoning

In a certain code language, 'CURRY' is written as 'BSONT' and 'KHAKI' is written as 'JFXGD'. How will 'BHEEM' be written in that language?

- A. AFBBI
- B. CFBBH
- C. AEBBI
- D. AFBAH



Q40 General Intelligence and Reasoning

How much angular distance will be covered by the minute hand of a correct clock in a period of 3 hours 10 minutes?

- A. 978°
- B. 1000°
- C. 1140°
- D. 1202°



Q41 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- Some purses are keys.
- All lockers are keys.
- All keys are pins.

Conclusions:

- I. Some pins are purses.
- II. No pin is a purse.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Both conclusions I and II follow
- D. Either conclusion I or II follows



Q42 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statements is true, decide which of the given conclusions logically follow(s) from the statement.

Statement:

Team A students lost 14 out of 20 games they played last season.

Conclusions:

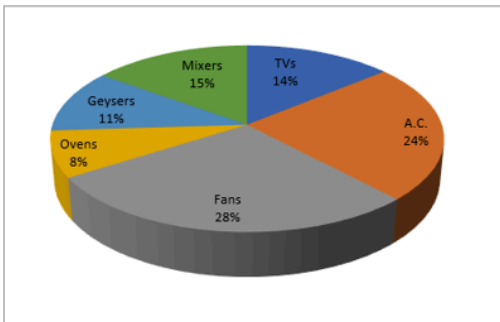
- I. Team A students are more interested in academics than sports.
- II. Team A students are unlucky.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow



Q43 General Intelligence and Reasoning

The following chart shows the percentage of various products sold from an electronics goods shop during the year 2021. The total number of products sold from the shop during 2021 is 16800. Study the chart and answer the question.



How many more Fans have been sold from the shop in comparison to Ovens during 2021?

- A. 3200
- B. 3360
- C. 3420
- D. 3566



Q44 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(5, 62, 7)

(8, 188, 12)

A. 6, 117, 19

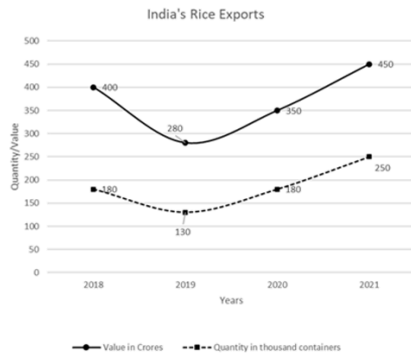
B. 11, 390, 13

C. 10, 181, 9

D. 7, 114, 9

**Q45** General Intelligence and Reasoning

Study the following line graph carefully and answer the question.



Supposing if in 2020, the average value of goods sold per container was same as that of 2019, then what would be the new approximate value of total exports (in crores) in 2020 if number of containers in 2020 remains unchanged?

A. 387

B. 555

C. 346

D. 500



Q46 General Intelligence and Reasoning

Eight persons, A, B, C, D, E, F, G and H, are sitting around a square table facing the centre of the table. Four of them are sitting at the corners while the other four are sitting at the exact centre of the sides of the table. C is sitting at one of the corners. F is to the immediate right of C. Only H is sitting between C and G. D is sitting at one of the corners. A is not sitting at any of the corners. E is to the immediate left of B. E is the immediate neighbour of F. Which two persons are sitting towards the left of G but to the right of B?

A. A and E

B. C and H

C. A and D



D. A and F

Q47 General Intelligence and Reasoning

L, M, N, O, P, Q and R, are sitting in a straight row, facing north. Only three people sit between Q and N. M and O are immediate neighbours. O is at the extreme right end of the row. R is at the immediate left of N. Who is at the fifth position from the left end of the row?

A. L

B. P

C. N



D. M

Q48 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation if '+' and '÷' are interchanged and also '×' and '-' are interchanged?

$$42 + 7 \div 24 \times 6 - 3 = ?$$

A. 10

B. 12



C. 13

D. 14



Q49 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $G < D < R = T > Y > Q = H$

A. $R < G$

B. $D < T$



C. $H > T$

D. $G = T$

Q50 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $A = F \geq S > H < Z > R = G$

Conclusions:

I. $S < G$

II. $S \geq A$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true



Q51 General Intelligence and Reasoning

Each vowel in the word OPTICAL is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. P

B. O

C. B



D. J



Q52 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

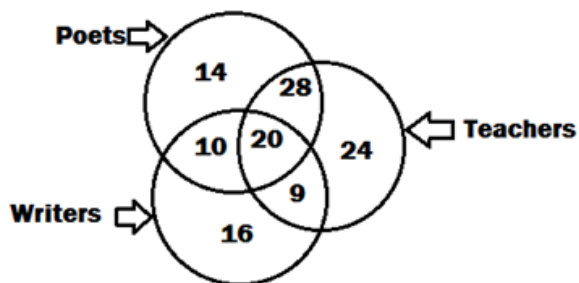
HCM : MHR

FET : KJY

- A. PRT : TPS
- B. GHK : HKJ
- C. UPJ : ZUO
- D. UFL : LKU

**Q53** General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



Which of the following statements is correct on the basis of the above diagram?

- A. The number of teachers who are both writers and poets is 20.
- B. The number of poets who are also teachers but not writers is 48.
- C. The number of writers who are neither teachers nor poets is 10.
- D. The number of poets who are also teachers is 44.

**Q54** General Intelligence and Reasoning

P started from a point facing north and then turned right and ran for 24 m east, turned left and walked for 26 m. He then turned left and first ran for 24 m and then walked for 6 m and then turned right and walked for 6 m, turned right again, and ran for 30 m. How much distance did he cover walking, and in which direction is he facing now?

(All turns are 90 degree turns only)

- A. 38 m, West
- B. 38 m, East
- C. 126 m, West
- D. 126 m, East



Q55 General Intelligence and Reasoning

Each vowel in the word INCURABLE is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. How many vowels will be there in the new word thus formed?

A. 2

B. 1



C. 3

D. 4

General Science

25 Questions • Answer Key

Q56 General Science

A concave mirror having focal length of magnitude 20 cm forms a real image at a distance of 60 cm from it. The object distance (in cm) is:

A. -30



B. +30

C. -15

D. +15

Q57 General Science

Consider the statements given below and identify the correct answer.

Statement-I: Washing soda is produced from sodium chloride.

Statement-II: It attacks dirt and grease to form water soluble products, which are then washed away on rinsing with water.

A. Both the statements are true.



B. Both the statements are false.

C. Statement-I is true, and Statement-II is false.

D. Statement-II is true, and Statement-I is false.



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Q58 General Science

In the reaction $\text{ZnO} + \text{C} \rightarrow \text{Zn} + \text{CO}$:

- A. carbon is reduced to CO
- B. ZnO is reduced to Zn
- C. ZnO is oxidized to Zn
- D. Zn does not undergo redox reaction.

Q59 General Science

The component of white light that deviates the most on passing through a glass prism is:

- A. red
- B. violet
- C. blue
- D. green

Q60 General Science

Ozone depletion in the stratosphere layer of the atmosphere is responsible for which of the following

- A. Increase of UV radiations reaching Earth's surface
- B. Increase in greenhouse effect
- C. Cooling of Earth's atmosphere
- D. Increase in infrared radiations in the troposphere

Q61 General Science

Consider the below statements and identify the correct answer.

Statement-I: Ionic compounds are generally brittle and break into pieces when pressure is applied.

Statement-II: Ionic compounds have low melting and boiling points.

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.



Q62 General Science

An electric heater rated 1000 W and an electric geyser rated 2000 W are used for 4 hours daily. The energy consumed in 10 days (in kWh) is:

A. 12

B. 120

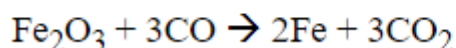


C. 1200

D. 12000

Q63 General Science

In the given reaction, _____ acts as a reducing agent.



A. Fe

B. Fe_2O_3

C. CO_2

D. CO



Q64 General Science

Some features of alveoli are mentioned below. Select the INCORRECT option.

A. Are finger-like structures



B. Have large surface area

C. Are thin walled

D. Have extensive network of blood vessels

Q65 General Science

The conversion of ethanol to ethanoic acid is an example of which of the following reactions?

A. Combustion reaction

B. Oxidation reaction



C. Addition reaction

D. Substitution reaction



Q66 General Science

The S.I unit of induced potential difference is:

- A. A
- B. mA
- C. V
- D. mV



Q67 General Science

In which part of the leaves do massive amounts of gaseous exchange take place during respiration?

- A. Stomata
- B. Grana
- C. Thylakoid
- D. Chlorophyll



Q68 General Science

In some women, oviducts are blocked. These women are unable to bear babies because sperms cannot reach the egg for fertilisation. The doctors advise IVF (invitro fertilisation) in such cases. Below are given some steps of the procedure. Select the INCORRECT step.

- A. Fusion of egg and sperms is done outside the body
- B. Zygote is formed and after a week placed in the uterus
- C. Complete development takes place in the uterus
- D. Zygote is kept outside and development takes place in a test tube



Q69 General Science

Which of the following will be the next member of the homologous series of hexene?

- A. Pentane
- B. Heptane
- C. Pentene
- D. Heptene



Q70 General Science

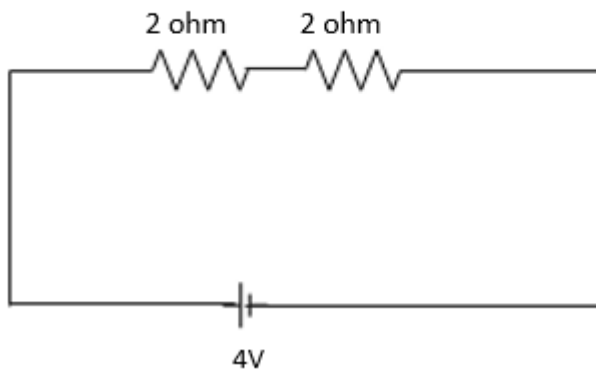
Some features of the circulatory system in humans are mentioned below. Select the INCORRECT option.

- A. Platelets help in clotting of blood
- B. Capillaries join to form veins
- C. Hypertension is caused by constriction of veins
- D. Lymph is also called tissue fluid



Q71 General Science

Calculate the total current in the circuit given below:



- A. 1A
- B. 2A
- C. 4A
- D. 8A



Q72 General Science

In human males, why are testes present outside the abdominal cavity in a pouch called scrotum?

- A. It is richly supplied by blood vessels needed for sperm formation
- B. It helps in maintaining temperature 2-3 degrees lower than the body for sperm formation
- C. It helps in maintaining low pressure than the body for sperm formation
- D. It secretes hormones for sperm formation



Q73 General Science

Which of the following is/are useful effort(s) for sustainability of resources?

- a. Switching off unnecessary lights and fans
- b. Using lift instead of stairs
- c. Repairing leaking taps for conserving water
- d. Using empty containers to store things
- e. Going to school by your own car instead of cycling

A. Only b

B. a, c and d



c. Only e

D. b and e

Q74 General Science

Which of the following triads is NOT a Dobereiner's triad?

- (i) Li, Na, K
- (ii) Ca, Sr, Ba
- (iii) N, P, Sb
- (iv) Cl, Br, I

A. Only i

B. Only ii

C. Only iii



D. Only iv



Q75 General Science

A convex lens produces a magnification of -3 for an object placed at 1.5 m from the lens. Find the image distance (with correct sign).

A. 4.5 m



B. -4.5 m

C. 0.5 m

D. -0.5 m

Q76 General Science

Which of the following options states the different ways of excretion in plants?

A. Only transpiration and diffusion

B. Only transpiration and storage

C. Only diffusion and storage

D. Transpiration, diffusion and storage



Q77 General Science

A magnet, when moved near a coil, produces an induced potential difference in the coil. What happens when we increase the speed of the magnet near the coil?

A. The induced potential difference in the coil increases.



B. The induced potential difference in the coil decreases.

C. The induced potential difference remains the same.

D. The induced current in the coil remains the same.



Q78 General Science

A spherical mirror converges a beam of light, at a given point on the principal axis. Which of the following statement(s) about the mirror is/are true?

- (a) The mirror used is concave
- (b) The mirror has positive focal length
- (c) The point of convergence is the principal focus of the mirror

A. Only (a)

B. Only (b)

C. Both (a) and (c)



D. Both (a) and (b)

Q79 General Science

An electric heater is rated 2200 W at 220 V. The minimum rating of the fuse wire to be connected to the device is:

A. 5 A

B. 10 A



C. 20 A

D. 22 A

Q80 General Science

What is the correct order of metallic character of the following metals?

A. $\text{Mg} < \text{Na} < \text{Ba} < \text{Cs}$



B. $\text{Na} < \text{Mg} < \text{Cs} < \text{Ba}$

C. $\text{Cs} < \text{Ba} < \text{Na} < \text{Mg}$

D. $\text{Ba} < \text{Cs} < \text{Mg} < \text{Na}$



Q81 General Awareness and Current Affairs

What is the name of the consumer awareness programme started by the Department of Consumer Affairs in 2022?

A. Consumer Empowerment Week



B. Consumer Awareness Week

C. Consumer Behaviour Week

D. Consumer Rights Week

Q82 General Awareness and Current Affairs

Who launched India's first 'One Health Consortium'?

A. Ministry of Science and Technology



B. Ministry of Health and Family Welfare

C. Ministry of Home Affairs

D. Ministry of Education

Q83 General Awareness and Current Affairs

Chauri Chaura incident occurred in which year?

A. 1921

B. 1922



C. 1920

D. 1919



Q84 General Awareness and Current Affairs

Kokborok is one of the state languages of Tripura. On 19th January 2022, Tripura celebrated which Kokborok day?

A. 24th

B. 34th

C. 44th



D. 55th

Q85 General Awareness and Current Affairs

What is the aim of Digital Government Mission launched by the Ministry of Electronics and Information Technology in January 2022?

A. To provide welfare service meant for girl child and women

B. To have services proactively anticipate citizens' needs before they approach the services.



C. To provide employment information to youth living in rural areas

D. To help workers to meet their financial needs

Q86 General Awareness and Current Affairs

What is the name of the sacred text of Christianity which consists of two parts: the Old Testament which is essentially the Hebrew text of the time of Jesus; And the New Testament that includes writings about Jesus Christ and the early church?

A. Bible



B. Book of Psalms

C. Knowing God Jesus

D. De doctrina Christiana



Q87 General Awareness and Current Affairs

Monazite ore is found in the sands of which of the following states of India?

- A. Rajasthan
- B. Punjab
- C. Kerala
- D. Odisha



Q88 General Awareness and Current Affairs

Article 12 to 35 contained in Part _____ of the Constitution deal with Fundamental Rights.

- A. I
- B. II
- C. III
- D. IV



Q89 General Awareness and Current Affairs

In January 2022, the Zoological Survey of India (ZSI) underlined some green rules for living root bridges of which state to get the UNESCO world heritage site tag?

- A. Kerala
- B. Meghalaya
- C. Rajasthan
- D. Haryana



Q90 General Awareness and Current Affairs

Where was the 2nd National Para Shooting Championship 2022 between 21 and 25 March 2022 held?

- A. Chandigarh
- B. Puducherry
- C. New Delhi
- D. Lakshadweep



Q91 General Awareness and Current Affairs

Who is the Chief Justice of India as on March 2022?

- A. DY Chandrachud
- B. Uday Umesh Lalit
- C. NV Ramana
- D. Ranjan Gogoi



Q92 General Awareness and Current Affairs

Which Article of the Constitution of India enshrines one of the Directive Principles of State Policy which lays down that 'the State shall take steps to organise village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government'?

- A. Article 32
- B. Article 37
- C. Article 40
- D. Article 48



Q93 General Awareness and Current Affairs

Which of the following statements in Economics is NOT correct?

- A. Total cost is the sum of the total variable cost and the total fixed cost.
- B. Average fixed cost curve is downward sloping.
- C. Short run marginal cost, average variable cost and short run average cost curves are 'U'-shaped.
- D. In the long run, all inputs are fixed.



Q94 General Awareness and Current Affairs

In January 2022, India's first para-badminton academy was launched in which state?

- A. Haryana
- B. Uttar Pradesh
- C. Jharkhand
- D. Punjab



Q95 General Awareness and Current Affairs

How many private banks were nationalised by Indra Gandhi during the Fourth Five Year Plan in 1969?

- A. 14
- B. 24
- C. 10
- D. 17



Q96 General Awareness and Current Affairs

The Gua mines of Jharkhand is associated with which of the following minerals?

- A. Iron-ore
- B. Coal
- C. Zinc
- D. Bauxite



Q97 General Awareness and Current Affairs

_____ is the money that is available from an individual's salary after he/she pays local, state, and federal taxes.

A. Disposable Income



B. Personal Income

C. National Income

D. Per Capita Income

Q98 General Awareness and Current Affairs

Saga Dawa festival is celebrated in which of the following Indian states?

A. Kerala

B. Arunachal Pradesh



C. Madhya Pradesh

D. Uttar Pradesh

Q99 General Awareness and Current Affairs

In January 2022, which village became the first open-defecation free (ODF) Plus village of Mizoram?

A. Khanpui

B. Selam

C. South Maubuang



D. Dulte



As of July 2022, what is the required age bracket of a subscriber to the Atal Pension Yojana?

A. 16-25 years

B. 18-40 years



C. 21-60 years

D. 14-35 years



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A cyclist covers a distance of 2.5 km in 4 minutes 10 seconds. How long will he take to cover a distance of 6 km at the same speed?

- A. 11 minutes
- B. 10 minutes
- C. 9 minutes
- D. 12 minutes



Q2 Mathematics

The value of $\sqrt{144} + \sqrt{0.0169} - \sqrt{4.41} =$

- A. 10.03
- B. 14.23
- C. 15.4
- D. 11.2



Q3 Mathematics

The average of thirteen consecutive integers is 36. If two times the smallest of these 13 integers is added to the largest of these 13 integers, what will be the sum obtained?

- A. 121
- B. 115
- C. 110
- D. 102



Q4 Mathematics

If $x^2 + xy + x = 18$ and $y^2 + xy + y = 24$, then the value of $x + y$ is:

- A. 5 or -6
- B. 6 or -7
- C. -5 or 6
- D. -6 or 7



Q5 Mathematics

Ten years ago, a mother was 3 times as old as her son. 5 years ago she was $\frac{5}{2}$ times her son's age. What is her present age?

A. 55 years



B. 45 years

C. 35 years

D. 30 years

Q6 Mathematics

If a sum of money doubles itself in 10 years at compound interest, then in how many years will it become 16 times of itself at the same rate?

A. 10

B. 20

C. 30

D. 40



Q7 Mathematics

Which of the following is NOT a true statement?

A. All squares are rhombuses.

B. All sides of a rhombus are congruent.

C. Diagonals of a rhombus bisect each other at right angles.

D. Sum of any pair of adjacent angles of a rhombus is not 180° .



Q8 Mathematics

Solve: $2(5x - 3) + 3(3x - 5) = 93$

A. $x = 6$



B. $x = -6$

C. $x = 9$

D. $x = -9$



Q9 Mathematics

The value of

$$(3^0 + 3^{-2} + 3^{-1}) \times 27 =$$

- A. 23
- B. 32
- C. 39
- D. 3

**Q10** Mathematics

In the year 2000, Monu was 3 times his sister's age. In 2010, he was 24 years older than her. Find Monu's age in 2010.

- A. 38 years
- B. 62 years
- C. 52 years
- D. 46 years

**Q11** Mathematics

There are three numbers which are co-prime to one other such that the product of the first two is 357 and that of the last two is 609. What is the sum of the three numbers?

- A. 67
- B. 83
- C. 75
- D. 91

**Q12** Mathematics

Simplify $\frac{\sin A}{1 + \cos A} + \frac{1 + \cos A}{\sin A}$.

- A. $\sec A$
- B. $\operatorname{cosec} A$
- C. $2\sec A$
- D. $2\operatorname{cosec} A$



Q13 Mathematics

Find the volume of a sphere whose diameter is 12 cm.

A. $284\pi \text{ cm}^3$

B. $288\pi \text{ cm}^3$ ✓

C. $864\pi \text{ cm}^3$

D. $248\pi \text{ cm}^3$

Q14 Mathematics

The mean of the data 9, 3, 5, 4, 4, 5 and y is y. What is the mode of the data?

A. 4

B. 5 ✓

C. 9

D. 3

Q15 Mathematics

The measure of each interior angle of a regular polygon is 120° . How many sides does this polygon have?

A. 5

B. 6 ✓

C. 7

D. 8

Q16 Mathematics

A bike running at a speed of 50 km/h reaches its destination 10 minutes late. If it runs at 60 km/h it is late by 5 minutes. How many minutes should the bike take, travelling at usual speed to complete the journey on the same route to reach on time?

A. 25 minutes

B. 20 minutes ✓

C. 15 minutes

D. 12 minutes



Q17 Mathematics

The sum of three consecutive multiples of 9 is 2457, find the largest one.

A. 819

B. 828



C. 999

D. 990

Q18 Mathematics

If A bought an item for ₹384 and sold it for ₹576 and B bought another item for ₹1,254 and sold it for ₹1,672. What is the ratio of gain % of A to gain % of B?

A. $\frac{5}{2}$

B. $\frac{3}{4}$

C. $\frac{3}{2}$



D. $\frac{5}{3}$

Q19 Mathematics

The HCF of 45, 78 and 117 is:

A. 7

B. 9

C. 5

D. 3



Q20 Mathematics

The product of the roots of the quadratic equation $6 - 5x^2 - 8x = 0$ is:

A. $\frac{8}{5}$

B. $-\frac{8}{5}$

C. $-\frac{6}{5}$ ✓

D. $\frac{6}{5}$

Q21 Mathematics

A dealer allows 30% discount on the marked price of an item and still makes a profit of 10%. By how much percentage is the marked price more than the cost price (rounded off to two places of decimal)?

A. 26.67%

B. 33.33%

C. 45.45%

D. 57.14% ✓

Q22 Mathematics

The cost incurred by Mahesh to produce an item in the factory was ₹2,000. He had to spend 10% of the production cost incurred on the item in the factory to transport it to the showroom. He sold the item from the showroom at a price that was 15% above the total cost incurred by Mahesh in the production and transportation of the item. What was the price at which Mahesh sold the item from the showroom?

A. ₹2,500

B. ₹2,300

C. ₹2,530 ✓

D. ₹2,250



Q23 Mathematics

A sum of money is to be distributed among four members A, B, C, and D in the ratio 4: 7: 9: 3. If C gets ₹720 more than D, find D's share.

A. ₹160

B. ₹240

C. ₹360



D. ₹480

Q24 Mathematics

Find the area of a rhombus whose diagonals are 12 cm and 15 cm long.

A. 60 cm^2

B. 45 cm^2

C. 80 cm^2

D. 90 cm^2



Q25 Mathematics

The value of $12 \div 3 \times (7 + 8 - 3)$ is:

A. 48



B. $\frac{6}{13}$

C. $\frac{1}{13}$

D. 24



Q26 General Intelligence and Reasoning

Study the given table and answer the question that follows.

The table shows value of Indian exports across different goods for different years.

Year	2021	2020	2019	2018	2017	2016
Items	(Amount in ₹ Crores)					
Fruits	85	75	70	61	35	30
Pulses	35	20	35	60	70	40
IT products	200	160	100	120	90	85
Defence products	120	80	110	85	60	40
Dairy products	60	62	68	72	40	30

What is the yearly average exports(combined) of fruits, IT products and defence products for 2018 to 2020?

- A. ₹280 crores
- B. ₹282 crores
- C. ₹165 crores
- D. ₹287 crores

**Q27** General Intelligence and Reasoning

In a certain code language, TOUGH is written as 20152178 and PLEAD is written as 1612514. How will CLOVE be written in the same language?

- A. 31215225
- B. 31315235
- C. 31215324
- D. 31115215

**Q28** General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

C _ P R _ D T _ R N _ T _ R N _ T P _ N

- A. P N P E R F P
- B. T P N D P F R
- C. T N T E P F P
- D. T N P E P F R



Q29 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

TOP : VRU

XOR : ZRW

- A. NET : PGY
- B. QIP : SLV
- C. TOM : VRQ
- D. NOR : PRW



Q30 General Intelligence and Reasoning

4 people A, B, C and D are sitting in a straight line, facing north. A and C are not sitting adjacent to each other, while C and B are sitting adjacent to each other. Which of the following sitting arrangements is NOT possible?

- A. DABC
- B. ABCD
- C. CBAD
- D. BCAD



Q31 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All sketches are cards.

All cards are posters.

Some sketches are folders.

Conclusions:

I. Some folders are posters.

II. Some cards are folders.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Both conclusions I and II follow
- D. Either conclusion I or II follows



Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

13, 27, 56, 115, 234, ?

A. 332

B. 346

C. 473



D. 482

Q33 General Intelligence and Reasoning

Four houses, A, B, C and D, are located in the same colony. House A is 300 m to the north of House D. House C is 400 m to the east of House B. House A is 300 m to the south of House B. In which direction is House D with reference to House B?

A. East

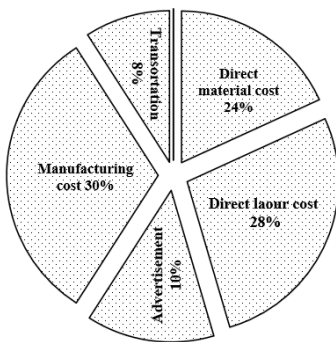
B. West

C. North

D. South

**Q34** General Intelligence and Reasoning

The following pie chart shows the percentage distribution of the expenditure incurred in manufacturing a power bank. Study the pie chart and answer the question.



If 100 power banks are manufactured and the manufacturing cost on them amounts to ₹50,000, then what should be the selling price of the power banks so that the manufacturer can earn a profit of 50%?

A. ₹3000

B. ₹2400

C. ₹2200

D. ₹2500



Q35 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $C \leq F < E = D > G \geq H < I$

Conclusions:

I. $D > C$

II. $E < H$

A. Only conclusion I is true



B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true

Q36 General Intelligence and Reasoning

Each of A, B, C, D, E and F has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. Thursday is the only gap day on which no exam is held. E's exam is on Saturday. The exams of A and F are separated by one day that is the gap day. D's exam is immediately before F but is immediately after C. B's exam is on Sunday. On which day is D's exam held?

A. Monday

B. Tuesday



C. Wednesday

D. Friday

Q37 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

25, 36, 49, 66, 85, ?

A. 105

B. 103

C. 108



D. 110



Q38 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(4, 3, 16)

(3, 5, 19)

A. (8, 2, 20)



B. (3, 2, 12)

C. (5, 2, 49)

D. (8, 1, 18)

Q39 General Intelligence and Reasoning

In a certain code language, ROUTINE is written as UORTENI and PLAYERS is written as ALPYSRE. How will BANKING be written in the same language?

A. NABKGNI



B. NABGNIK

C. BNAKIGN

D. NBAIGKN

Q40 General Intelligence and Reasoning

Study the given letter, number, symbol series and answer the question that follows.

7 T % N 9 * M \$ 3 U = L 8 Y @ G & 3 E > 5 & R 3 ! K # 7 % H = Y 6

Find out the total number of letters that are immediately followed by a number and immediately preceded by a symbol.

A. 1

B. 2

C. 3

D. 4



Q41 General Intelligence and Reasoning HINDI - no English version saved

एक कथन और उसके बाद दो धारणाएं I और II दी गई हैं। कथन में दी गई जानकारी को सत्य मानते हुए विचार करें, और बताएं कि दी गई धारणाओं में से कौन सी कथन में निहित हैं?

कथन:

इमारत की बाहरी दीवारों में कई दरारें हैं, जिनकी मरम्मत दीवार की पेंटिंग शुरू होने से पहले की जानी चाहिए, जिससे बाद में रिसाव जैसी समस्याओं का सामना न करना पड़े।

धारणा:

- I. बाहरी दीवारों को पेंट करने से रिसाव की समस्याएं हो सकती हैं।
- II. बाहरी दीवारों में दरारों के कारण रिसाव की समस्याएं हो सकती हैं।

- A. केवल धारणा I निहित है
- B. केवल धारणा II निहित है ✓
- C. न तो धारणा I, और न ही II निहित है
- D. धारणा I और II, दोनों निहित हैं

Q42 General Intelligence and Reasoning

What is the angular distance covered by the second hand of a correct clock in 12 minutes?

- A. 4320° ✓
- B. 4762°
- C. 5120°
- D. 5611°

Q43 General Intelligence and Reasoning

V, W, X, Y, Z, A and B are seven boxes kept one over the other but not necessarily in the same order. A is kept immediately above W. Only four boxes are kept between B and W. Only one box is kept between V and X. X is kept immediately above A. B is kept at the topmost position. How many boxes are kept between Z and Y?

- A. One
- B. Two
- C. Three ✓
- D. Four



Q44 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 are not allowed.)

(7, 175, 5)

(6, 294, 7)

A. (3, 192, 8)



B. (5, 140, 7)

C. (6, 216, 5)

D. (8, 412, 9)

Q45 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All blazers are dungarees.
2. No dungaree is scarf.
3. All pyjamas are dungarees.

Conclusions:

- I. No blazer is scarf.
- II. No blazer is pyjama.
- III. Some blazers are pyjamas.

A. Only conclusion I and II follow

B. Only conclusion I and III follow

C. Only conclusion I follows



D. None of the conclusions follow



Q46 General Intelligence and Reasoning

Four friends Himani, Shalaka, Mitali and Brinda are sitting around a square table facing the centre of the table. All four of them are sitting at the corners of the table. Himani is to the immediate right of Brinda. Mitali is to the immediate left of Shalaka. Himani is second to the left of Shalaka. After some time, Himani leaves her place and is replaced by Kamini. Similarly, Brinda is also replaced by Tara. Now who is sitting to the immediate left of Tara?

A. Shalaka



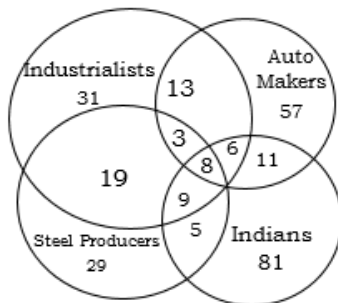
B. Mitali

C. Kamini

D. Brinda

Q47 General Intelligence and Reasoning

Study the diagram and answer the question that follows. The numbers in different sections indicate the number of persons. How many Indian industrialists make autos but are NOT steel producers?



A. 13

B. 3

C. 8

D. 6

**Q48** General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$125.99 - 35.92 + 3.89 \times 16.11 = ?$$

A. 150

B. 158

C. 154



D. 166



Q49 General Intelligence and Reasoning

Which two signs should be interchanged to make the given equation correct?

$$24 \times 6 - 12 + 18 \div 3 = 46$$

A. $\times$ and $+$

B. $\times$ and $\div$



C. $+$ and $\div$

D. $+$ and $-$

Q50 General Intelligence and Reasoning

In a class of 21 students, each scored differently. P's rank from the bottom is 9th, while Q's rank from the top is also 9th. How many students are ranked between Q and P?

A. 4

B. 2

C. 5

D. 3



Q51 General Intelligence and Reasoning

Each of the digits in the number 813924765 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. None

B. One

C. Two



D. Three

Q52 General Intelligence and Reasoning

Refer to the given letter and symbol series and answer the question that follows.

(Left) U # S & S F o G ^ & J % Z K * D X ¥ T X € @ Y \$ (Right)

How many such letters are there in the series each of which is immediately preceded by a symbol and also immediately followed by a symbol?

A. 2

B. 4

C. 6

D. 5



Q53 General Intelligence and Reasoning

Each vowel in the word 'DESTROY' is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter, thus formed, is arranged in alphabetical order, which letter will be fifth from the right end?

A. F

B. P



C. Q

D. R

Q54 General Intelligence and Reasoning

Starting from point L, a person walks 125 m towards the south. He then takes a left turn and walks 70 m. From there, he takes a left turn and walks 80 m. After that, he takes a left turn and walks 115 m. Finally, he takes a right turn and walks 45 m to reach point M. How far and in which direction is point M from point L ? (All turns are 90 degree turns only)

A. 45 m, East

B. 45 m, West



C. 90 m, East

D. 90 m, North

Q55 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $N > M < K = L \geq I > J$

Conclusions:

I. $L > J$

II. $N > L$

A. Only conclusion I is true



B. Only conclusion II is true

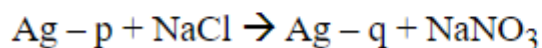
C. Both conclusions I and II are true

D. Neither conclusion I nor II is true



Q56 General Science

What will come in place of p and q, respectively, in the given double displacement reaction?



- A. NO_3 and NO_3
- B. Cl and NO_3
- C. Cl and Cl
- D. NO_3 and Cl



Q57 General Science

Which of the following materials is preferably used in making heating elements of electrical heating devices?

- A. Nichrome
- B. Constantan
- C. Tin-lead alloy
- D. Tungsten



Q58 General Science

Which of the following home appliances does NOT use an electric motor?

- A. Electric fan
- B. Electric mixer
- C. Electric washing machine
- D. Electric iron



Q59 General Science

Two resistors of $4\ \Omega$ each are connected in parallel to a $5\ \text{V}$ battery source. The total current in the circuit is:

- A. $2.5\ \text{A}$
- B. $5\ \text{A}$
- C. $10\ \text{A}$
- D. $20\ \text{A}$



Q60 General Science

Consider the statements below and identify the correct answer.

Statement-I: Modern periodic table has 18 vertical columns known as groups.

Statement-II: Modern periodic table has 7 horizontal rows known as periods.

- A. Statement I is correct, Statement II is incorrect.
- B. Statement II is correct, Statement I is incorrect.
- C. Both statements are correct.
- D. Both statements are incorrect.

Q61 General Science

Given below are some conclusions of Mendel's work on pea plants. All of them are correct except one. Select the INCORRECT conclusion.

- A. Genes come in pairs.
- B. Genes are inherited as distinct units.
- C. Segregation of genes takes place during formation of gametes.
- D. Each gamete has two copies of the same gene.

Q62 General Science

What is the main reason for the pollution of River Ganga by coliform bacteria?

- A. Washing of clothes
- B. Chemical effluents from industries
- C. Immersion of unburnt corpses
- D. Untreated sewage dumped in it

Q63 General Science

Oral pills used for birth control change the hormonal balance of the body. How do these prevent pregnancy? Select the correct option.

- A. Eggs are not released and no fertilisation
- B. No formation of eggs
- C. Lining of uterus breaks off
- D. Eggs are released but no fertilisation



Q64 General Science

A compound X is transparent crystalline solid. It has cleansing properties and used in manufacture of glass. Compound X is:

- A. baking soda
- B. washing soda
- C. sodium hydroxide
- D. bleaching powder



Q65 General Science

In a dynamo, electric current is produced using the principle of:

- A. electric conduction
- B. electromagnetism
- C. electromagnetic radiation
- D. electromagnetic induction



Q66 General Science

Selectively permeable membranes are those that allow penetration of _____.

- A. neither solvent nor solute molecules
- B. only solute molecules but not solvent molecules
- C. both solvent and solute molecules
- D. only solvent molecules but not solute molecules

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q67 General Science

The insoluble substance formed in a solution during a chemical reaction is known as _____.

- A. residue
- B. soluble salt
- C. aqueous solution
- D. precipitate



Q68 General Science

Consider the below statements and identify the correct answer.

Statement-I: Most carbon compounds are poor conductors of electricity.

Statement-II: Carbon compounds have low melting and boiling points.

- A. Both the statements are true ✓
- B. Both the statements are false
- C. Statement-I is true, and Statement-II is false
- D. Statement-II is true, and Statement-I is false

Q69 General Science

Which of the following is NOT a result of the ozone layer depletion?

- A. Tsunami ✓
- B. The Earth getting more UV rays from the Sun
- C. Skin cancer
- D. Immune deficiency disorders

Q70 General Science

Some features of transportation in plants are mentioned below. Which option shows the INCORRECT feature?

- A. Xylem transports water and Phloem transports food
- B. Movement of both water and food is bidirectional ✓
- C. Vessels and Tracheids are dead cells and Sieve tubes are living
- D. Water movement is by simple physical forces; food movement requires energy

Q71 General Science

Kidney is an organ of excretion and osmoregulation in humans. Regulation of which two substances is done by the kidneys?

- A. CO_2 and proteins
- B. Sugar and salts
- C. Water and salts ✓
- D. Water and O_2

Q72 General Science

Which of the following is a protein-splitting enzyme?

A. Pepsin



B. Amylase

C. Ptyalin

D. Lipase

Q73 General Science

An object placed 30 cm from a concave lens forms a virtual erect image at a distance of 10 cm from the lens. The magnification produced by the lens is:

A. 3

B. -3

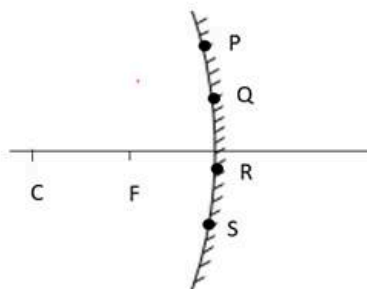
C. $1/3$



D. $-1/3$

Q74 General Science

P, Q, R and S are four points on the surface of a concave mirror as shown in the figure. If r_1 , r_2 , r_3 and r_4 are the distance of centre of curvature from points P, Q, R and S, respectively, then the correct relation between r_1 , r_2 , r_3 and r_4 is:



A. $r_1 = r_2 = r_3 = r_4$



B. $r_1 > r_2 > r_3 > r_4$

C. $r_1 < r_2 < r_3 < r_4$

D. $r_1 = r_2$, $r_3 = r_4$, $r_2 \neq r_3$



Q75 General Science

A wire of a given material has length 'l' and resistance 'R'. Another wire of the same material having nine times the length and the same area of cross section will have a resistance equal to:

A. $9R$



B. $1/9R$

C. $3R$

D. $1/3R$

Q76 General Science

At which position on principal axis does a concave mirror forms a highly diminished, real and inverted image of an object?

A. F



B. $2F$

C. between F and $2F$

D. beyond $2F$

Q77 General Science

Lemons placed inside a beaker filled with water appear relatively larger in size due to:

A. refraction of light



B. reflection of light

C. scattering of light

D. dispersion of light

Q78 General Science

Which of the following group of hydrocarbons follows the general formula of C_nH_{2n} ?

A. Alkane

B. Alkene



C. Alkyne

D. Alkyl



Q79 General Science

Consider the statements below and identify the correct answer.

Statement I: Among chemical properties, Mendeleev concentrated on the compounds formed by elements with carbon and hydrogen.

Statement II: He selected these elements as they are less reactive and formed compounds with few elements.

- A. Statement I is correct, Statement II is incorrect.
- B. Statement II is correct, Statement I is incorrect.
- C. Both statements are correct.
- D. Both statements are incorrect. ✓

Q80 General Science

In chlor-alkali process, chlor represents chlorine gas and alkali represents:

- A. ZnO
- B. CaCO_3
- C. NaOH ✓
- D. Ca(OH)_2

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In February 2022, India became the first country in the world to play _____ One Day International cricket matches.

- A. 1100
- B. 1000 ✓
- C. 900
- D. 800



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Q82 General Awareness and Current Affairs

The Union Budget 2022-23 has proposed to reduce the surcharge of cooperative societies from _____ to 7% for those whose income is between ₹1 crore and ₹10 crore.

A. 9%

B. 10%

C. 11%

D. 12%



Q83 General Awareness and Current Affairs

From which state of India did ISRO successfully test fire the Vikas engine, that would power India's first human-carrying rocket Gaganyaan?

A. Tamil Nadu



B. Punjab

C. Haryana

D. Rajasthan

Q84 General Awareness and Current Affairs

Which of the following is the world's largest food security programme extended till September 2022 by the Union Cabinet, Government of India in March 2022?

A. Annapurna Scheme

B. Swarnajayanti Gram Swarozgar Yojana

C. Mahatma Gandhi National Rural Employment Guarantee Act

D. Pradhan Mantri Garib Kalyan Anna Yojana



Q85 General Awareness and Current Affairs

Which of the following languages is NOT a classical language in India as on June 2022?

A. Sanskrit

B. Bengali



C. Tamil

D. Odia

Q86 General Awareness and Current Affairs

As per Annual Status of Education Report (rural) – 2021, what was the enrolment rate of children enrolled in government schools in the year 2021?

A. 65.3%

B. 67.5%

C. 70.3%



D. 72.5%

Q87 General Awareness and Current Affairs

Which Indian Cricketer played his 100th test match against Sri Lanka in Mohali in March 2022?

A. Virat Kohli



B. Rohit Sharma

C. Ravichandran Ashwin

D. Ishant Sharma

Q88 General Awareness and Current Affairs

Which of the following is NOT a tributary of the Yamuna river system?

A. Hindon

B. Chambal

C. Sind

D. Chenab



Q89 General Awareness and Current Affairs

Which of the following is NOT a part of the Panchayati Raj system in India as per the Constitution?

- A. Gram Panchayat
- B. Gram Corporation
- C. Panchayat Samiti
- D. Zila Panchayat



Q90 General Awareness and Current Affairs

The Largest brackish water Lake of India is present in which state?

- A. Odisha
- B. Gujarat
- C. Assam
- D. Maharashtra



Q91 General Awareness and Current Affairs

The Missionaries of Charity is a Catholic religious congregation established in _____ by Mother Teresa.

- A. 1947
- B. 1950
- C. 1952
- D. 1954



Q92 General Awareness and Current Affairs

Which Article of the Indian Constitution states that 'The Council of Ministers shall be collectively responsible to the House of the People'?

- A. Article 75 (3)
- B. Article 75 (1)
- C. Article 75 (2)
- D. Article 80 (4)



Q93 General Awareness and Current Affairs

In which of the following states is 'Nishagandhi Nritya Utsav' celebrated?

A. Tamil Nadu

B. Karnataka

C. Kerala



D. Uttar Pradesh

Q94 General Awareness and Current Affairs

N.K.Singh became the Chairman of which Finance Commission of India?

A. 13th

B. 15th



C. 17th

D. 19th

Q95 General Awareness and Current Affairs

Workers who own and operate an enterprise to earn their livelihood are known as:

A. hired workers

B. government employed workers

C. self-employed workers



D. regular salaried employed workers



Q96 General Awareness and Current Affairs

Fiscal policy is the policy of:

- A. NABARD
- B. the Government ✓
- C. RBI
- D. Both the Government and RBI

Q97 General Awareness and Current Affairs

Which of the following Acts was passed by the British Parliament, defining the powers and responsibilities of the various organs of the East India Company?

- A. Regulating Act of 1773 ✓
- B. Pitt's India Act of 1784
- C. Government of India Act of 1858
- D. Indian Councils Act of 1892

Q98 General Awareness and Current Affairs

Which physiographic division covers a distance of 2500 km from Indus to Brahmaputra in west-east direction?

- A. Northern plains
- B. Himalayan mountains ✓
- C. Peninsular plateau
- D. Coastal plains

Q99 General Awareness and Current Affairs

The Twenty Point Programme (TPP) was launched by the Government of India in _____.

- A. 1975 ✓
- B. 1980
- C. 1985
- D. 1990



Who has launched the first Indian Virtual Science Lab for children under the CSIR Jigyasa programme?

A. Dr. Jitendra Singh



B. Dharmendra Pradhan

C. Amit Shah

D. Dr. Virendra Kumar



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The value of $4^2 + \sqrt{8^2} - 4\sqrt{25} - 10 =$

A. -6



B. -25

C. -32

D. 12

Q2 Mathematics

If a and b are the roots of the equation $x^2 - 7x + 12 = 0$, then the value of $\frac{a^3 + b^3}{a^2 + b^2 + 1}$ is:

A. 3.5



B. 4.4

C. 5.2

D. 2.6

Q3 Mathematics

If the simple interest on a certain sum for 18 months at 5.5% per annum exceeds the simple interest on the same sum for 14 months at 6% per annum by ₹62.50, then the sum is:

A. ₹8,200

B. ₹7,000

C. ₹6,500

D. ₹5,000



Q4 Mathematics

Rani's sister's age is 4 years more than her age. If her sister's age is 28 years, then find Rani's age.

A. 32 years

B. 26 years

C. 24 years



D. 22 years



Q5 Mathematics

A and B undertake to complete a piece of work for ₹600. A alone can complete it in 4 days while B alone can complete it in 6 days. With the help of C, they finish the work in 2 days. Find the share of C in the payment received.

A. ₹100



B. ₹200

C. ₹300

D. ₹78

Q6 Mathematics

P, Q and R jointly start a business. It was agreed that P would invest ₹25,000 for 6 months, Q ₹44,000 for 5 months and R ₹50,000 for 3 months. Out of total profit of ₹1,04,000, the amount received by P will be:

A. ₹40,920

B. ₹27,900

C. ₹33,780

D. ₹30,000

**Q7 Mathematics**

The sum of the ages of a mother, son and daughter is 70 years. If the mother is thrice as old as her son, and the daughter is 5 years older than her brother, how old is the mother?

A. 35 years

B. 39 years



C. 42 years

D. 45 years

Q8 Mathematics

If the average of 5 consecutive even numbers is 10, then find the number at the centre when these five numbers are arranged in ascending order.

A. 20

B. 14

C. 10



D. 12



Q9 Mathematics

If $48 : x :: x : 75$, and $x > 0$, then what is the value of x ?

A. 60



B. 51

C. 63

D. 57

Q10 Mathematics

If the area of an equilateral triangle is $25\sqrt{3} \text{ cm}^2$, then the length of each side of the triangle is:

A. 5 cm

B. 8 cm

C. 10 cm



D. 12 cm

Q11 Mathematics

If the perimeter of a circle is $\frac{88}{7} \text{ cm}$, then find the perimeter (in cm) of the square the length of each of whose sides is equal to the radius of the given circle. [Use $\pi = \frac{22}{7}$]

A. 6

B. 7

C. 8



D. 9

Q12 Mathematics

If $\tan \theta = 4$, then the value of $\frac{4 \cos \theta + 2 \sin \theta}{2 \sin \theta - \cos \theta}$ is:

A. $\frac{12}{8}$

B. $\frac{12}{7}$



C. $\frac{12}{5}$

D. $\frac{12}{10}$



Q13 Mathematics

A trader marked the price of an article at $1\frac{2}{5}$ times of its cost price and he sold it at $\frac{17}{20}$ of the marked price. What is his gain percentage on that article?

A. 17%

B. 20%

C. 19%



D. 23%

Q14 Mathematics

Find the roots of $\sqrt{2x+9} + x = 13$.

A. 2 and 8

B. 8 and 6

C. 4 and 20

D. 20 and 8



Q15 Mathematics

If the surface area of a sphere is $36\pi \text{ cm}^2$, then the radius of the sphere is:

A. 2 cm

B. 3 cm



C. 4 cm

D. 5 cm

Q16 Mathematics

The value of $\sqrt{29\frac{4}{25}}$ is:

A. 5.5

B. 5.6

C. 5.2

D. 5.4



Q17 Mathematics

If $a^4 + \frac{1}{a^4} = 34$, then the value of $a^6 + \frac{1}{a^6}$ is:

A. 243

B. 216

C. 198



D. 185

Q18 Mathematics

Find the curved surface area of a cylinder whose diameter of base is 14 m and height is 24 m. [Use $\pi = \frac{22}{7}$]

A. 1506 cm^2

B. 1065 cm^2

C. 1056 cm^2



D. 1560 cm^2

Q19 Mathematics

A dishonest dealer professes to sell his goods at the cost price but uses a false weight and thus gains 25%. How much quantity of grains does he give for a kilogram?

A. 900 grams

B. 750 grams

C. 975 grams

D. 800 grams



Q20 Mathematics

If the mean of 22, 25, 27, 24 and x is 26, then the value of x is:

A. 41

B. 35

C. 28

D. 32



Q21 Mathematics

If two parallel lines are intersected by a transversal, then which of the options below is necessarily true?

- A. The sum of the measures of a pair of alternate interior angles is 180°
- B. The sum of the measures of a pair of vertically opposite angles is 180°
- C. The sum of the measures of a pair of interior angles on the same side of the transversal is 180° ✓
- D. The sum of the measures of a pair of corresponding angles is 180°

Q22 Mathematics

The value of $\sqrt{729} + \sqrt{1681} + \sqrt{576} - \sqrt{1849}$ is:

- A. 37
- B. 64
- C. 49 ✓
- D. 55

Q23 Mathematics

Which of the following numbers is divisible by both, 7 and 11?

- A. 1771 ✓
- B. 2684
- C. 2534
- D. 3014

Q24 Mathematics

A person has to cover a distance of 8 km in 1 hour. If he covers one-fourth of the distance in one-third of the total time, then what should his speed (in km/h) be to cover the remaining distance in the remaining time so that the person reaches the destination exactly on time?

- A. 9 ✓
- B. 8
- C. 7
- D. 6



Q25 Mathematics

The total number of three-digit numbers divisible by 2 or 5 is

A. 400

B. 540



C. 245

D. 270

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Refer to the given letter and symbol series and answer the question that follows.

(Left) K € T X @ * D X ¥ & J % Z Y \$ & # S & \$ F o G ^ (Right)

How many such symbols are there in the series each of which is immediately preceded by a letter and also immediately followed by a letter?

A. 1

B. 2

C. 3



D. 4

Q27 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statements is true, decide which of the given conclusions logically follow(s) from the statement.

Statement:

In a recent survey on choice of drink, 65 percent of the people preferred tea, 28 percent preferred coffee, 5 percent preferred milk, while 2 percent were neutral.

Conclusions:

- I. Tea is a better drink than coffee.
- II. More people prefer to drink coffee as compared to milk.

A. Only conclusion I follows

B. Only conclusion II follows



C. Neither conclusion I nor II follows

D. Both conclusions I and II follow



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Q28 General Intelligence and Reasoning

KIT 20 is related to PRG 50 in a certain way. In the same way, ENT 16 is related to VMG 40. To which of the following is MFG 18 related following the same logic?

A. NUT 40

B. QUT 45

C. NVT 45

D. NUT 45



Q29 General Intelligence and Reasoning

In a certain code language, MONDAY is written as ZBEOPN and MARCH is written as IDSBN. How will APRIL be written in the same language?

A. ZKSWC

B. MKSVB

C. MJSQB



D. MJSWB

Q30 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. Some hills are plateaus.
2. Some plateaus are deserts.
3. All deserts are plains

Conclusions:

- I. Some plains are plateaus.
- II. Some plains are hills.
- III. All deserts are hills.

A. Only conclusion I follows



B. Only conclusion II follows

C. Only conclusions I and II follow

D. Only conclusions II and III follow



Q31 General Intelligence and Reasoning

Which of the following number will replace the question mark (?) and complete the given number series?

3, 6, 8, 16, 18, 36, ?

A. 72

B. 45

C. 38



D. 42

Q32 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

20 : 42 :: 25 : 52 :: 18 : ?

A. 34

B. 38

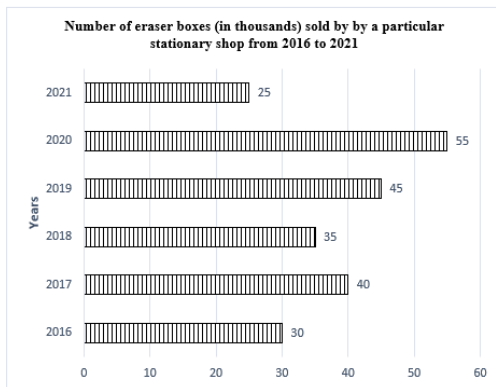


C. 54

D. 60

Q33 General Intelligence and Reasoning

Study the following bar graph carefully and answer the question.



What is the approximate percentage increase in the number of the eraser boxes sold from 2018 to 2020?

A. 50%

B. 57%



C. 45%

D. 60%



Q34 General Intelligence and Reasoning

Select the correct combination of mathematical signs that can sequentially replace Y to balance the following equation.

$$32 \text{ Y } 8 \text{ Y } 16 \text{ Y } 8 \text{ Y } 8$$

A. $\times, =, -, \div$

B. $\div, \times, =, -$

C. $\div, \times, =, \times$



D. $\times, \div, =, -$

Q35 General Intelligence and Reasoning

B was standing at a point, facing north. B turned and ran towards the east for 50 m, then turned towards the south and walked for 30 m. He then turned left and ran for 40 m, then turned right and ran for 50 m, turned right again and walked for 10 m and at last, turned right and walked for 20 m. How much distance did B cover only by walk and in which direction is he facing now?

(All turns are 90 degree turns only)

A. 150 m, South

B. 60 m, South

C. 60 m, North



D. 150 m, North

Q36 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

GRM-2, EPK-6, CNI-14, ALG-30, ?

A. XJE-60

B. YKE-62

C. YJE-62



D. YJF-64



Q37 General Intelligence and Reasoning

Sheela was standing facing the morning sun. She started walking towards the morning sun and turned to her right side, where she walked for few minutes and then turned left and walked for 3 m and stopped. In which direction is Sheela facing right now?

(All turns are 90 degree turns only)

A. East



B. West

C. North

D. South

Q38 General Intelligence and Reasoning

Six students, F, E, D, C, B and A, were studying around a square table in a college library, facing the centre. Four of them were sitting at the corners while two others were sitting at the exact centre of the sides. C and E were diagonally opposite to each other. A was not at any of the corner positions and was an immediate neighbour of both E and D. D was diagonally opposite to F. B was at the immediate right of F. No student sat between C and D as well as between E and F. Which student sat third to the left of B?

A. A



B. E

C. C

D. D

Q39 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

14 : 203 :: 16 : 264 :: 18 : ?

A. 333



B. 423

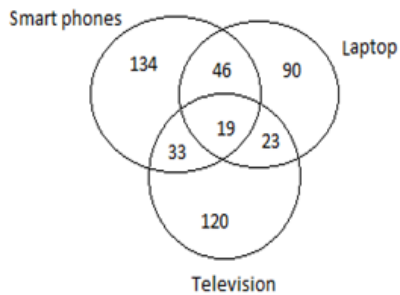
C. 353

D. 347



Q40 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons who use the electronic item.



How many people use both Laptop and Television?

A. 23

B. 42



C. 19

D. 56

Q41 General Intelligence and Reasoning

7 friends decided not to eat sweets on one day of their choice in the same week starting on Sunday and ending on Saturday. No one selected the same day of the week. P selected Saturday. Q selected Wednesday. R said that he will select the day immediately before P. S decided to select any available day between P's and Q's selection. T selected Sunday. U said that he will select the day immediately before Q. Which day is left for V to select?

A. Monday



B. Tuesday

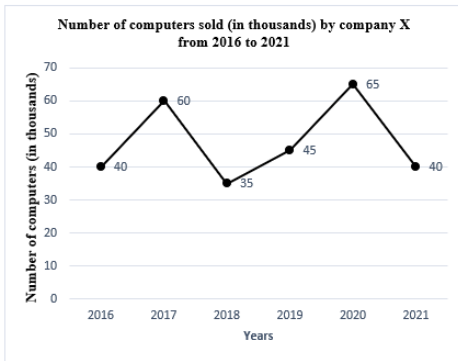
C. Wednesday

D. Thursday



Q42 General Intelligence and Reasoning

Study the following line graph carefully and answer the given question.



Find the difference between the number of computers sold for the year 2017 and 2021.

A. 20000



B. 15000

C. 10000

D. 25000

Q43 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $V > R > N = U = H > C < G$

A. $U > G$

B. $N > V$

C. $N = H$



D. $R = H$

Q44 General Intelligence and Reasoning

If each of the letters in the word 'ANOTHER' is arranged in alphabetical order, then how many letters will be there in the English alphabetical series between the letter that is fourth from the left end and the one that is second from the right end?

A. 2

B. 3



C. 4

D. 5



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Q45 General Intelligence and Reasoning

What day of the week was 10 January 2006?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Thursday



Q46 General Intelligence and Reasoning

Seven boxes, P, Q, R, S, T, U and V, are kept one over the other but not necessarily in the same order. Only three boxes are kept below R. S is immediately below Q. V is immediately below T. P is immediately above Q. S is third box from top. T is not immediately below R. Which is the third box from the bottom?

- A. T
- B. U
- C. R
- D. S



Q47 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

7, 56, 28, 224, 112, ?

- A. 846
- B. 896
- C. 920
- D. 900



Q48 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below:

(Left) 815 458 512 630 235 (Right)

What will be the resultant if third digit of the second largest number is added to the second digit of smallest number?

- A. 2
- B. 3
- C. 5
- D. 6



Q49 General Intelligence and Reasoning

Five persons, K, L, M, N and P, receive their salaries on five different dates of the same month, viz. 1st, 2nd, 3rd, 4th and 5th. L receives salary on the date immediately after M. N receives salary on the date immediately before K. P receives salary on the date immediately after K. P receives salary on the 3rd of the month. On which date does M receive salary?

A. 1stB. 2ndC. 4thD. 5th**Q50** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	&	5	9	#	6	%	8
Codes	S	D	M	U	T	L	A

Conditions:

- (i) If the first element is an even number and the last element is also an even number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the second element is an even number and the fifth element is a symbol, the codes for these two (the second and the fifth elements) are to be interchanged.
- (iii) If the fourth element is a symbol and the sixth element is also a symbol, both these elements (the fourth and the sixth elements) are to be coded as N.

Question: 8 5 & % 9 # 6 9

A. AMSNDNTM

B. MDSNMNTA

C. ADSLMUTM

D. ADSNMNTM

**Q51** General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $R > G > A > B = D = F > S$

A. $A > R$ B. $A > F$ C. $S > D$ D. $F > R$ 

Q52 General Intelligence and Reasoning

Eight friends, P, Q, R, S, T, U, V and W, are sitting around a square table facing the centre of the table. Four of them are sitting at the corners while the other four are sitting at the exact centre of the sides of the table. T is sitting at one of the corners. U is third to the right of T. S is to the immediate left of V. T is second to the right of V. Only U is between R and P. Only W is between T and R. Who is sitting to the immediate left of T?

A. P

B. Q



C. W

D. R

Q53 General Intelligence and Reasoning

Three statements are followed by four conclusions numbered I, II, III and IV. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statement.

Statements:

1. No paint is fresco.
2. No fresco is lacquer.
3. Some paints are lacquers.

Conclusions:

- I. No lacquer is paint.
- II. No lacquer is fresco.
- III. Some frescos are paints.
- IV. All lacquers are paints.

A. Only conclusions I and II follow

B. Only conclusion II follows.



C. Only conclusions I and IV follow

D. Only conclusion IV follows.

Q54 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' is interchanged with '×', and '÷' is interchanged with '-'?

$$6 \div 16 \times 4 \div 8 - 8 + 2 \times 7 = ?$$

A. 0

B. 1

C. -1



D. 23



Q55 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$11.998 \div 2.008 \times 3.991 + 14.9929 - 10.002 = ?$$

A. 21

B. 24

C. 29



D. 34

General Science

25 Questions • Answer Key

Q56 General Science

Which of the following is the common product produced during aerobic and anaerobic respiration initially in the first step?

A. Lactic acid

B. Ethanol

C. Water

D. Pyruvate



Q57 General Science

The leaves of the _____ plant contain methanoic acid.

A. orange

B. tamarind

C. tomato

D. nettle



Q58 General Science

Identify the INCORRECT relation between power (P), Current(I) , Resistance (R) and potential difference (V).

A. $P = VI$

B. $P = V^2/R$

C. $P = IR^2$



D. $P = I^2R$



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Q59 General Science

In which direction does a freely suspended bar magnet point?

- A. Geographical South- Geographical East
- B. Geographical North- Geographical West
- C. Geographical South- Geographical West
- D. Geographical North- Geographical South



Q60 General Science

What is the distance between the pole and focus of a spherical mirror?

- A. R
- B. $R/2$
- C. $2R$
- D. $R/4$



Q61 General Science

A convex lens forms a real and inverted image twice the size of the object. The magnification produced by the lens is equal to:

- A. $1/2$
- B. $-1/2$
- C. 2
- D. -2



Q62 General Science

The splitting up of white light into seven components as it enters a glass prism is called:

- A. dispersion of light
- B. reflection of light
- C. refraction of light
- D. scattering of light



Q63 General Science

_____ are used to make bidis.

- A. Tamarind leaves
- B. Tendu leaves
- C. Coconut leaves
- D. Oak leaves

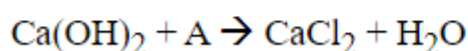
Q64 General Science

The normal systolic and diastolic pressure in humans is _____, respectively.

- A. 140 and 90 mm of Hg
- B. 120 and 80 mm of Hg
- C. 100 and 60 mm of Hg
- D. 150 and 75 mm of Hg

Q65 General Science

Which of the following reactants will come in place of A and give a neutralisation reaction?



- A. Hydrochloric acid
- B. Sulphuric acid
- C. Acetic acid
- D. Nitric acid

Q66 General Science

Bhupesh suffered crop failure for few years. When he got the pH of the soil examined, it was about 11.6. Which of the following compounds can he use to treat the soil of his agricultural field?

- A. Ca(OH)_2
- B. NaCl
- C. $\text{Al}_2(\text{SO}_4)_3$
- D. Zn(OH)_2



Q67 General Science

Write a balanced chemical equation with state symbols for the following reaction.

Potassium hydroxide solution (in water) reacts with nitric acid solution (in water) to produce sodium nitrate solution and water.

- A. $2 \text{KOH} + 2 \text{HNO}_3 \rightarrow 2 \text{KNO}_3 + 2 \text{H}_2\text{O}$
- B. $2 \text{KOH (aq)} + 2 \text{HNO}_3 \text{ (l)} \rightarrow 2 \text{KNO}_3 \text{ (aq)} + 2 \text{H}_2\text{O (aq)}$
- C. $2 \text{KOH (l)} + 2 \text{HNO}_3 \text{ (l)} \rightarrow 2 \text{KNO}_3 \text{ (l)} + 2 \text{H}_2\text{O (l)}$
- D. $2 \text{KOH (aq)} + 2 \text{HNO}_3 \text{ (aq)} \rightarrow 2 \text{KNO}_3 \text{ (aq)} + 2 \text{H}_2\text{O (l)}$ ✓

Q68 General Science

Which of the following statements is/are true for a number of resistors connected in parallel combination?

- (i) All the resistors are connected between two given points.
- (ii) The equivalent resistance of the circuit is more than the individual resistance.
- (iii) The potential difference across each resistor is same.

- A. Only (i)
- B. Only (iii)
- C. Both (i) and (iii) ✓
- D. Both (i) and (ii)

Q69 General Science

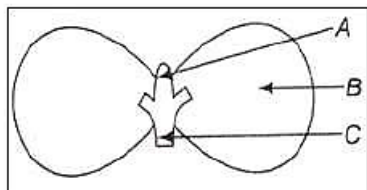
Three bulbs A, B and C rated 40 W, 60 W and 100 W, respectively, are connected in parallel to a voltage source of 220 V. The bulb that glows with maximum brightness is:

- A. bulb A
- B. bulb B
- C. bulb C ✓
- D. all bulbs will glow with equal brightness



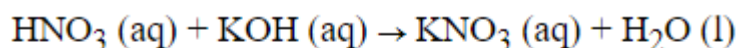
Q70 General Science

Study the diagram of a dicot seed given below. Select the correct option regarding the functions of the parts labelled A, B and C



- A. A - Future root, B - Stores food, C - Future shoot
- B. A - Future shoot, B - Future root, C - Stores food
- C. A - Future shoot, B - Stores food, C - Future root
- D. A - Stores food, B - Stores food, C - Future root

Q71 General Science



The above reaction is an example of:

- A. decomposition reaction
- B. neutralisation reaction
- C. redox reaction
- D. combination reaction

Q72 General Science

Which of the following statements is/are true for a current carrying straight conductor?

- (i) The magnetic field lines are concentric circles with conductor at the centre.
- (ii) The strength of the magnetic field increases as we move away from the conductor.
- (iii) The direction of magnetic field can be determined using right hand thumb rule.

- A. Only (i)
- B. Only (ii)
- C. Both (i) and (ii)
- D. Both (i) and (iii)



Q73 General Science

Consider the below statements and identify the correct answer.

Statement I: Carbon has the unique ability to form bonds with other atoms of carbon, giving rise to large molecules.

Statement II: This property is called catenation.

- A. Statement I is correct, and Statement II is incorrect.
- B. Statement II is correct, and Statement I is incorrect.
- C. Both the statements are correct. ✓
- D. Both the statements are incorrect.

Q74 General Science

Which tissue in the coconut husk makes it hard and stiff?

- A. Sclerenchyma ✓
- B. Parenchyma
- C. Collenchyma
- D. Guard cells

Q75 General Science

At present, _____ elements are known, of which _____ are naturally occurring elements.

- A. 114, 92
- B. 118, 92
- C. 114, 94
- D. 118, 94 ✓

Q76 General Science

Which of the following is a naturally occurring source of air pollution?

- A. Power plants
- B. Volcanic eruptions ✓
- C. Burning firewood
- D. Automobile exhausts



Q77 General Science

Which of the following organisms has a longer small intestine?

- A. Human
- B. Tiger
- C. Cow
- D. Lion



Q78 General Science

Which of the following is an example of a virus?

- A. Elephantiasis
- B. Anthrax
- C. HIV
- D. AIDS



Q79 General Science

The magnification produced by a lens is $1/2$. The nature and the relative size of the image formed by the lens in the respective order is:

- A. real, inverted and diminished
- B. real, inverted and enlarged
- C. virtual, erect and diminished
- D. virtual, erect and enlarged



Q80 General Science

Consider the below statements and identify the correct answer.

Statement I: Law of Octaves was applicable only up to calcium.

Statement II: After calcium, every eighth element did not possess properties similar to that of the first.

- A. Both statements are correct. Statement II is correct explanation of Statement I.
- B. Both Statements are correct. Statement I is correct explanation of Statement II.
- C. Only Statement I is correct.
- D. Only Statement II is correct.



Q81 General Awareness and Current Affairs

Who bagged the women's singles title at Syed Modi International Badminton Tournament, 2022?

A. PV Sindhu



B. Saina Nehwal

C. Jwala Gutta

D. Ameeta Singh

Q82 General Awareness and Current Affairs

In February 2022, where was India's first Biosafety Level-3 Mobile Laboratory inaugurated?

A. Gujarat

B. Maharashtra



C. Rajasthan

D. Jharkhand



Q83 General Awareness and Current Affairs

With which of the following has the Government of India signed a 115 million dollar Rejuvenating Watersheds for Agricultural Resilience through Innovative Development (REWARD) Programme?

- A. UNDP
- B. World Health Organization
- C. World Bank ☒
- D. Reserve Bank of India

Q84 General Awareness and Current Affairs

The Easter basket is related to which of the following religions?

- A. Hinduism
- B. Islam
- C. Sikhism
- D. Christianity ☒

Q85 General Awareness and Current Affairs

On 20 January 2022, which court of India in Neil Aurelio Nunes and Ors vs. Union of India and Ors, upheld the constitutional validity of 27 per cent reservation for the Other Backward Classes (OBCs) in the All India Quota (AIQ) for undergraduate and postgraduate medical and dental courses?

- A. Madras High Court
- B. Karnataka High Court
- C. Supreme Court ☒
- D. Bombay High Court



Q86 General Awareness and Current Affairs

What is the ranking of India in wind power as on March 2021?

A. 8th

B. 7th

C. 10th

D. 4th



Q87 General Awareness and Current Affairs

Where is the National War Memorial located?

A. Mumbai

B. Kolkata

C. Delhi



D. Agra

Q88 General Awareness and Current Affairs

How many physical regions are there in India?

A. 3

B. 5

C. 6



D. 8



Q89 General Awareness and Current Affairs

The first Municipal Corporation was set up during the British era in the former Presidency Town of _____ in 1688.

- A. Madras
- B. Bombay
- C. Calcutta
- D. Nagpur



Q90 General Awareness and Current Affairs

Which of following is NOT a part of the Dravidian language family's four largest languages?

- A. Kannada
- B. Tamil
- C. Sanskrit
- D. Malayalam



Q91 General Awareness and Current Affairs

In October 2021, which portal was been launched by the Ministry of Social Justice and Empowerment to provide a platform for senior citizens in India seeking employment opportunities?

- A. SAMADHAN
- B. SACRED
- C. SANCHAY
- D. SANNIDHI



Q92 General Awareness and Current Affairs

The Indian Constitution includes borrowed features from how many countries?

- A. 13
- B. 07
- C. 10
- D. 06



Q93 General Awareness and Current Affairs

Who was the Chairman of Union Carbide during The Bhopal Gas Tragedy in Bhopal?

A. Warren Anderson



B. J R Shah

C. Michal Bellay

D. John Ervin

Q94 General Awareness and Current Affairs

The Aitareya Upanishad belongs to fourth, fifth and sixth chapters of the second book of Aitareya Aranyaka of the _____ and considered as the oldest Upanishads.

A. Yajur Veda

B. Rig Veda



C. Atharva Veda

D. Sama Veda

Q95 General Awareness and Current Affairs

In February 2022, Patanjali launched a co-branded contactless credit card with which bank?

A. State Bank of India

B. Punjab National Bank



C. Axis Bank

D. HDFC Bank



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Q96 General Awareness and Current Affairs

Which of the following features is correct regarding the federal system of the Indian Constitution?

- A. Dual government ✓
- B. Dual citizenship
- C. Equal representation of all states in the lower house of parliament
- D. Equal representation of all states in the upper house of parliament

Q97 General Awareness and Current Affairs

Which one of the following river marks the eastern-most boundary of the Himalayas?

- A. Brahmaputra ✓
- B. Ganga
- C. Godavari
- D. Chambal

Q98 General Awareness and Current Affairs

In the year 2021, Neeraj Chopra won India's first ever gold medal in athletics at the _____ Olympics.

- A. Sydney
- B. London
- C. Tokyo ✓
- D. Beijing

Q99 General Awareness and Current Affairs

In December 2021, who launched India's Semiconductor Mission, which aims to manufacture a vibrant semiconductor and display ecosystem to enable India's emergence as a global hub for electronics manufacturing and design?

- A. Rajeev Chandrasekhar
- B. Rajendra Kumar
- C. Ashwini Vaishnaw ✓
- D. Anand Deshpande



In February 2022, who was appointed as Chairman of the Insolvency and Bankruptcy Board of India?

A. Shashank Saksena

B. Ravi Mittal



C. Anuradha Guru

D. Krishnamurthy Subramanian



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Madhu and Shiney together can complete a piece of work in 20 days, Shiney and Rosy together can complete the same work in 12 days, and Rosy and Madhu together can complete the work in 15 days. In how many days will three of them complete it together?

A. 5 days

B. 10 days



C. 12 days

D. 15 days

Q2 Mathematics

In a parallelogram two adjacent sides are in the ratio 3 : 2 and the perimeter is 65 cm. The length of each of the two shorter sides of this parallelogram is:

A. 18 cm

B. 19 cm

C. 13 cm



D. 21 cm

Q3 Mathematics

$16x^2 - 8x + 1 = 0$, then what is the value of $(16x^2 + \frac{1}{4x^2})$?

A. 4

B. 5



C. 6

D. 7



Q4 Mathematics

Find the selling price of an article (in ₹) if the cost price is ₹4,500 and gain is 5%.

A. 4,725



B. 4,675

C. 4,527

D. 4,657

Q5 Mathematics

Select the correct option with respect to the following.

Two triangles are similar if:

- a) Any two of their sides are equal
- b) their corresponding sides are proportional
- c) Any two of their angles are equal
- d) their corresponding angles are equal

A. both a and b

B. both b and c

C. both a and d

D. both b and d



Q6 Mathematics

If $2^{3k-5} = 4096$, then the value of k is:

A. 7

B. $\frac{17}{3}$



C. $\frac{16}{3}$

D. 11



Q7 Mathematics

Find the arithmetic mean of 5, 15, 23, 26, and 29.

A. 20.6

B. 19.6



C. 18.6

D. 17.6

Q8 Mathematics

If $a + b + c = 6$ and $ab + bc + ca = -2$, then find the value of $a^3 + b^3 + c^3 - 3abc$.

A. 240

B. 200

C. 252



D. 192

Q9 Mathematics

If $x + \frac{1}{x} = 4$, then $x^2 + \frac{1}{x^2} =$

A. 18

B. 16

C. 14



D. 12

Q10 Mathematics

A tank is filled in 4 hours by three pipes A, B and C. Pipe C is twice as fast as pipe B and pipe B is twice as fast as pipe A. How much time will pipe A take to fill the tank?

A. 20 hours

B. 25 hours

C. 26 hours

D. 28 hours



Q11 Mathematics

Find the roots of the equation $x^2 + 11x - 26 = 0$.

- A. 11 and 2
- B. -2 and 11
- C. -13 and 2
- D. 13 and -2



Q12 Mathematics

If $18 : 30 :: 30 : x$, then find the value of x .

- A. 50
- B. 40
- C. 35
- D. 45



Q13 Mathematics

Which of the following is a quadratic equation?

- A. $x(x - 4) = 2x + x^2 - 7$
- B. $5(2y + 3) - 6y = 5y(y^2 - 8y)$
- C. $k(k + 1) - k(k - 2) 2k = 0$
- D. $p(p^2 + 7) = p^2 + p^3 - 18$

- A. Only A
- B. Only B
- C. Only C
- D. Only D



Q14 Mathematics

What is the least number added to 2488 so that it is completely divisible by 3,4,5 and 6?

A. 42

B. 28

C. 34

D. 32



Q15 Mathematics

Simplify $4\frac{7}{9} \times 7\frac{8}{9} \times 81 + 2\frac{3}{4}$.

A. 3055.25

B. 3053.25

C. 3053.75

D. 3055.75



Q16 Mathematics

Rajiv's salary was first decreased by 40% and subsequently increased by 50%. How much percent did he lose from his initial salary?

A. 10%

B. 15%

C. 12%

D. 14%



Q17 Mathematics

Evaluate. $\left(\frac{-2}{5}\right)^{-2} \times \left(\frac{-4}{5}\right)^4$

A. $\frac{64}{25}$

B. $\frac{25}{64}$

C. $\frac{25}{26}$

D. $\frac{26}{25}$



Q18 Mathematics

Find the length of the side of an equilateral triangle, if its area is $4\sqrt{3}$ sq. unit.

- A. $\sqrt{3}$ unit
- B. 16 unit
- C. 2 unit
- D. 4 unit



Q19 Mathematics

The value of the product

$\sin 90^\circ \cdot \sin 89^\circ \cdot \sin 88^\circ \cdot \sin 87^\circ \dots \sin 0^\circ$ is:

- A. 1
- B. π
- C. $\frac{\pi}{2}$
- D. 0



Q20 Mathematics

The odometer of a car reads 12,000 km at the start of a trip and 12,800 km at its end. If the trip took 4 hours, then the average speed of car in m/sec is:

- A. $\frac{430}{8} \text{ m/sec}$
- B. $\frac{188}{9} \text{ m/sec}$
- C. $\frac{270}{8} \text{ m/sec}$
- D. $\frac{500}{9} \text{ m/sec}$



Q21 Mathematics

A sum of money amounts to ₹13,380 after 3 years and to ₹20,070 after 6 years at compound interest compounded annually. Find the sum.

- A. ₹8,920
- B. ₹7,020
- C. ₹8,505
- D. ₹7,007



Q22 Mathematics

A shopkeeper sells 35 kg sugar for every 40 kg using false weights. How much percentage profit does he make if sells sugar at cost price (rounded off to two places of decimal)?

A. 17.66%

B. 15.33%

C. 14.28%



D. 12.50%

Q23 Mathematics

A cuboidal room is of length 15 m, breadth 17 m, and height 21 m. Find the cost of painting its walls and ceiling at the rate of ₹40/m².

A. ₹44,250

B. ₹85,126

C. ₹58,912

D. ₹63,960

**Q24** Mathematics

What is the greatest number, by which when 8954, 9806 and 11297 are divided, the remainder in each case is the same?

A. 230

B. 222

C. 125

D. 213

**Q25** Mathematics

Simplify: $x^2 + 5x - 12 - 3(x^2 - 2x + 9)$.

A. $-2x^2 + 11x - 39$ B. $2x^2 + 11x - 39$ C. $-2x^2 + 11x + 39$ D. $2x^2 - 11x - 39$ 

Q26 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $X < Z = T > V > P < Y = O$

A. $T < X$

B. $T > Y$

C. $O > P$



D. $V > Y$

Q27 General Intelligence and Reasoning

Given below are three statements and three conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide whether the conclusion/s follow/s the given statements.

Statements:

I. Some lions are cats.

II. All cats are animals.

III. Some animals are not lions.

Conclusions:

I. Some animals are lions.

II. All lions are animals.

III. No animal is a lion.

A. Only conclusion I follows



B. Conclusions II and III follow

C. Only conclusion III follows

D. None of the conclusions follow

Q28 General Intelligence and Reasoning

G, H, I, J, K and L are the initials of six girls who were sitting around a circular table, discussing the venue of their picnic. They were all facing the table's centre. L was not immediately next to either G or H. I was second to the left of K. There were exactly two girls between J and G. I was to the immediate left of G. K was to the immediate left of H. Who was to the immediate right of L?

A. J

B. K

C. I



D. G



Q29 General Intelligence and Reasoning

Five houses, P, Q, R, S and T, are located in the same colony. T is 40 m to the east of Q. P is 30 m to the south of Q. R is 40 m to the west of Q. Q is 35 m to the south of S. In which direction is R with reference to T?

- A. East
- B. West
- C. North
- D. South

Q30 General Intelligence and Reasoning

In a class of 17 students, each scored differently. A's rank from the top is 9th, while B's rank from the bottom is 11th. C's rank from the top is better than A but worse than B. What is C's rank from the top?

- A. 7th
- B. 8th
- C. 9th
- D. 6th

Q31 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

15 : 180 :: 17 : 204 :: 21 : ?

- A. 232
- B. 240
- C. 248
- D. 252

Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

12, 14, 31, 97, 393, ?

- A. 1972
- B. 1965
- C. 1971
- D. 1970



Q33 General Intelligence and Reasoning

In a certain code language, 'FEELING' is written as 'VVUOTMR' and 'HEAVILY' is written as 'ZVSEBOR'. How will 'FORTUNE' be written in that language?

A. ULIGFMV

B. ILGUVMF

C. ILUGVMF



D. ILUGFMV

Q34 General Intelligence and Reasoning

Among six girls, Natasha, Yuvika, Aditi, Tanya, Shahnaz and Daljeet, each one has a different height. Tanya is the shortest among all. Aditi is taller than only Natasha and one another girl. Shahnaz is shorter than Daljeet, who is shorter than Yuvika. Who is the third tallest among all six girls?

A. Yuvika

B. Daljeet

C. Shahnaz



D. Aditi

Q35 General Intelligence and Reasoning

Study the given number, symbol series and answer the question that follows.

9 1 @ 4 * 7 ^ 5 3 # 9 1 < 5 4 @ 3 \$ # 2 * 6 ! 4 2 & 9 < 3 6

How many such numbers are there which are immediately preceded by a symbol and immediately followed by an even number?

A. 4

B. 3



C. 6

D. 5



Q36 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	=	\$	6	8	<	?	/	2	5	!	@	7	3	^
Code	G	L	F	M	E	N	D	P	C	R	T	B	V	A

Conditions:

- (i) If the first element is a symbol and the last, a number, then the first and last elements are to be coded as © and ¥, respectively.
- (ii) If the first element is an odd number and the last, an even number, the codes for these two are to be interchanged.
- (iii) If both second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '5 < = 2 @ 6' be coded?

A. C E G P T F

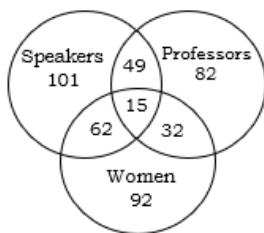
B. F E G P T C

C. F N G P T C

D. B E L D T C

Q37 General Intelligence and Reasoning

Study the diagram and answer the questions that follow. The numbers in different sections indicate the number of persons. How many women are speakers and NOT professors and how many professors are speakers and NOT women?



A. 47 and 49, respectively

B. 62 and 49, respectively

C. 62 and 32, respectively

D. 77 and 49, respectively



Q38 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete ?

8G, 14C, 20Y, 26U, ?

A. 30R

B. 30Q

C. 32P

D. 32Q



Q39 General Intelligence and Reasoning

Four friends W, X, Y and Z are sitting at the corners of a square table facing towards the centre. W and Z are not at the opposite corners, but W is to the immediate right of Y. Who among the following is sitting opposite to X?

A. W



B. X

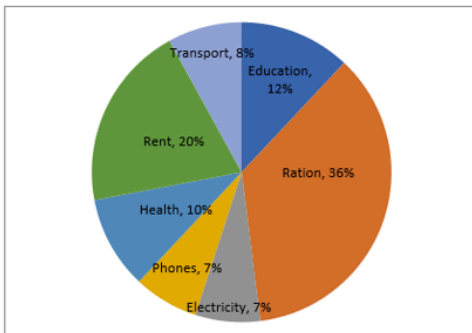
C. Y

D. Z

Q40 General Intelligence and Reasoning

The following chart shows the expenditure of a house on various heads. The total expenditure of the house is ₹85,200.

Study the chart and answer the question.



How much more amount is spent on ration than on rent?

A. ₹14,332

B. ₹13,512

C. ₹13,632



D. ₹13,852



Q41 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word QUALITY is arranged in alphabetical order?

A. 1



B. 2

C. 3

D. 4

Q42 General Intelligence and Reasoning

The following question is based on the given seven, 3-digit numbers.

(Left) 347, 486, 627, 113, 721, 418, 779 (Right)

(For example, 456: 6 = digit in unit's place, 5 = digit in ten's place, 4 = digit in hundred's place)

NOTE - All operations to be done from left to right.

If 2 is added to the digit in hundred's place of each number given above, in how many numbers will be the modified digit in hundred's place be exactly divisible by the digit appearing in the ten's place?

A. 1

B. 2

C. 3



D. 4

Q43 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All gifts are letters.

All letters are chats.

All words are gifts.

Conclusions:

I. Some chats are words.

II. All gifts are chats.

III. Some words are not letters.

A. Only conclusions I and III follow

B. Only conclusion II follows

C. Only conclusions I and II follow



D. All the conclusions, I, II and III, follow



Q44 General Intelligence and Reasoning

How many times in 48 hours are the hour and the minute hands of a correct clock in a straight line but opposite directions?

- A. 102
- B. 94
- C. 76
- D. 88



Q45 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

KDRB : PWIY

UNCG : FMTX

- A. TNDK : GMRP
- B. DHEL : WSVQ
- C. VQCX : EPXZ
- D. FTZN : UGVW



Q46 General Intelligence and Reasoning

Each of the digits in the number 34135278 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

- A. 1
- B. 2
- C. 3
- D. 4



Q47 General Intelligence and Reasoning

Kalpit is standing in a park facing the south direction. Then, he takes two consecutive clockwise turns of 45° each. Then, he takes a third turn of some degrees after which he is now facing the south-east direction. Of how many degrees and in which direction did he take the third turn?

- A. 90° , anticlockwise
- B. 90° , clockwise
- C. 135° , anticlockwise
- D. 135° , clockwise



Q48 General Intelligence and Reasoning

The following table shows the number of sofa sets sold by four salespersons in three different months. Study the table and answer the question.

Salespersons	May	June	July
Vishal	125	110	95
Arunima	140	92	75
Kartik	188	114	80
Mitali	125	120	210

What is the percentage contribution of Vishal's May sale in the total sale of May?

A. 18.5%

B. 21.6%



C. 23.4%

D. 25.6%

Q49 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

4 : 8 :: 8 : 32 :: 12 : ?

A. 24

B. 72



C. 36

D. 144

Q50 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$12.999 - 3.998 + 14.002 \times 3.998 + 27.008 \div 3.001 + 35.999 \div 5.998 = ?$

A. 68

B. 72

C. 80



D. 89



Q51 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '+' means '×' and '×' means '+', what will come in place of the question mark (?) in the following equation?

$$64 + 32 - 8 \times 11 \div 3 = ?$$

A. 90

B. 93



C. 39

D. 35

Q52 General Intelligence and Reasoning

Six persons, L, M, N, O, P and Q, have cooking classes in different months of the same year, viz. February, March, June, August, September and December.

P has the class immediately before Q. Only M has the class before O. L has the class immediately after N and before Q. Which of the following is correct?

A. M has the class in March.

B. L has the class in June.

C. Q has the class in February.

D. P has the class in September.



Q53 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statements is true, decide which of the given conclusions logically follow(s) from the statement.

Statement:

Onion prices have skyrocketed due to shortage of onions and largescale hoarding by a few traders.

Conclusions:

I. The government must crackdown on the hoarders and impose stringent penalties on hoarders.

II. People must stop eating onions and switch to potatoes instead.

A. Only conclusion I follows



B. Only conclusion II follows

C. Neither conclusion I nor II follows

D. Both conclusions I and II follow



Q54 General Intelligence and Reasoning

Six boxes, A, B, C, D, E and F, are kept one over the other but not necessarily in the same order. Only one box is kept between B and D. Only two boxes are kept between B and E. E is kept just above A. F is kept just above B. Box A is not kept in the bottom most position. Which box is kept at the top?

A. E



B. C

C. D

D. B

Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

8, 18, 38, 78, 158, ?

A. 224

B. 306

C. 318



D. 324

General Science

25 Questions • Answer Key

Q56 General Science

An electric heater rated 1000 W is used for 5 hours daily. For cost per unit of ₹6.00, calculate the total cost for running the device for the month of September (in ₹).

A. 900



B. 500

C. 180

D. 150

Q57 General Science

The component of white light that has maximum refractive index is:

A. violet



B. red

C. yellow

D. green



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Q58 General Science

What changes take place in the guard cells that cause the opening of stomata?

- A. Water enters the guard cells and they shrink
- B. Water comes out of the guard cells and they shrink
- C. Water enters the guard cells and they swell
- D. Water comes out of the guard cells and they swell

Q59 General Science

The sign of the magnification produced by a concave mirror is:

- A. always positive
- B. always negative
- C. positive when the image is real and negative when the image is virtual
- D. positive when the image is virtual and negative when the image is real

Q60 General Science

During neutralisation reaction H^+ ion comes from _____ and OH^- ion comes from _____, respectively, to form a water molecule.

- A. acid; salts
- B. salts; base
- C. base; acid
- D. acid; base

Q61 General Science

_____ determines the sex of fertilised eggs in a few reptiles.

- A. Autosome
- B. Allosome
- C. Moisture
- D. Temperature



Q62 General Science

Consider the below statements and identify the correct answer.

Statement-I: Sodium hydroxide is prepared by chlor-alkali process.

Statement-II: Sodium hydroxide is used for making artificial textile fibres (such as rayon).

- A. Both the statements are true. ✓
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

Q63 General Science

Forests can be conserved by which of the following factors?

- a) Regulated and planned cutting of trees
- b) Control over forest fire
- c) Construction of roads in the forest
- d) Monoculture planting
- e) Promotion of afforestation and reforestation
- f) Proper utilisation of forest and forests products
- g) Clearing land for cattle grazing

- A. a, c, d and e
- B. b, c, e and g
- C. d, e, f and g
- D. a, b, e and f ✓

Q64 General Science

What part of the plant is used to store waste material?

- A. Nucleus
- B. Plastids
- C. Vacuoles ✓
- D. Lysosomes



Q65 General Science

The term (aq) written after the symbol/formula of a substance in a chemical equation indicates that it is present in:

- A. solid state
- B. gaseous state
- C. a solution in water
- D. liquid state



Q66 General Science

Which of the following is an example of a thermal decomposition reaction?

- A. $\text{ZnCO}_3 \rightarrow \text{ZnO} + \text{CO}_2$
- B. $2\text{AgCl} \rightarrow 2\text{Ag} + \text{Cl}_2$
- C. $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$
- D. $2\text{NaCl (molten)} \rightarrow 2\text{Na} + \text{Cl}_2$



Q67 General Science

What was the main aim of the agreement made by UNEP in 1987?

- A. To stop emission of greenhouse gases
- B. To freeze the production of CFCs at 1986 level
- C. To use more CFCs in fire extinguishers
- D. To stop water pollution



Q68 General Science

Seema squeezed a lemon and collected the juice in a glass. She realised that its sourness reduced when she added some water to it. What is the effect of addition of water on the concentration of hydroxide ions?

- A. It increases
- B. It reduces
- C. It remains constant
- D. It first increases and then decreases



Q69 General Science

Which part of the human brain controls the involuntary action of vomiting?

- A. Midbrain
- B. Forebrain
- C. Hindbrain
- D. Spinal cord



Q70 General Science

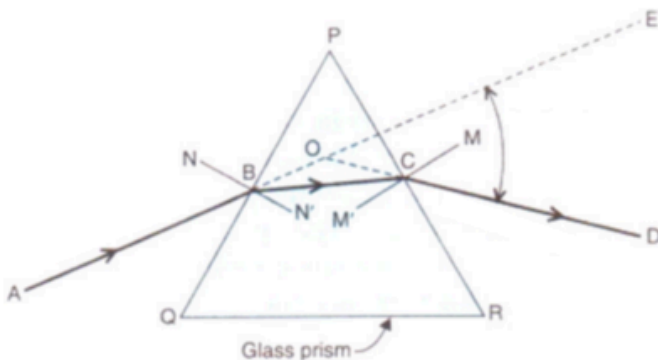
What branch of biology focuses on the study of inheritance patterns?

- A. Genetics
- B. Biotechnology
- C. Anthropology
- D. Evolution biology



Q71 General Science

The figure below shows refraction of a ray of light AB through a triangular glass prism. Here, $\angle EOD$ represents:



- A. angle of incidence
- B. angle of refraction
- C. angle of emergence
- D. angle of deviation



Q72 General Science

The phenomenon due to which the relative motion between a conductor and a magnet produces a potential difference across the conductor is called:

A. electromagnetic induction



B. electromagnetism

C. electrostatic force

D. electromagnetic force

Q73 General Science

Which of the following devices is based on the principle of electromagnetic induction?

A. Electric fan

B. Electric motor

C. Electric generator



D. Electric bulb

Q74 General Science

Which of the following statements is/are correct?

(A) Resistance is independent of temperature.

(B) The more the voltage across a conductor, the more is the resistance.

(C) The S.I unit of resistance is ohm.

A. Only A

B. Only C



C. Both A and B

D. Both A and C



Q75 General Science

A $2\ \Omega$ resistance is connected to a $4\ \Omega$ resistance in series. Their equivalent resistance will be:

A. $6\ \Omega$



B. $3/4\ \Omega$

C. $4/3\ \Omega$

D. $1\ \Omega$

Q76 General Science

The elements which have 2 electrons in their outermost cell are generally:

A. metals



B. non-metals

C. metalloids

D. noble gases

Q77 General Science

There are four different elements along with their atomic numbers: A (9), B (11), C (19) and D (37). Find the odd element from these with respect to their positions in the periodic table?

A. A



B. B

C. C

D. D

Q78 General Science

Consider the below statements and identify the correct answer.

Statement I: Series of compounds in which the same functional group substitutes for hydrogen in a carbon chain is called a homologous series

Statement II: As the molecular mass increases in any homologous series, a gradation in physical properties is seen.

A. Statement I is correct, and Statement II is incorrect.

B. Statement II is correct, and Statement I is incorrect.

C. Both the statements are correct.



D. Both the statements are incorrect.



Q79 General Science

Which of the following blood components aid in the formation of clots?

A. Red blood cells

B. White blood cells

C. Platelets



D. Plasma proteins

Q80 General Science

A boy standing in front of a magic mirror combination finds his head enlarged, body of same size and legs smaller in size. The mirrors used in the top, middle and bottom of the magic mirror arrangement in the respective order are:

A. concave, plane, convex



B. convex, plane, concave

C. concave, convex, plane

D. convex, concave, plane

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

What was the profession of freedom fighter Deshbandhu Chittaranjan Das?

A. Doctor

B. Teacher

C. Lawyer



D. Painter



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Q82 General Awareness and Current Affairs

Who among the following won the final of the men's singles at the India Open 2022?

A. Kidambi Srikanth

B. Lakshya Sen



C. Chirag Shetty

D. Satwiksairaj Rankireddy

Q83 General Awareness and Current Affairs

Who has won his eighth title at the 19th Asian 100 UP Billiards Championship, 2022?

A. Dhruv Sitwala

B. Pankaj Advani



C. Geet Sethi

D. Aditya Mehta

Q84 General Awareness and Current Affairs

Which of the following harvest festivals is mainly celebrated in South India?

A. Maghi

B. Bihu

C. Uttarayan

D. Onam



Q85 General Awareness and Current Affairs

Name the app released by the Indian Army for an in-house messaging application for the military sector.

A. ASIGMA



B. SAI

C. DGNCC

D. MY IAF



Who built the Jal Mandir related to Jainism?

A. King Nandivardhan



B. King Asoka

C. Parshvanatha

D. Rishabhadeva

The economic reforms were initiated by Narasimha Rao government in:

A. the 5th five-year plan

B. the 7th five-year plan

C. the 9th five-year plan

D. the 8th five-year plan



“Dare2eraD TB” by the Department of Biotechnology, Ministry of Science & Technology, was launched on the occasion of World TB Day by who among the following?

A. Dr. Jitendra Singh



B. Dr. VK Paul

C. Dr. Mansukh Mandaviya

D. Dr. Bharati Pravin Pawar



Q89 General Awareness and Current Affairs

Koraput, Rayagada, Kalahandi, Balangir districts of Odisha are famous for which mining mineral?

- A. Copper
- B. Bauxite
- C. Mica
- D. Limestone



Q90 General Awareness and Current Affairs

Which Article of the Indian Constitution specifically mentions, "The official language of the Union shall be Hindi in Devanagari script?"

- A. Article 80
- B. Article 51A
- C. Article 343(1)
- D. Article 395



Q91 General Awareness and Current Affairs

As per Article 80 of the Constitution of India, _____ is the maximum strength of Rajya Sabha in India.

- A. 122
- B. 250
- C. 475
- D. 542



Q92 General Awareness and Current Affairs

Which of the following says, "The laws apply in the same manner to all, regardless of a person's status"?

- A. Rule of Law
- B. Rule of State
- C. Rule of Power
- D. Rule of Government



Q93 General Awareness and Current Affairs

On 16 March 2022, the Union Ministry for Road Transport and Highways inaugurated a pilot project for hydrogen-based advanced Fuel Cell Electric Vehicle (FCEV). This pilot project was initiated by:

A. Toyota Kirloskar Motor Pvt. Ltd.



B. Tata Motors Pvt. Ltd.

C. Maruti Suzuki India Limited

D. Kia India Pvt. Limited.

Q94 General Awareness and Current Affairs

Microfinance in India is a form of financial service which provides small loans and other financial services to poor and low-income households for _____.

A. medium term

B. short term



C. long term

D. medium and long term

Q95 General Awareness and Current Affairs

Which of the following regions is known to receive the maximum rainfall from the South-west Monsoon winds in India?

A. Western Ghats



B. Eastern Ghats

C. Gangetic Plains

D. Central Plateau Region



Q96 General Awareness and Current Affairs

In 1989 the _____ recommended constitutional recognition for the *local government bodies*.

A. Raja Chelliah Committee

B. PK Thungon Committee



C. Khusro Committee

D. Sarkaria Commission

Q97 General Awareness and Current Affairs

As of July 2022, under which of the Social Security Insurance schemes is insurance provided with a premium of ₹20 per annum that is to be deducted from the account holder's bank account through 'auto-debit' facility in one instalment?

A. Pradhan Mantri Vaya Vandana Yojana (PMVVY)

B. Varishtha Pension Bima Yojana

C. Pradhan Mantri Suraksha Bima Yojana (PMSBY)



D. Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)

Q98 General Awareness and Current Affairs

Which of the following statement is CORRECT about the Law of Demand with regard to subject of Economics?

- a) The law of demand is a fundamental principle of economics that states that at a higher price consumer will demand a lower quantity of a good.
- b) Demand is derived from the law of diminishing marginal utility it is based on the fact that consumers use economic goods to satisfy their most urgent needs first.
- c) The shape and magnitude of demand shifts in response to changes in price.

A. Only a

B. Only b

C. Only c

D. Both a and b



Q99 General Awareness and Current Affairs

Which of the following rivers is NOT a tributary of River Brahmaputra?

A. Subansiri

B. Gandak



C. Manas

D. Lohit

Q100 General Awareness and Current Affairs

Telecom Company Bharti Airtel has signed an agreement to buy what percentage of Vodafone's stake in Indus Towers?

A. 3.7

B. 4.7



C. 5.7

D. 6.7



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Chandrasekhar sold 12 identical articles for a total of ₹420, incurring a loss equal to the cost price of 7 such articles. The cost price of 1 such article is:

A. ₹60

B. ₹48

C. ₹84



D. ₹35

Q2 Mathematics

Which of the following is the correct empirical formula?

A. $3(\text{mode} - \text{mean}) = \text{median} - \text{mean}$ B. $\frac{2}{3}(\text{Mode} - \text{Mean}) = \text{Median} - \text{Mean}$ C. $\frac{\text{Mode} - \text{Mean}}{3 \times 2} = \text{Median} - \text{Mean}$ D. $\frac{\text{Mode} - \text{Mean}}{3} = \text{Median} - \text{Mean}$ 

Q3 Mathematics

The LCM of two numbers is 84. If the numbers are in the ratio 2: 3, then find the sum of the numbers.

A. 25

B. 40

C. 60

D. 70



Q4 Mathematics

If the simple interest on a sum of money at 8% per annum for 2 years is ₹1,000, find the compound interest on the same sum for the same period at the same rate in case of annual compounding.

A. ₹1,040



B. ₹1,140

C. ₹1,060

D. ₹1,260



Q5 Mathematics

Simplify $\frac{423 \times 423 - 325 \times 325}{423 - 325}$.

A. 478

B. 874

C. 748



D. 487

Q6 Mathematics

The value of

$$12 + 12 \times 12 - 12 \div 12 =$$

A. 23

B. 0

C. 155



D. 140

Q7 Mathematics

Which of the following is RHS of the equation

$$\sqrt{\frac{1+\sin A}{1-\sin A}} =$$

A. $\sec A + \cot A$

B. $\sin A + \cos A$

C. $\sec A + \tan A$



D. $\frac{1}{\operatorname{cosec} A}$

Q8 Mathematics

Find the greatest 5-digit number that can be divisible by 18, 15 and 21.

A. 99545

B. 99455

C. 99450

D. 99540



Q9 Mathematics

When the selling price of a TV is ₹18,700, the shopkeeper incurred a loss of 15%. What should be the selling price of that TV to gain 15%?

A. ₹34,200

B. ₹19,800

C. ₹43,200

D. ₹25,300



Q10 Mathematics

6 men and 8 women could finish a work in 14 days. 8 men and 12 women could finish the same work in 10 days. How much time would be taken to finish the same work if one man worked alone?

A. 140 days

B. 175 days

C. 210 days

D. 280 days



Q11 Mathematics

Using $\pi = \frac{22}{7}$, find the perimeter of the semi-circle whose diameter is 21 cm long.

A. 64.5 cm

B. 72.5 cm

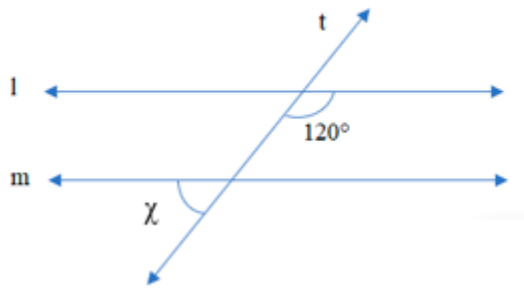
C. 54.0 cm

D. 77.5 cm



Q12 Mathematics

If the given figure line l is parallel to m and t is the transversal. Find the measure of angle x .



A. 120°

B. 60°



C. 30°

D. 40°

Q13 Mathematics

Simplify:

$$(x^2 + m^2 - z^2)^2 - (x^2 - m^2 + z^2)^2 =$$

A. $4x(m^2 - z^2)$

B. $3x^2(m^2 - z^2)$

C. $4x^2(m^2 - z^2)$



D. $2x^2(m^2 - z^2)$

Q14 Mathematics

1500 people visited an exhibition on Saturday, while 1680 visited on Sunday. The percentage increase in the number of people visiting the exhibition is _____.

A. 10%

B. 12%



C. 13%

D. 18%



Q15 Mathematics

There are two consecutive natural numbers such that the sum of their squares is 313. Find the smaller of these two numbers.

A. 12



B. 13

C. 14

D. 15

Q16 Mathematics

Find the median of:

CI	0-10	10-20	20-30	30-40	40-50	50-60	60-70
F	2	4	7	9	10	12	6

A. 40

B. 41

C. 42

D. 43

**Q17** Mathematics

Find the area of the parallelogram whose base is 15 cm and the corresponding height is 6 cm.

A. 60 cm^2

B. 45 cm^2

C. 90 cm^2



D. 80 cm^2

Q18 Mathematics

8 men and 12 women can build a wall in 10 days. 6 men and 8 women can build the same in 14 days. How long will take 1 woman to build it alone?

A. 350 days

B. 700 days

C. 140 days

D. 280 days



Q19 Mathematics

A can complete a certain job in 32 days. B is 60% more efficient than A. In how many days can B alone complete the same job?

- A. 10 days
- B. 15 days
- C. 20 days
- D. 32 days



Q20 Mathematics

If, in the quadrilateral ABCD, the measures of the angles A, B, C, and D are in the ratio 2 : 3 : 5 : 6, then the quadrilateral is a:

- A. square
- B. Kite
- C. parallelogram
- D. trapezium



Q21 Mathematics

The third proportional of 10 and 50 is

- A. 250
- B. 125
- C. 1250
- D. 300



Q22 Mathematics

Simplify:

$$\frac{4.32 \times 4.32 - 2.64 \times 2.64}{1.68}$$

- A. 6.94
- B. 6.96
- C. 6.99
- D. 6.56



Q23 Mathematics

A, B and C can do a piece of work in 20, 30 and 60 days, respectively. In how many days can A complete the work if he is assisted by B and C on every third day?

A. 13 days

B. 24 days

C. 12 days

D. 15 days

**Q24** Mathematics

Express $0.2\bar{7}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{5}{18}$



B. $\frac{18}{5}$

C. $\frac{7}{18}$

D. $\frac{18}{7}$

Q25 Mathematics

Find the roots of $3a^2x^2 + 8abx + 4b^2 = 0$

A. $-\frac{2b}{a}$ and $-\frac{2b}{a}$

B. $-\frac{2b}{a}$ and $-\frac{2b}{3a}$



C. $-\frac{2b}{a}$ and $-\frac{3b}{2a}$

D. $-\frac{2b}{3a}$ and $-2b$



Q26 General Intelligence and Reasoning

P, Q, R, S, T, U and V were seven kids sitting around a square table, facing the centre. Three of them were sitting at the corners while four others were sitting at the exact centre of the sides. One of the corners was empty. U, sitting at one of the centre of the sides, was second to the right of T. There was one empty chair between P and U. R and Q were diagonally opposite to each other. T was at the immediate left of Q. S was to the immediate left of V. Who among the following was the kid at a corner position?

A. V



B. S

C. T

D. U

Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

13, 17, 19, 23, 29, ?

A. 21

B. 31



C. 33

D. 35

Q28 General Intelligence and Reasoning

Refer to the following number and symbol series and answer the question.

(Left) 5 2 # 3 % 2 3 & 8 S 7 8 # 9 5 @ 6 & 4 9 S 3 6 # 7 5 S 8 % 6 2 & 8 2 % 3 8 @ 9 (Right)

If all the symbols are dropped from the series, which of the following will be seventh from the right?

A. 2

B. 5

C. 6

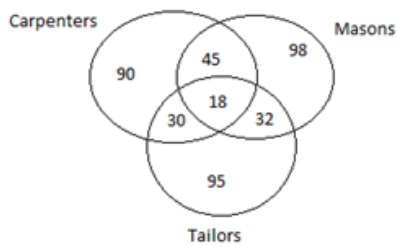


D. 8



Q29 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons in different professions.



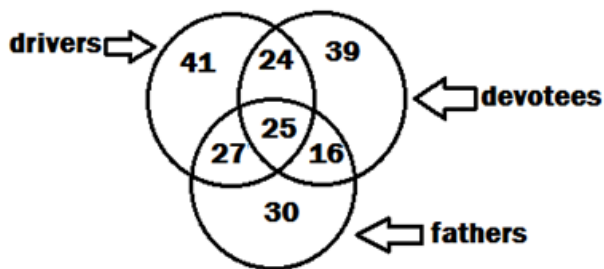
How many Masons are Tailors as well?

- A. 45
- B. 32
- C. 50
- D. 18



Q30 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such fathers are there who are also devotees?

- A. 16
- B. 25
- C. 41
- D. 49



Q31 General Intelligence and Reasoning

Which two numbers should be interchanged to make the given equation correct?

$$11 + 13 \times 3 - 14 \div 7 = 44$$

A. 11 and 13



B. 11 and 7

C. 14 and 11

D. 14 and 13

Q32 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

B _ G K M _ T V _ C E _ L

A. DPYI

B. DOYH

C. DPYH



D. DPZH

Q33 General Intelligence and Reasoning

Five girls, Amita, Fauzia, Gargi, Ranjita and Sucheta, are sitting in a straight line. All are facing the north direction. Sucheta sits second to the left of Gargi. Fauzia sits third to the right of Sucheta. Only one girl is sitting between Amita and Ranjita. Amita is not sitting at any of the extreme ends. Which two girls are sitting at the extreme ends?

A. Ranjita and Gargi

B. Gargi and Sucheta

C. Sucheta and Fauzia

D. Ranjita and Fauzia



Q34 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

GYABBRIBRXMRAYEJSFU YHUYHNRPQSDAI

How many letters are there in the English alphabetical series between the letter that is seventh from the left end and the letter that is sixth from the left end of the given series?

A. 5

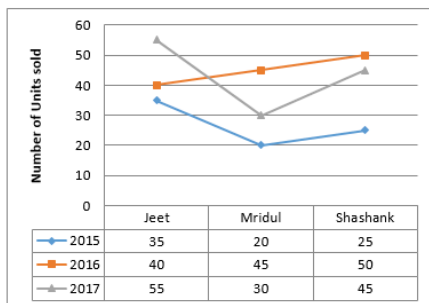
B. 7

C. 6

D. 8

**Q35** General Intelligence and Reasoning

The graph and the table below show the total units sold by three salesmen named Jeet, Mridul and Shashank in three different years i.e. 2015, 2016 and 2017. Study the graph and the table and answer the question.



If Jeet has sold an average of 40 units in five years i.e. from 2015 to 2019, and if the number of units sold by Jeet in 2018 and 2019 is exactly same then how many units did he sell in the years 2018?

A. 40

B. 35

C. 45

D. 30

**Q36** General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

15 : 24 :: 35 : 48 :: 63 : ?

A. 75

B. 36

C. 42

D. 80



Q37 General Intelligence and Reasoning

If 10 August 2021 was a Tuesday, then what day of the week was 18 September 2021?

A. Saturday



B. Sunday

C. Monday

D. Tuesday

Q38 General Intelligence and Reasoning

Q, W, E, R, T and Y live on seven different floors of the same building with one floor being vacant. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 7. T lives on the 7th floor, and W lives on the 1st floor. Q lives between E and R. One floor immediately above E is vacant. Only Y lives between R and W. The 5th floor is occupied by E. On which floor does Q live?

A. 2nd

B. 3rd

C. 4th



D. 5th

Q39 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$15 - 8 \div 4 + 30 \times 5 = ?$$

A. 39

B. 40

C. 41



D. 42



Q40 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	5	4	+	@	?	3	<	#	2	%	!	9	=	6
Code	B	S	R	T	U	P	D	Y	A	V	C	X	E	H

Conditions:

- (i) If the first element is a symbol and the last, a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last, an even number, the first and last elements are to be coded as O.
- (iii) If both second and third elements are either symbols or numbers, the third element is to be coded as the code for the second element.

How will '5 % = 3 ! 9' be coded?

A. XVEPCB

B. OVEPCO

C. BVEPCX

D. BVVPCX

**Q41 General Intelligence and Reasoning**

Which of the following numbers will replace the question mark (?) in the given series?

225, 221, 214, 201, 176, ?

A. 127

B. 125

C. 129

D. 132

**Q42 General Intelligence and Reasoning**

Each of K, L, M, N and P has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. No exam is held on Friday and Saturday. Only two persons have exams between N and M. L's exam is held on Wednesday. Only one person has exam between N and L. P's exam is held on Sunday. Whose exam is held on Monday?

A. K

B. L

C. M

D. N



Q43 General Intelligence and Reasoning

Five persons, P, Q, R, S and T, got jobs in five different years, viz. 1991, 1992, 1993, 1994 and 1995. Q got the job immediately before T. R got the job immediately after P. S got the job immediately after R. T got the job in the year 1992. Who got the job in the year 1995?

A. P

B. Q

C. R

D. S



Q44 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $Z > M = A < U \geq G \geq L = D$

A. $A > Z$

B. $A = G$

C. $G < D$

D. $U > M$



Q45 General Intelligence and Reasoning

B was taking a morning walk. She started from a point and walked 50 m towards east. She then takes a right turn, walks 30 m, turns right again, and walks 50 m. She takes a final left turn, walks 10 m and stops. How far is she from the original starting point?

(All turns are 90 degree turns only)

A. 20 m

B. 30 m

C. 40 m

D. 50 m



Q46 General Intelligence and Reasoning

Shobha started from point A and walked 10 m towards the east. She then took a left turn and walked another 10 m. She then took a right turn and walked 30 m. She then took a right turn and walked 15 m. She then took a right turn and walked 40 m. She then took a left turn and walked 5 m to reach a shopping mall. How far and in which direction is point A from the shopping mall ? (All turns are 90 degree turns only)

A. 10 m, South

B. 10 m, North



C. 5 m, South

D. 5 m, North

Q47 General Intelligence and Reasoning

Refer to the following number series and answer the question.

(Left) 2 5 4 3 7 8 6 7 9 4 3 7 8 6 2 3 4 8 9 4 8 7 6 4 3 7 2 8 9 7 5 3 2 4 5 9 (Right)

How many such odd numbers are there which are immediately preceded by an even number and also immediately followed by an even number? (Consider counting from left to right only)

A. Four



B. Five

C. Six

D. Seven

Q48 General Intelligence and Reasoning

Given below are three statements and three conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide whether the conclusion/s follow/s the given statements.

Statements:

- I. All candies are melons.
- II. All biscuits are melons.
- III. All cakes are biscuits.

Conclusions:

- I. All cakes are melons.
- II. Some candies are biscuits.
- III. Some candies are not biscuits.

A. Only conclusion I follows



B. Conclusions I and either conclusion II or III follow

C. Only conclusion III follows

D. None of the conclusions follow



Q49 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

18 : 96 :: 22 : 116 :: 23 : ?

A. 121



B. 132

C. 146

D. 164

Q50 General Intelligence and Reasoning

In a certain code language, MARKS is written as QEVOW and CLOSE is written as GPSWI. How will DRIVE be written in the same language?

A. HVMZK

B. HVMZI



C. GVNZI

D. HVMAJ

Q51 General Intelligence and Reasoning

The table given below shows the production of different types of household items (in lakhs) by a certain company over the years. Study the table and the answer the question.

Items Years	Production of different household items					
	P	Q	R	S	T	U
2016	70	80	75	90	50	80
2017	72	90	70	100	52	85
2018	75	95	80	100	58	90
2019	80	100	90	110	60	110
2020	85	90	95	118	64	120
2021	88	110	100	120	70	148

Which of the following type of household item was recorded as having the highest annual growth rate over one year in terms of production and in which year?

A. Items P in 2017

B. Items Q in 2018

C. Items R in 2018



D. Items S in 2017



Q52 General Intelligence and Reasoning

Among six friends, Pulkit, Aryan, Mahi, Somi, Vinay and Zeenat, each person scores different marks in an examination. Aryan scores less marks than only four other persons. Somi scores less marks than Mahi. Zeenat scores less marks than Vinay. Pulkit scores less marks than Aryan. Mahi scores less marks than Zeenat. Who scores the highest marks among all six friends?

A. Vinay



B. Zeenat

C. Mahi

D. Pulkit

Q53 General Intelligence and Reasoning

BTE 11 is related to DVG120 in a certain way. In the same way, PAN 9 is related to RCP 80. To which of the following is GMT 12 related following the same logic?

A. IOV 119

B. IOV 120

C. IOV 143



D. IOW 143

Q54 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$68.27 - 140.1 + 9.99 \times 7.7 = ?$$

A. 35

B. 25

C. 8



D. 16



Q55 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

The government is proposing a ban on the export of wheat for the next 4 weeks in order to contain the rising prices in domestic markets.

Arguments:

- I. Floods in various parts of the country has resulted in a steep drop in the output of wheat crop this season.
- II. Ban on export of wheat will result in significant penalties in the international markets on non-fulfilment of existing contracts.

- A. Argument I weakens, while argument II strengthens the statement
- B. Argument II weakens, while argument I strengthens the statement ☒
- C. Both arguments I and II weaken the statement
- D. Both arguments I and II strengthen the statement

General Science

25 Questions • Answer Key

Q56 General Science

Electromagnetic induction was discovered by:

- A. Michael Faraday ☒
- B. Isaac Newton
- C. Albert Einstein
- D. Alessandro Volta

Q57 General Science

One of the goals of the Namami Gange Programme is to:

- A. perform religious rituals with water from the Ganga River
- B. revitalise the Ganga River ☒
- C. start river cruises on the Ganga River to boost tourism
- D. increase the supply of the Ganga River water for drinking purposes



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Q58 General Science

Why are mitochondria considered as a 'weird' organelle?

- A. Because they are the store of cellular contents
- B. Because they can digest microorganisms
- C. Because they are the power-house of the cell
- D. Because they contain ribosomes and DNA



Q59 General Science

Which of the following reactions will be possible?

- A. $\text{MgCl}_2 + \text{Cu} \rightarrow \text{CuCl}_2 + \text{Mg}$
- B. $\text{ZnSO}_4 + \text{Fe} \rightarrow \text{FeSO}_4 + \text{Zn}$
- C. $\text{CuSO}_4 + \text{Ca} \rightarrow \text{CaSO}_4 + \text{Cu}$
- D. $\text{Al}_2(\text{SO}_4)_3 + \text{Pb} \rightarrow \text{PbSO}_4 + \text{Al}$



Q60 General Science

A current of 2.5 mA flows through a conductor having resistance $2\ \Omega$. The potential difference across the ends of the conductor is:

- A. 1.25 V
- B. 1.25 mV
- C. 5 V
- D. 5 mV



Q61 General Science

When coal and petroleum are burnt in insufficient air (oxygen), which harmful gas is produced, causing pollution?

- A. Oxides of nitrogen
- B. Carbon dioxide
- C. Carbon monoxide
- D. Sulphur dioxide



Q62 General Science

Which of the following is NOT a unit of power?

- A. watt
- B. joule/second
- C. kilowatt hour
- D. horsepower



Q63 General Science

A ray of light travelling in air enters a glass slab. Which of the following statements is/are correct?

- (i) Angle of incidence is greater than the angle of refraction.
- (ii) Angle of incidence is equal to angle of emergence.
- (iii) The emergent ray is parallel to the incident ray.

- A. Both (i) and (ii)
- B. Both (ii) and (iii)
- C. Both (i) and (iii)
- D. (i), (ii) and (iii)



Q64 General Science

In which of the following case(s) will a current be registered by the galvanometer connected to a circular coil?

- (i) When a magnet is held stationary near the coil.
- (ii) When a magnet is moved towards the coil.
- (iii) When a magnet is moved away from the coil.

- A. Only (i)
- B. Only (iii)
- C. Both (i) and (ii)
- D. Both (ii) and (iii)



Q65 General Science

Systolic blood pressure is exerted by the blood against the walls of the artery during which of the following phases?

- A. Ventricular contraction
- B. Auricular contraction
- C. Ventricular relaxation
- D. Auricular relaxation



Q66 General Science

In which different parts do the plants store their waste products?

- A. Leaves, lysosomes and leucoplast
- B. Vacuoles, bark and lysosomes
- C. Leaves, vacuoles and Old xylem
- D. Lysosomes, fruits and leucoplasts



Q67 General Science

Which of the following are neutralisation reactions?

- (i) $\text{NaOH (aq)} + \text{HCl (aq)} \rightarrow \text{NaCl (aq)} + \text{H}_2\text{O (l)}$
- (ii) $\text{HNO}_3 \text{ (aq)} + \text{KOH (aq)} \rightarrow \text{KNO}_3 \text{ (aq)} + \text{H}_2\text{O (l)}$
- (iii) $\text{HCl (aq)} + \text{NaOH (aq)} \rightarrow \text{NaCl (aq)} + \text{H}_2\text{O (l)}$

- A. i, ii and iii
- B. i and ii
- C. i and iii
- D. ii and iii



Q68 General Science

Select the option that shows the correct matching of Column I with Column II regarding Asexual Reproduction.

Column I	Column II
A. Leishmania	i) Regeneration
B. Yeast	ii) Binary fission
C. Plasmodium	iii) Multiple fission
D. Hydra	iv) Budding

A. A-i, B-ii, C-iii, D-iv

B. A-ii, B-iv, C-iii, D-i

C. A-iv, B-ii, C-i, D-iii

D. A-ii, B-i, C-iii, D-iv

Q69 General Science

What will be the angle of incidence for a ray of light incident along the principal axis of a convex mirror?

A. 0°

B. 30°

C. 60°

D. 90°

Q70 General Science

Which of the following relations correctly represents magnification m produced by a convex mirror?

A. $0 < m < 1$

B. $m = 1$

C. $m < 0$

D. $m > 1$



Q71 General Science

Predict the reactants for neutralisation reaction where the products are lithium sulphate and water.

- A. Hydrochloric acid and lithium nitrate
- B. Sulphuric acid and lithium carbonate
- C. Hydrochloric acid and lithium carbonate
- D. Sulphuric acid and lithium hydroxide



Q72 General Science

To study chemical properties of elements, Mendeleev concentrated on their compounds formed by which two elements?

- A. O and S
- B. C and H
- C. N and Cl
- D. H and O



Q73 General Science

A convex lens forms a real, inverted and diminished image. The position of the object is:

- A. beyond $2F$
- B. between F and $2F$
- C. at infinity
- D. between O and F



Q74 General Science

Which of the following DOES NOT constitute a part of pubertal development?

- A. Voice change
- B. Getting pimples
- C. Menstruation
- D. Obesity



Q75 General Science

A, which has an anomalous position in the Modern Periodic Table, depends on its properties. It has electronic configuration of alkali metals, but exists as diatomic molecules. B is the element that comes immediately after sodium in the third period and belongs to group C in the modern periodic table.

Identify A, B and C.

A. A = Hydrogen, B = Mg, C = 2



B. A = Helium, B = Al, C = 13

C. A = Lanthanoids, B = Ne, C = 3

D. A = Lithium, B = K, C = 1

Q76 General Science

Two bulbs A and B are connected in parallel to a 3 V source. If the ratio of resistance of bulb A to that of bulb B is 1 : 3. The ratio of the heat produced by bulb A to that of bulb B in a given time is:

A. 1 : 3

B. 3 : 1



C. 1 : 9

D. 9 : 1

Q77 General Science

How many total electrons are shared by three carbon atoms with all the hydrogen atoms in a propane molecule?

A. 2

B. 4

C. 6

D. 8

**Q78** General Science

Why do plants have low energy needs?

A. Because they only increase in height

B. Because they produce oxygen

C. Because they are self-sufficient in terms of food

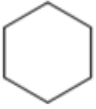
D. Because they have a lot of dead cells



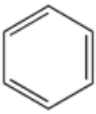
Q79 General Science

Which of the following is the correct structure of benzene molecule?

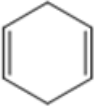
A.



B.



C.



D.



Q80 General Science

Which gas is utilised during the preparation of bleaching powder?

A. Hydrogen

B. Oxygen

C. Chlorine



D. Carbon dioxide

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In which state was the National senior women's football championship held from 28 November to 9 December 2021?

A. Tamil Nadu

B. Andhra Pradesh

C. Kerala



D. Odisha



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Q82 General Awareness and Current Affairs

Who among the following is the Minister of Rural Development & Panchayati Raj as on 15th June 2022?

- A. Amit Shah
- B. Piyush Goyal
- C. Dharmendra Pradhan
- D. Giriraj Singh



Q83 General Awareness and Current Affairs

Zyklus Cadila has received the approval for Emergency Use Authorization (EUA) from the Drug Controller General of India (DCGI) for which vaccine, in August 2021?

- A. ZyCoV-D
- B. ZyCovid
- C. ZyCorbeVax
- D. ZyCovdila



Q84 General Awareness and Current Affairs

In November 2021, which state government released State Policy for Children 2021 to ensure prevention and protection of children from all forms of violence, abuse, and exploitation?

- A. Kerala
- B. Rajasthan
- C. Tamil Nadu
- D. Punjab



Q85 General Awareness and Current Affairs

In January 2022, the Punjab and Maharashtra Co-operative bank has been merged with which bank?

- A. Capital Small Finance Bank
- B. Unity Small Finance Bank
- C. AU Small Finance Bank
- D. Ujjivan Small Finance Bank



Q86 General Awareness and Current Affairs

The Indian Men's Cricket Team played their thousandth ODI match against which team?

- A. Sri Lanka
- B. Australia
- C. South Africa
- D. West Indies



Q87 General Awareness and Current Affairs

Which of the following scriptures is NOT a part of Vedic literature?

- A. Upanishads
- B. Brahmanas
- C. Pitakas
- D. Aranyakas



Q88 General Awareness and Current Affairs

The East India Company Act, 1813, is also known as the _____.

- A. India Independence Act
- B. British Parliament Act
- C. Indian Council Act
- D. Charter Act



Q89 General Awareness and Current Affairs

The production function of a firm is a relationship between:

- A. inputs used and output produced
- B. inputs used and waste produced
- C. waste and output produced
- D. input used, and output and waste produced



Q90 General Awareness and Current Affairs

According to the regulation of the Indus Water Treaty signed in 1960, India can use only _____ of the total water carried by the Indus River system.

A. 10%

B. 20%



C. 40%

D. 50%

Q91 General Awareness and Current Affairs

License Raj was started during which of the following Five Year Plans?

A. Fifth Five Year Plan

B. Fourth Five Year Plan

C. Second Five Year Plan

D. Sixth Five Year Plan

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q92 General Awareness and Current Affairs

The famous festival of India, Makar Sankranti is celebrated in which month?

A. January



B. March

C. May

D. July

Q93 General Awareness and Current Affairs

The 'Stree Manoraksha Project' was launched by the Union Minister for Women and Child Development, Smriti Zubin Irani in collaboration with:

A. NIMHANS



B. NCW

C. Ministry of Health

D. SBI



Q94 General Awareness and Current Affairs

Which of the following is an ore of aluminium?

- A. Hematite
- B. Siderite
- C. Monazite
- D. Bauxite



Q95 General Awareness and Current Affairs

As per Article 53 of the Constitution of India, with whom are all the executive powers of the Union vested?

- A. Prime Minister
- B. President
- C. Governor
- D. Chief Justice



Q96 General Awareness and Current Affairs

By which of the following amendments was the Right to Education included in the Indian Constitution?

- A. 86
- B. 87
- C. 83
- D. 85



Q97 General Awareness and Current Affairs

As per a brand valuation report released by Brand Finance in February 2022, what is the rank of Life Insurance Corporation of India (LIC) in the list of insurance brands globally?

- A. 7th
- B. 8th
- C. 9th
- D. 10th



Q98 General Awareness and Current Affairs

What is the rank of Bengali language in the world among the most spoken languages as per Forbes ?

A. 17th

B. 27th

C. 10th

D. 6th



Q99 General Awareness and Current Affairs

Red Sanders, an endemic tree species, is restricted to which of the following Indian physical divisions?

A. Eastern Ghats



B. Western Ghats

C. Himalayan Mountain Region

D. Gangetic Plains

Q100 General Awareness and Current Affairs

Who among the following became the first film star of India to roll out his NFT (Non-Fungible tokens) collection in 2021?

A. Salman Khan

B. Shah Rukh Khan

C. Amitabh Bachchan



D. Rajnikanth



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Arrange the given fractions in ascending order: $\frac{1}{3}, \frac{4}{7}, \frac{2}{5}, \frac{5}{6}, \frac{3}{5}$

A. $\frac{2}{5}, \frac{1}{3}, \frac{3}{5}, \frac{4}{7}, \frac{5}{6}$

B. $\frac{5}{6}, \frac{1}{3}, \frac{4}{7}, \frac{2}{5}, \frac{3}{5}$

C. $\frac{1}{3}, \frac{2}{5}, \frac{4}{7}, \frac{3}{5}, \frac{5}{6}$ ✓

D. $\frac{1}{3}, \frac{2}{5}, \frac{3}{5}, \frac{4}{7}, \frac{5}{6}$

Q2 Mathematics

The traffic lights at three different crossings turn red after every 30 sec, 45 sec, and 60 sec, respectively. If they all turn red simultaneously at 8.30 a.m., then at what time will they again turn red simultaneously?

A. 8.33 a.m. ✓

B. 8.34 a.m.

C. 8.35 a.m.

D. 8.38 a.m.

Q3 Mathematics

A fraction becomes $\frac{1}{2}$ if 2 is added to the numerator and 5 is added to the denominator. It also becomes $\frac{1}{3}$ if 2 is subtracted from both the numerator and denominator. Then the fraction is

A. $\frac{8}{15}$

B. $\frac{3}{5}$ ✓

C. $\frac{1}{7}$

D. $\frac{4}{17}$



Q4 Mathematics

A parallelogram having all sides equal and diagonals unequal is called a:

- A. square
- B. rectangle
- C. rhombus
- D. kite



Q5 Mathematics

Find the cost of fencing of a rectangular land, if it has an area of 100 m^2 and one side of length 20 m at a rate of ₹30 per meter.

- A. ₹2,400
- B. ₹1,500
- C. ₹3,000
- D. ₹1,200



Q6 Mathematics

If $\frac{a+1}{a} = k$, what is the value of $\frac{a^2-1}{a^2}$?

- A. $k^2 + 2$
- B. $k - 2k^2$
- C. $2k - k^2$
- D. $k + 2$



Q7 Mathematics

The LCM of $2^3 \times 3^2 \times 5$, $2^2 \times 5^2 \times 7$ and $3^3 \times 5^2 \times 7^2$ is:

- A. $2^3 \times 3^2 \times 5^3 \times 7^2$
- B. $2^3 \times 3^2 \times 5 \times 7^3$
- C. $2^3 \times 3^3 \times 5^2 \times 7^2$
- D. $2^3 \times 3^4 \times 5^2 \times 7$



Q8 Mathematics

If $\triangle ABC$ is similar to $\triangle DEF$ such that $2AB = DE$ and $BC = 8$ cm, then EF is equal to:

A. 12 cm

B. 4 cm

C. 16 cm



D. 8 cm

Q9 Mathematics

The ratio of the present ages of a man and his wife is $7 : 6$. After 6 years, this ratio will be $8 : 7$. If, at the time of marriage, the ratio of their ages was $4 : 3$, then how many years ago from now did they get married?

A. 13 years

B. 15 years

C. 16 years

D. 18 years



Q10 Mathematics

A batsman scored the following runs in the last 5 innings. Find his score in the 4th innings if the average score is 43.

1 st	2 nd	3 rd	4 th	5 th
92	53	35	x	27

A. 8



B. 12

C. 10

D. 4

Q11 Mathematics

Find the fourth proportional of $x + 7x$, $x + 5$ and $x + 6$ if $x = 3$.

A. 24

B. 8

C. 9

D. 3



Q12 Mathematics

Twelve years ago, Rekha's age was $\frac{2}{5}$ of that of her sister. The ratio of Rekha's and her sister's present age is 3: 4. What is the total of their present ages?

A. 36 years



B. 28 years

C. 48 years

D. 42 years

Q13 Mathematics

Two trains start at the same time from Stations A and B respectively and travel towards each other at a speed of 60 km/h and 40 km/h, respectively. At the time they meet, the faster train has travelled 60 km more than the slower train. What is the distance between the two stations?

A. 300 km



B. 360 km

C. 420 km

D. 450 km

Q14 Mathematics

Two express trains of length 320 m and 380 m started moving from Ahmedabad to Delhi at the same time. Their speeds are 84 km/h and 42 km/h, respectively. In how many seconds will the faster train cross the slower train?

A. 45 sec

B. 50 sec

C. 120 sec

D. 60 sec

**Q15** Mathematics

Mr. Saxena bought some pens at ₹150 a dozen. He sold them for ₹15 each. What is his profit/loss per cent?

A. 20% profit



B. 37.5% loss

C. 28.6% loss

D. 18.5% profit



Q16 Mathematics

If $1 + \sqrt{3}$ and $1 - \sqrt{3}$ are the roots of a quadratic equation, then the quadratic equation is:

A. $x^2 - 2x - 2 = 0$ ✓

B. $x^2 - 2x + 2 = 0$

C. $x^2 - 2x + 3 = 0$

D. $x^2 - 2x - 3 = 0$

Q17 Mathematics

The sum of roots of the equation $5x^2 - 11x + 6 = 0$ is:

A. $\frac{6}{5}$

B. $-\frac{6}{5}$

C. $-\frac{11}{5}$

D. $\frac{11}{5}$ ✓

Q18 Mathematics

Simplify: $\left(\frac{2}{3} + \frac{1}{3}\right) \times 23 - 13 + 6$.

A. 16 ✓

B. 10

C. 23

D. 29

Q19 Mathematics

Find the area of a regular hexagon (in cm^2) with sides of length 6 cm.

A. $5\sqrt{2}$

B. 18

C. $54\sqrt{3}$ ✓

D. 36



Q20 Mathematics

The fourth proportion of 12, 24 and 45 is:

A. 25

B. 30

C. 90



D. 60

Q21 Mathematics

If $\frac{a}{b} = \frac{4}{3}$ and $3a + 2b = 24$, then find the value of a.

A. 4

B. 5

C. $\frac{13}{3}$

D. $\frac{16}{3}$



Q22 Mathematics

The simple interest on a sum of money is $\frac{3}{5}$ of the principal in 12 years. What is the rate of interest per annum?

A. 5%



B. 6%

C. 7%

D. 8%

Q23 Mathematics

The cost price of an article is 64% of the marked price. Calculate the gain percent after allowing a discount of 4%.

A. 50%



B. 60%

C. 40%

D. 45%



Q24 Mathematics

If mean of the data 11, 17, $x + 1$, $3x$, 19, $2x - 4$, $x + 5$ is 21, then find the mode of the data.

A. 11

B. 15

C. 17

D. 19 **Q25** Mathematics

Simplify: $\sqrt{\frac{1+\sin \theta}{1-\sin \theta}}$.

A. $\sec \theta - \tan \theta$ B. $\operatorname{cosec} \theta + \tan \theta$ C. $\operatorname{cosec} \theta - \tan \theta$ D. $\sec \theta + \tan \theta$ **General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

6, 8, 13, 23, 40, ?

A. 52

B. 66 

C. 75

D. 86

Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

24, 28, 35, 48, 73, ?

A. 123

B. 121

C. 122 

D. 120



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Q28 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Private schools have increased their fees by 20 per cent for this academic year citing rising costs.

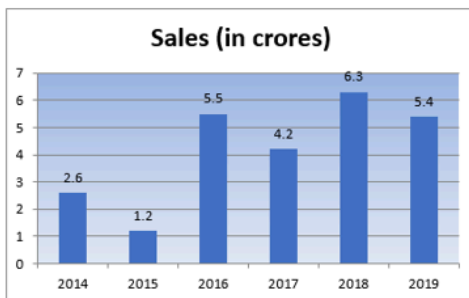
Arguments:

- I. The government has lowered the taxes levied on private schools by 8 percent this year.
- II. The Teacher's Union is protesting against the decision of private schools to cut salaries by 15 percent.

- A. Argument I weakens, while argument II strengthens the statement
- B. Argument II weakens, while argument I strengthens the statement
- C. Both arguments I and II weaken the statement ☒
- D. Both arguments I and II strengthen the statement

Q29 General Intelligence and Reasoning

The following chart shows the sales of Company-A in various years from 2014 to 2019. Study the chart and answer the question.



In which years was the sale below the average sale of all the six years?

- A. 2014, 2015 and 2016
- B. Only 2014 and 2015 ☒
- C. Only 2014 and 2017
- D. Only 2014



Q30 General Intelligence and Reasoning

In a row of students facing north, Krish is 19th from the extreme left end while Maya is 30th from the extreme right end. When both of them interchange their positions, Krish becomes 36th from the extreme left end. How many students are there in the row?

A. 66

B. 62

C. 65



D. 63

Q31 General Intelligence and Reasoning

Six teams named P, Q, R, S, T and U won tournaments in different months of the same year, viz. January, February, March, April, May and June. R won the tournament in January. Q won in the month immediately before U. P won the tournament in the month immediately before S. Exactly two teams won the tournaments between the months of R and S. In which month did T win the tournament?

A. February



B. March

C. April

D. May

Q32 General Intelligence and Reasoning

Three statements are followed by four conclusions numbered I, II, III and IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All parrots are doves.
2. No dove is canary.
3. All flamingoes are canaries.

Conclusions:

- I. Some flamingoes are parrots.
- II. No canary is parrot.
- III. No parrot is flamingo.
- IV. Some canaries are parrots.

A. Only conclusions I follows

B. Only conclusions II and III follow.



C. Only conclusions I and IV follow.

D. Only conclusion IV follows.



Q33 General Intelligence and Reasoning

This question is based on the following three-letter words:

(Left) CAR HAT FED EYE (Right)

How many letters are there between the second letter of the first word from the left and the first letter of the first word from the right?

A. 6

B. 7



C. 8

D. 9

Q34 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

3 : 25 :: 7 : 81 :: 11 : ?

A. 121

B. 144

C. 169



D. 196

Q35 General Intelligence and Reasoning

If '+' means '÷', '-' means '+', '×' means '-' and '÷' means '×', then what will be the value of the following expression?

$[(36 \times 16) - (5 \div 3)] + (2 - 5)$

A. 1

B. 5



C. 10

D. 15



Q36 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	@	%	!	4	2	5	#	?	+	=	3	&	7	<
Code	C	L	N	D	M	B	R	A	P	J	X	W	E	H

Conditions:

- (i) If the first element is a symbol and the last, a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last, an even number, the first and last elements are to be coded as O.
- (iii) If both second and third elements are either numbers or symbols, the third element is to be coded as the code for the second element.

How will '% + < 2 5 =' be coded?

A. L P P M B J



B. L P H M B J

C. L H H M B J

D. J H P M B L

Q37 General Intelligence and Reasoning

In a certain code language, 'DOVE' is written as 'PEFW' and 'CROW' is written as 'SDXP'. How will 'MYNA' be written in that language?

A. NZOB

B. ZNBO



C. ZMBO

D. ZNOB

Q38 General Intelligence and Reasoning

Each of P, Q, R, S, T, U and V has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. Only three persons have exams between R and V. Only two persons have exams between Q and P. V's exam is on Saturday. Q's exam is immediately before R. Only U's exam is between P and V. T's exam is not held on Wednesday. Q's exam is on Monday. On which day is S's exam held?

A. Monday

B. Tuesday

C. Wednesday



D. Sunday



Q39 General Intelligence and Reasoning

Six frogs, P, Q, R, S, T and U, were sitting around a circular pond, facing the centre. T was second to the left of S. P was second to the right of U. P is not seated three places to the right of Q. There are exactly two frogs between Q and S. Which frog was sitting to the immediate right of P?

A. T

B. U

C. S

D. R



Q40 General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $P = L \geq K > J < F < N$

A. $K = F$

B. $J = L$

C. $P > J$



D. $N > K$

Q41 General Intelligence and Reasoning

Based on the given statement, two conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $A < Q, Q \leq X, E = A < T$

Conclusions:

1. $T < E$

2. $A = X$

A. Only conclusion 1 is true

B. Only conclusion 2 is true

C. Both conclusions 1 and 2 are true

D. Neither conclusion 1 nor 2 is true



Q42 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

8 : 67 :: 10 : 103 :: 17 : ?

A. 145

B. 192

C. 292



D. 312

Q43 General Intelligence and Reasoning

Six teachers, C, D, E, F, G and H, are sitting around a circular table. They were facing the centre of the table. Exactly two people sit between H and D, while F is sitting to the immediate left of C. E is sitting to the immediate right of H. D is an immediate neighbour of both G and F. Who is the third person to the left of C?

A. D

B. G



C. H

D. C

Q44 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

NECTAR : TCVEGP :: POCKET : VGMEQR :: MONKEY : ?

A. AGMPQO



B. AGMRSO

C. BHMPQP

D. AFMPQN

Q45 General Intelligence and Reasoning

Six houses, K, L, M, N, O and P, are located in the same colony. L is 50 m to the south of K. P is 250 m to the west of K. O is 200 m to the north of K. N is 190 m to the south of L. M is 150 m to the east of L. In which direction is House O with reference to House L?

A. East

B. West

C. North



D. South



Q46 General Intelligence and Reasoning

The following question is based on the given five, 3-digit numbers.

(Left) 721, 463, 227, 316, 627 (Right)

(For example, 456: 6 = digit in unit's place, 5 = digit in ten's place, 4 = digit in hundred's place)

NOTE - All operations to be done from left to right.

If the digit in unit's place of each number is interchanged with the digit in hundred's place of the same number, which original number will become the largest number?

A. 721

B. 627



C. 227

D. 316

Q47 General Intelligence and Reasoning

Anuj started to walk from a point A and goes 10 m towards North and then turned left and walked 5 m. He then turned right and walked a distance of 5 m and then again turned right and walked a distance of 5 m before stopping at point P. How far and towards which direction should he walk in order to reach Point A starting from Point P?

(All turns are 90 degree turns only)

A. 5m towards East

B. 10m towards West

C. 15m towards North

D. 15m towards South



Q48 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '÷' means '×' and '×' means '+', what will come in place of the question mark (?) in the following equation?

$$24 - 3 \times 12 + 4 \div 3 = ?$$

A. 8



B. 10

C. 11

D. 12



Q49 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '+' means '×' and '×' means '+', what will come in place of the question mark (?) in the following equation?

$$21 + 48 - 8 \times 6 \div 4 = ?$$

A. 37

B. 38

C. 39



D. 40

Q50 General Intelligence and Reasoning

Today is a Wednesday. What day of the week will it be after 75 days?

A. Tuesday

B. Monday

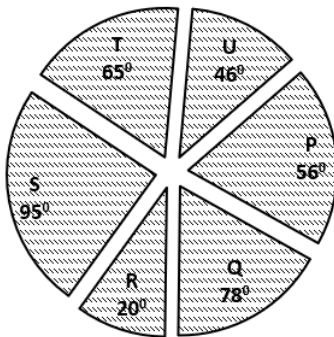


C. Wednesday

D. Friday

Q51 General Intelligence and Reasoning

The pie chart given below shows the expenditure of a certain company across various sectors – P, Q, R, S, T and U – during a particular year. Study the graph and answer the question.



What approximate percentage of the total spending is spent on sector S?

A. 26.4%



B. 28.3%

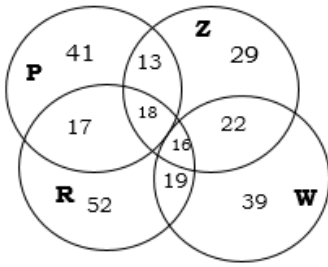
C. 24%

D. 20.05%



Q52 General Intelligence and Reasoning

In the following diagram, R = Students, P = Boys, W = Girls, and Z = Psychology. The numbers in different sections indicate the number of persons. How many girls are psychology students?



A. 19

B. 18

C. 17

D. 16



Q53 General Intelligence and Reasoning

How many such pairs of letters are there in the word 'PARTICLE' (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. None

B. One

C. Two



D. Three

Q54 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

G _ Q _ A _ T _ N _ G T Q N _ G _ Q N D

A. T N G Q B C T



B. T G G Q B C Q

C. T N G Q B Q C

D. T A G N B C T



Q55 General Intelligence and Reasoning

Given below are three statements and three conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide whether the conclusion/s follow/s the given statements.

Statements:

- I. Some monkeys are pandas.
- II. Some pandas are giraffes.
- III. All giraffes are lions.

Conclusions:

- I. Some lions are pandas.
- II. Some lions are monkeys.
- III. Some giraffes are monkeys.

A. Only conclusion I follows



B. Conclusions I and III follow

C. Only conclusion III follows

D. All the conclusions follow

General Science

25 Questions • Answer Key

Q56 General Science

In chemical reaction $\text{N}_2 + x\text{H}_2 \rightarrow 2\text{NH}_3$, what is the value of x?

A. 1

B. 2

C. 3



D. 4

Q57 General Science

Which of the following metals can displace aluminium from an aluminium sulphate solution?

A. Fe

B. Cu

C. Mg



D. Hg

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Q58 General Science

When is carbon dioxide produced as a waste product in plants?

- A. During respiration
- B. During photosynthesis
- C. During transpiration
- D. During both respiration and photosynthesis

Q59 General Science

What temperature will be required for the preparation of Plaster of Paris from gypsum?

- A. 100°C
- B. 0°C
- C. 373°C
- D. 173°C

Q60 General Science

A beam of white light undergoes dispersion through a triangular glass prism forming a band of seven colours. Which of the statements is/are correct?

- (a) The red-coloured component has minimum refractive index.
- (b) The violet-coloured component deviates the least.
- (c) All components of white light have same speed in glass.

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b)
- D. Both (b) and (c)



Q61 General Science

If a coil of a conductor with $50\ \Omega$ resistance is subjected to time varying magnetic field such that the EMF induced is 5 V , then the induced current in the coil is:

- A. zero
- B. infinite
- C. 0.01 A
- D. 0.1 A



Q62 General Science

The Bishnoi community contributes to forest and animal conservation in _____.

- A. Rajasthan
- B. Gujarat
- C. Madhya Pradesh
- D. Haryana



Q63 General Science

Which of the following salts will give an aqueous solution having pH of almost 7?

- (i) NH_4Cl
- (ii) Na_2CO_3
- (iii) K_2SO_4

- A. Only (i)
- B. Only (ii)
- C. Both (i) and (ii)
- D. Only (iii)



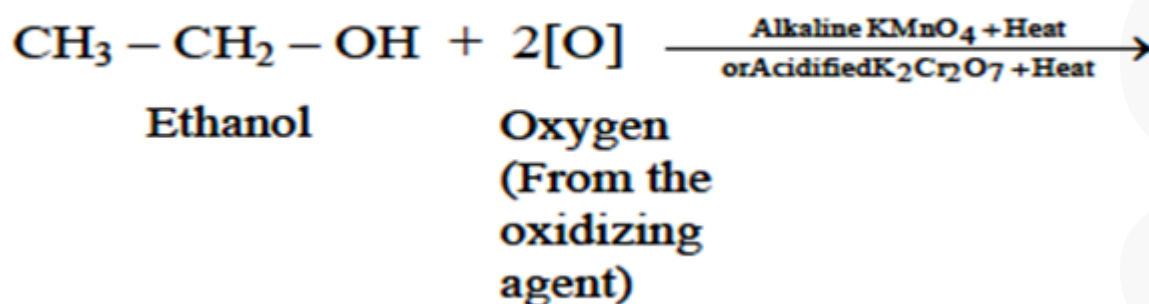
Q64 General Science

Which of the following materials is preferably used for electrical transmission lines?

- A. Nichrome
- B. Copper
- C. Tungsten
- D. Tin-lead alloy

Q65 General Science

The product for the following reaction will be:



- A. CH_3CHO
- B. $\text{CH}_2=\text{CH}_2$
- C. $\text{CH}_3\text{COOCH}_3$
- D. CH_3COOH

Q66 General Science

Where is the respiratory pigment in human body present?

- A. In blood plasma
- B. In red blood cells
- C. In white blood cells
- D. In both plasma and white blood cells



Q67 General Science

Which of the following environmental factors plays an important role in deciding the sex of a developing organism in some animals?

A. Wind

B. Humidity

C. Temperature



D. Light

Q68 General Science

Which group of the modern periodic table is NOT mentioned in Mendeleev's periodic table?

A. Halogen group

B. Chalcogen group

C. Pnictogen group

D. Noble gas group



Q69 General Science

Select the incorrect statements from among the following.

(i) Newland arranged the elements in the order of increasing atomic masses and gave the law of Octaves.

(ii) Sodium is the eighth element after lithium.

(iii) Calcium is the eighth element after Beryllium.

(iv) The law of Octaves was applicable only up to Magnesium, as after Magnesium every eighth element did not possess properties similar to that of the first.

A. iv



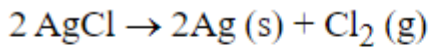
B. iii

C. ii

D. i



Q70 General Science



What is the suitable condition for the above reaction to take place?

- A. Sunlight + Pressure
- B. Heat
- C. Heat + Pressure
- D. Sunlight



Q71 General Science

An electric oven is rated 2500 W. The energy used by it in 5 hours will be:

- A. 12.5 J
- B. 12.5 kWh
- C. 12500 J
- D. 12500 kWh



Q72 General Science

The value of absolute refractive index of a medium is always:

- A. less than 1
- B. more than 1
- C. equal to 1
- D. equal to 0



Q73 General Science

A current of 5 A flows through an electrical appliance when the potential difference of 50 V is applied across its terminals. What will be the current drawn by the appliance if the potential difference is increased to 110 V?

- A. 5 A
- B. 10 A
- C. 11 A
- D. 25 A



Q74 General Science

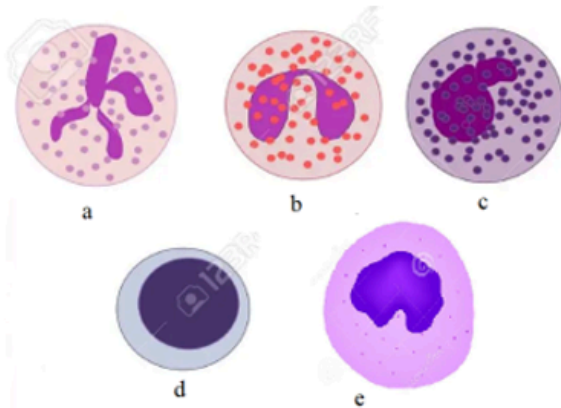
Aerenchyma cells are present in _____.

- A. pea
- B. neem
- C. cactus
- D. common water hyacinth



Q75 General Science

The diagram below shows the different types of white blood cells. Identify the option with correct labelling.



- A. a - Neutrophil, b - Eosinophil, c - Basophil, d - Lymphocyte, e - Monocyte
- B. a - Neutrophil, b - Basophil, c - Lymphocyte, d - Eosinophil, e - Monocyte
- C. a - Eosinophil, b - Neutrophil, c - Basophil, d - Monocyte, e - Lymphocyte
- D. a - Neutrophil, b - Monocyte, c - Eosinophil, d - Basophil, e - Lymphocyte



Q76 General Science

A ray of light is incident on the pole of a concave mirror. The acute angle between the incident ray and the principal axis will be called:

- A. angle of reflection
- B. angle of incidence
- C. angle of deviation
- D. angle of emergence



Q77 General Science

In human males, the sex chromosomes present are XY. What is the difference between them?

- A. X-chromosome is bigger, whereas Y is smaller. ✓
- B. Y chromosome is bigger, whereas X is smaller.
- C. There is no difference in size.
- D. Y chromosome has more genes than X chromosome.

Q78 General Science

Which among the following mirror(s) always forms virtual and erect image?

- (A) Convex mirror
- (B) Plane mirror
- (C) Concave mirror

- A. Only A
- B. Only B
- C. Both A and B ✓
- D. Both B and C

Q79 General Science

Select the option that has only biodegradable substances.

- A. Glass, Metals, Egg shells, Paper, Tetra packs
- B. Batteries, Vegetable peelings, Stale bread, Glass, Metals
- C. Eggshells, Paper, Stale biscuits, Fruits, Vegetable peels ✓
- D. Tetra packs, Metals, Leather, Stale biscuits, Fruits



Q80 General Science

According to Fleming's right-hand rule, the index finger and the central finger of the right hand represent directions of _____ and _____, respectively.

- A. induced current, magnetic field
- B. magnetic field, induced current ✓
- C. motion of the conductor, magnetic field
- D. motion of the conductor, induced current

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which regulatory body is the only note issuing authority in India?

- A. Reserve Bank of India ✓
- B. Securities and Exchange Board of India
- C. Insurance Regulatory and Development Authority of India
- D. Small Industries Development Bank of India.

Q82 General Awareness and Current Affairs

Which microfinance institution of India provides loans only against gold jewellery and provides foreign exchange services, money transfer, wealth management services, travel and tourism services?

- A. Mahindra & Mahindra Financial Services Ltd
- B. Muthoot Finance Ltd ✓
- C. Aditya Birla Finance Ltd
- D. Power Finance Corporation Ltd

Q83 General Awareness and Current Affairs

Which new mission has been announced in the Union Budget of India, 2021, for exceptional opportunities in mapping, exploring and utilising the oceanic resources?

- A. Deep Ocean Mission ✓
- B. Blue Economy Mission
- C. Samundra Setu Mission
- D. Maritime Exercise Mission



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The term 'Panthalassa' is related to which of the following?

A. Oceans



B. Soil

C. Atmosphere

D. Mountains

Name India's lone participant in the winter Olympics, who finished 45th in the giant slalom event.

A. Aanchal Thakur

B. Shailaja Kumar

C. Himanshu Thakur

D. Arif Khan



Q86 General Awareness and Current Affairs

Atal Innovation Mission (AIM) and NITI Aayog in collaboration with _____ launched the community Innovators Fellowship (CIF) marking the 'International Day of Women and Girls in Science'.

- A. Ministry of Women and Child Development
- B. United Nations Development Programme (UNDP) ☒
- C. Department of Science and Technology
- D. Indian Institute of Science

Q87 General Awareness and Current Affairs

In which year did the Indira Gandhi Government devalue the India Rupee?

- A. 1978
- B. 1956
- C. 1966 ☒
- D. 1970

Q88 General Awareness and Current Affairs

Who is the highest executive of the country in India?

- A. The President ☒
- B. The Prime Minister
- C. The Vice President
- D. The Speaker of the Lok Sabha



Q89 General Awareness and Current Affairs

Against which of the following Acts did Mahatma Gandhi decide to launch nationwide Satyagraha in 1919?

- A. Inland Emigration Act
- B. Rowlatt Act
- C. Pitt's India Act
- D. Regulating Act



Q90 General Awareness and Current Affairs

From which year onwards is the Union of India Budget presented on 1 February instead of the last working day of February?

- A. 2015
- B. 2017
- C. 2019
- D. 2021



Q91 General Awareness and Current Affairs

In which year was the 11th Fundamental Duty added in the Indian Constitution?

- A. 2002
- B. 2012
- C. 1998
- D. 2004



Q92 General Awareness and Current Affairs

In which of the following cities did Gautam Buddha get enlightenment?

- A. Kaushambi
- B. Lumbini
- C. Bodh Gaya
- D. Sanchi



Q93 General Awareness and Current Affairs

Which among the following States topped the 4th Khelo India Youth Games 2021 medals tally?

- A. Karnataka
- B. Manipur
- C. Rajasthan
- D. Haryana



Q94 General Awareness and Current Affairs

On which of the following occasions is 'Natyanjali Utsav' celebrated in Tamil Nadu every year?

- A. Janmashtami
- B. Mahashivratri



- C. Diwali
- D. Pongal

Q95 General Awareness and Current Affairs

World Wetland Day was celebrated on 2 February 2022. What was theme of this year?

- A. Wetlands and water
- B. Wetland's action for people and nature



- C. Wetlands and Biodiversity
- D. Wetlands and climate change



Q96 General Awareness and Current Affairs

How many language universities are located in India as on June 2022?

A. 6



B. 16

C. 26

D. 20

Q97 General Awareness and Current Affairs

As of July 2022, students from how many minority communities under the Maulana Azad Fellowship Scheme (MANF) get five year fellowships in the form of financial assistance notified by the Central Government, to pursue M. Phil and Ph.D?

A. Two

B. Four

C. Six



D. Eight

Q98 General Awareness and Current Affairs

On 14 February 2022, ISRO successfully launched its first earth observation satellite of 2022, EOS-04. It was launched by which rocket?

A. PSLV-C51

B. PSLV-C52



C. PSLV-C53

D. PSLV-C54



Q99 General Awareness and Current Affairs

In which state will you find the Mahendragiri Hills?

- A. Jharkhand
- B. Chhattisgarh
- C. West Bengal
- D. Odisha



Q100 General Awareness and Current Affairs

In which year was The Municipal Corporation in Calcutta set up by a royal charter?

- A. 1688
- B. 1687
- C. 1726
- D. 1736



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Rachna can eat 21 oranges in 60 minutes. She wants to know how many minutes it would take her to eat 35 oranges at the same pace?

- A. 80 min
- B. 90 min
- C. 100 min
- D. 120 min



Q2 Mathematics

Two pipes, A and B, can fill a tank of 1000 litres in 5 hours and 6 hours, respectively. If they are opened together, how many hours will they take to fill an empty tank of 1800 litres?

- A. $\frac{54}{11}$
- B. $\frac{52}{11}$
- C. $\frac{25}{11}$
- D. $\frac{45}{11}$



Q3 Mathematics

Simplify $\sqrt{625} - \sqrt{324} + 33^2$.

- A. 1069
- B. 1609
- C. 1906
- D. 1096



Q4 Mathematics

The value of $\sqrt{1234321} =$

- A. 121
- B. 139
- C. 1111
- D. 1219



Q5 Mathematics

What is the measure of each exterior angle of a regular hexagon?

- A. 60°
- B. 30°
- C. 45°
- D. 120°



Q6 Mathematics

The coefficient of x^4y^3 in the expansion of $(3x - 2y)^2(x^2 + y^3)^2$ is:

- A. 18
- B. 15
- C. 12
- D. 14



Q7 Mathematics HINDI - no English version saved

एक फल विक्रेता ₹4,800 में 800 सेब खरीदता है। वह परिवहन पर ₹800 खर्च करता है। उसे प्रत्येक सेब पर ₹10 का लाभ प्राप्त करने के लिए, प्रत्येक सेब को किस मूल्य पर बेचना चाहिए?

- A. ₹76
- B. ₹32
- C. ₹12
- D. ₹17



Q8 Mathematics

If $x : 6 :: 6 : y$, and $x : y :: y : 6$, then which of the options below gives the correct values of x and y , in that order?

A. 6 and 6



B. 6 and 12

C. 12 and 6

D. 12 and 12

Q9 Mathematics

If the mean of the following data is 4, find the missing frequency.

x	3	5	9	2
f	3	4	-	8

A. 4

B. 5

C. 3



D. 7

Q10 Mathematics

The value of $156.025 + 251.216 - 52.156$ is:

A. 355.085



B. 302.152

C. 326.327

D. 332.074

Q11 Mathematics

If the average of two numbers is 26 and one of them is 12, then find the other number.

A. 14

B. 20

C. 40



D. 52



Q12 Mathematics HINDI - no English version saved

एक पिता की आयु, उसके पुत्र की आयु की सात गुनी है। अब से तीन वर्ष बाद, पिता की आयु उसके पुत्र की आयु की पांच गुनी हो जाएगी। पिता की वर्तमान आयु कितनी है?

A. 45 वर्ष

B. 42 वर्ष



C. 39 वर्ष

D. 36 वर्ष

Q13 Mathematics

The floor of an office has dimensions $5 \text{ m} \times 3 \text{ m}$. The cost of painting the walls and ceiling is ₹7,440 at the rate of ₹60/m². Find the height of the room (in m).(rounded off to one decimal place)

A. 6.8



B. 4.5

C. 5.6

D. 3.5

Q14 Mathematics

8118 is divisible by:

A. 5

B. 6



C. 7

D. 8

Q15 Mathematics

A dealer sold three-fifth of his goods at a gain of 25% and the remaining at cost price. What is his loss or gain percent in the whole transaction?

A. 18% loss

B. 18% gain

C. 15% loss

D. 15% gain



Q16 Mathematics

Find the arithmetic mean of the given data.

x	10	20	30	40	50
f	5	5	4	6	5

A. 30.4



B. 30.6

C. 26.4

D. 16.4

Q17 Mathematics

The number of solutions to the pair of linear equations $5x - 3y = 7$ and $7x + 4y = 18$ is:

A. one



B. none

C. infinite

D. three

Q18 Mathematics

If one root of the equation $(a + 3)x^2 - 13ax + 7 - a = 0$ is the reciprocal of the other, then the value of a is:

A. -2

B. -3

C. 2



D. 3

Q19 Mathematics HINDI - no English version saved

यदि 2 वर्ष पहले रवि ने मोनू से 4% वार्षिक चक्रवृद्धि ब्याज की दर पर ₹3,000 की राशि उधार ली थी, तो उसे चुकाने के लिए रवि द्वारा मोनू को कुल कितनी राशि का भुगतान करना होगा?

A. ₹2,344.80

B. ₹3,453.90

C. ₹3,244.80



D. ₹4,321



Q20 Mathematics

Find the least six-digit number that is exactly divisible by 8, 10, 12 and 16.

- A. 100020
- B. 100040
- C. 100060
- D. 100080



Q21 Mathematics

Find the total surface area of a cylinder whose radius of base is 7 cm and height is 15 cm.

- A. $308\pi \text{ cm}^2$
- B. $380\pi \text{ cm}^2$
- C. $803\pi \text{ cm}^2$
- D. $830\pi \text{ cm}^2$



Q22 Mathematics

Which of the following is NOT a quadrilateral?

- A. Parallelogram
- B. Rhombus
- C. Circle
- D. Trapezium



Q23 Mathematics

Find the value of $\frac{\sin^2 \theta - \sin^4 \theta + 1}{1 - \sin^2 \theta} + \frac{1 - \tan^2 \theta - \tan^4 \theta}{1 + \tan^2 \theta}$.

- A. -1
- B. 0
- C. 1
- D. 2



Q24 Mathematics

For what values of z will the following equation have equal roots?

$$(z + 4)x^2 + (z + 1)x + 1 = 0$$

- A. 4, 3
- B. 2, -5
- C. 5, -3
- D. 2, -3

**Q25** Mathematics

Two pipes A and B can fill a tank in 15 hours and 20 hours, respectively, while a third pipe C can empty the full tank in 30 hours. If all the three pipes operate simultaneously, in how much time will the tank, initially empty, be filled?

- A. 12 hours
- B. 13 hours
- C. 15 hours
- D. 18 hours

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

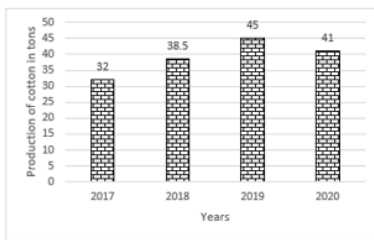
Six girls named P, Q, R, S, T and U are sitting in a straight line. All are facing the north direction. U sits third to the left of R. S sits third to the right of Q. U sits second to the left of Q. T is not the immediate neighbour of U. What is P's position in the line?

- A. Second from the extreme left end
- B. At the extreme left end
- C. Third from the extreme left end
- D. Third from the extreme right end



Q27 General Intelligence and Reasoning

The following bar graph shows the production of cotton (in tons) over the years. Study the graph and answer the question.



What is the approximate percentage increase in the production of cotton in 2020 as compared to 2017?

- A. 26%
- B. 25.05%
- C. 28.12%
- D. 30.50%



Q28 General Intelligence and Reasoning

The table given below shows the number of students who were interviewed and who got selected by the universities A, B, C and D over the years. Study the table and answer the question.

Students Years	A		B		C		D	
	Interviewed	Selected	Interviewed	Selected	Interviewed	Selected	Interviewed	Selected
2017	1500	700	1200	800	1800	1000	1200	750
2018	1600	800	1500	600	2000	1120	1400	460
2019	2200	900	2000	680	1800	1100	2000	500
2020	1500	950	1600	700	1800	1200	1500	450
2021	1100	400	1500	490	1300	800	1300	350

In university C, the total number of students selected over the years was approximately what percentage of the total number of students who were interviewed over the years?

- A. 40%
- B. 50%
- C. 60%
- D. 65%



Q29 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(2, 4, 18)

(4, 6, 50)

A. (3, 5, 32)



B. (2, 5, 49)

C. (6, 7, 65)

D. (5, 4, 18)

Q30 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	8	=	4	7	@	%	>	2	!	?	5	3	<	9
Code	Z	F	T	J	D	H	E	X	V	W	K	U	P	A

Conditions:

- (i) If the first element is a symbol and the last, a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last, an even number, the first and last elements are to be coded as O.
- (iii) If both second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '3 = < 2 @ 8' be coded?

A. O F E X D O

B. O F P X D O



C. O P F X D O

D. O F E D X O



Q31 General Intelligence and Reasoning

If '+' means ' $\div$ ', '-' means '+', ' $\times$ ' means '-' and ' $\div$ ' means ' $\times$ ', then, what will be the value of the following expression?

$$[(12 \times 3) - (2 \div 3)] + (1 - 4) \div 4$$

A. 9

B. 16

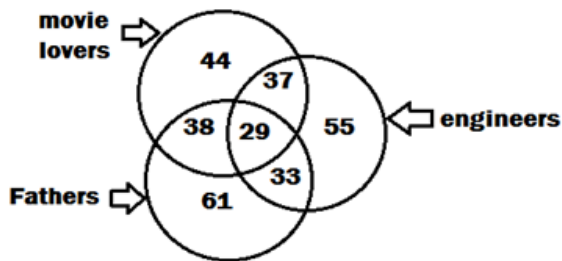
C. 12



D. 8

Q32 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such fathers are there who are also movie lovers but NOT engineers?

A. 29

B. 44

C. 38



D. 61



Q33 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts, and decide which of the given conclusions logically follow/s from the given statements.

Statements:

Some hotels are dormitories.

Some gates are shelters.

All shelters are fences.

Conclusions:

(I) Some gates are dormitories.

(II) Some fences are gates.

(III) Some hotels are shelters.

A. Only conclusion I follows

B. Only conclusion II follows



C. Either conclusion I or conclusion III follows

D. None of the conclusions follow

Q34 General Intelligence and Reasoning

Six doctors, K, L, M, N, O and P, are sitting in a straight line. All are facing the north direction. Only O is sitting between N and L. Only P is sitting between L and K. K sits fifth to the right of M. Who is sitting to the immediate right of M?

A. N



B. P

C. L

D. O

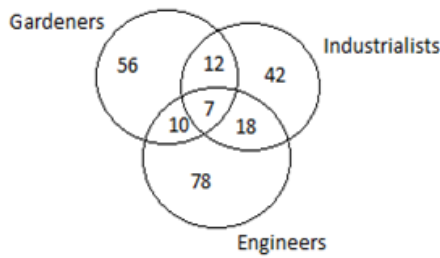


Blackbook Vocabulary — Now in the App!

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Q35 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons with different professions.



How many people are Gardeners but NOT Engineers?

A. 56

B. 68

C. 75

D. 80

Q36 General Intelligence and Reasoning

Janhvi and Pranitha are standing at the extreme ends of a row in which all the students are facing the north. Only 26 students are standing between Janhvi and Ravi. Only 14 students are standing between Ravi and Pranitha. Total how many students are standing in the line?

A. 42

B. 43

C. 44

D. 45

Q37 General Intelligence and Reasoning

Refer to the following number series and answer the question.

2 5 2 6 5 2 2 6 3 8 9 5 6 3 6 2 2 5 5 3

How many such numbers are there in the series each of which is immediately preceded by an odd number and also immediately followed by an odd number?

A. 1

B. 2

C. 3

D. 4



Q38 General Intelligence and Reasoning

Each of the digits in the number 318924765 is arranged in descending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

- A. None
- B. One
- C. Two
- D. Three



Q39 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $F = E \geq D = A > Z < S = O$

Conclusions:

- I. $F \geq D$
- II. $D < O$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Both conclusions I and II are true
- D. Neither conclusion I nor II is true



Q40 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below:

(Left) 448 455 275 563 215 (Right)

What will be the resultant if the third digit of the largest number is added to the second digit of the smallest number?

- A. 3
- B. 4
- C. 5
- D. 6



Q41 General Intelligence and Reasoning

Six friends, Arun, Suresh, Rahul, Priyanka, Dilan and Hiba, took a test online. All of them scored different marks in the test. Suresh scored more than Priyanka but less than Arun. Hiba scored the least. Dilan scored less than Rahul. Arun scored more than Priyanka and Rahul. Who among the six scored the most?

- A. Suresh
- B. Arun
- C. Rahul
- D. Priyanka

Q42 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

STM : RUL

PJR : OKQ

- A. MTL : LUM
- B. TCS : SDR
- C. BUP : AVQ
- D. VEW : UDV

Q43 General Intelligence and Reasoning HINDI - no English version saved

इस प्रश्न में, संख्याओं/प्रतीकों के एक समूह को नीचे दी गई तालिका और उसके बाद दी गई शर्तों के अनुसार अक्षरों का उपयोग करके कूटबद्ध किया गया है। शर्तों के अनुसार कूटों का सही संयोजन आपका उत्तर होगा।

संख्या/प्रतीक	^	#	5	7	@	%	>	2	!	?	4	8	\$	3
कूट	L	F	B	J	D	H	E	X	V	Z	K	U	R	P

शर्तें:

यदि पहला तत्व एक प्रतीक है, और अंतिम तत्व एक संख्या है, तो इन दोनों के कूटों को परस्पर बदला जाना चाहिए।

यदि पहला तत्व एक विषम संख्या है, तो पहले और अंतिम तत्वों को क्रमशः Ø और ¥ के रूप में कूटबद्ध किया जाएगा।

यदि दूसरे और तीसरे तत्व, दोनों पूर्ण वर्ग हैं, तो तीसरे तत्व को दूसरे तत्व के कूट के रूप में कूटबद्ध किया जाएगा।

'7 # ^ 2 !' को किस प्रकार कूटबद्ध किया जाएगा?

- A. J B F V Z
- B. J F L X ¥
- C. Ø F L X ¥
- D. Ø F L X V



Q44 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

Q W _ R _ X E _ Q _ E R Q Z E _

A. EQZYR

B. EQRYR



C. EQRYE

D. EQRER

Q45 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

5, 6, 10, 12, 15, ?, 20, 24

A. 19

B. 21

C. 20

D. 18



Q46 General Intelligence and Reasoning

If each of the digits in the number given below is arranged in the descending order from left to right, what will be the sum of the digits that are second from the left and third from the right in the new number thus formed?

(Left) 259812357 (Right)

A. 8

B. 10



C. 11

D. 12



Q47 General Intelligence and Reasoning

Refer to the following letter, number and symbol series and answer the question.

(Left) 4 T 6 S 2 A D & C E 2 4 + & 7 6 U 5 H U K 8 E W @ E A & P (Right)

How many such vowels are there in the series which are immediately preceded by a number and also immediately followed by a consonant?

- A. None
- B. One
- C. Two
- D. Three



Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

9, 10, 22, 69, 280, ?

- A. 560
- B. 576
- C. 1405
- D. 1450



Q49 General Intelligence and Reasoning

Vishal is standing in a park facing the south direction. He then turns 90° clockwise on the same point. After that, he turns 45° clockwise. In which direction is he facing now?

- A. South-west
- B. North-east
- C. North-west
- D. South-east



Q50 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

27 : 140 :: 22 : 115 :: 32 : ?

A. 140

B. 165

C. 130

D. 155

Q51 General Intelligence and Reasoning HINDI - no English version saved

छः डिब्बों - A, B, C, D, E और F को एक ऊर्ध्वाधर स्तंभ में व्यवस्थित किया गया है, किंतु उनका इसी क्रम में होना अनिवार्य नहीं है। B को ऊपर से दूसरे स्थान पर रखा गया है। केवल D को A और B के बीच रखा गया है। E, D के नीचे किसी एक स्थान पर है, और E और D के बीच केवल एक डिब्बा रखा गया है। F सबसे निचले स्थान पर नहीं है। कौन सा डिब्बा नीचे से दूसरे स्थान पर रखा गया है?

A. D

B. C

C. A

D. E

Q52 General Intelligence and Reasoning HINDI - no English version saved

एक कथन और उसके बाद दो धारणाएं I और II दी गई हैं। आपको कथन में दी गई जानकारी को सत्य मानते हुए यह बताना है कि दी गई धारणाओं में से कौन सी धारणाएं कथन में निहित हैं?

कथन:

परिवहन कर्मियों की हड़ताल के कारण बस सेवाएं पूरी तरह ठप हो गईं, जिसकी वजह से लोग अपने कार्यस्थलों पर नहीं पहुंच सके।

धारणा:

- I. नागरिकों को मेट्रो रेल सेवाओं का अधिक उपयोग करना चाहिए।
- II. बहुत से लोग अपने कार्यस्थल पर जाने के लिए बस सेवाओं पर निर्भर हैं।

A. केवल धारणा I निहित है

B. केवल धारणा II निहित है

C. न तो धारणा I और न ही II निहित है

D. धारणा I और II, दोनों निहित हैं



Q53 General Intelligence and Reasoning

Which of the following years was a leap year?

- A. 2002
- B. 2006
- C. 2012
- D. 2018



Q54 General Intelligence and Reasoning

All 65 students of a class are standing in a row facing the north. Amrit is 46th from the extreme left end of the row, whereas Kashvi is 14th from the extreme right end. How many students are standing between Amrit and Kashvi?

- A. 4
- B. 5
- C. 6
- D. 7



Q55 General Intelligence and Reasoning

Sujata is standing in a park facing the east direction. She then turns 135° anticlockwise. After that, she turns 90° anticlockwise. Then, she turns 45° clockwise. In which direction is she facing now?

- A. East
- B. North-west
- C. West
- D. South-west



General Science

25 Questions • Answer Key

Q56 General Science

What is the basic event in reproduction?

- A. Replication of DNA
- B. Replication of RNA
- C. Making of proteins
- D. Cell division



Q57 General Science

Which of the following is/are NOT true for ionic compounds?

- i. Ionic compounds have low melting and boiling points.
- ii. Ionic compounds are brittle and break into pieces when pressure is applied.
- iii. Ionic compounds are solids and are somewhat hard because of the strong force of attraction between the positive and negative ions.
- iv. Ionic compounds conduct electricity in the molten state.

A. Only i



B. i and ii

C. i and iii

D. i and iv

Q58 General Science

If a substance loses hydrogen during a reaction, it is said to be:

A. reduced

B. oxidised



C. decomposed

D. neutralised

Q59 General Science

A light ray is travelling from air medium to water medium (refractive index = 1.3) such that angle of incidence is x degree and angle of refraction is y degree. The value of ratio $(\sin y)/(\sin x)$ is:

A. $1/1.3$



B. 1.3

C. 1

D. 0.3



Q60 General Science

Identify the correct statement(s) from among the following.

- (a) Resistivity of a material is dependent on the nature of the material.
- (b) Resistivity of a material is independent of the area of cross section.
- (c) Resistivity of a pure metal is more than its alloy.

A. Only (a)

B. Only (b)

C. Both (a) and (b)



D. Both (b) and (c)

Q61 General Science

The laws of reflection hold true for which of the following mirror(s)?

- (A) Concave mirror
- (B) Convex mirror
- (C) Plane mirror

A. Only A and B

B. Only B and C

C. Only A and C

D. A, B and C



Q62 General Science

A ray of light is incident on an interface separating two media at an angle of incidence equal to 45° , for which the angle of refraction is 30° . The refractive index of the second medium with respect to first, is equal to:

A. $\sqrt{2}$



B. $\frac{1}{\sqrt{2}}$

C. $\frac{1}{2}$

D. $\frac{\sqrt{3}}{2}$

Q63 General Science

The manufacturing of refrigerators that do not release chlorofluorocarbons has been made mandatory throughout the world. How will this help to prevent ozone depletion?

A. It will help convert oxygen molecules into ozone.

B. CFCs will change into ozone molecules.

C. It will reduce the production of CFCs from oxygen molecules.

D. It will reduce the release of CFCs that react with ozone molecules.



Q64 General Science

Pyruvate is formed from glucose in the _____ of a cell.

A. cytoplasm



B. nucleus

C. ribosome

D. mitochondria

Q65 General Science

The magnetic field lines inside a bar magnet are directed from:

A. north pole to south pole

B. south pole to north pole



C. centre to north pole

D. centre to south pole



Q66 General Science

What aids in preventing the mixing of oxygen-rich and carbon dioxide-rich blood in the heart?

- A. Tricuspid valve
- B. Pulmonary valve
- C. Aortic valve
- D. The wall between the chambers



Q67 General Science

Fleming's right-hand rule can be used to determine the direction of induced current when the angle between the magnetic field and the motion of the conductor is:

- A. 0°
- B. 30°
- C. 90°
- D. 180°



Q68 General Science HINDI - no English version saved

भारत के किस राज्य में पेयजल के भंडारण के लिए 'खड़ीन (Khadins)' बनाए जाते हैं?

- A. पश्चिम बंगाल
- B. गुजरात
- C. राजस्थान
- D. कर्नाटक



Q69 General Science

Which of the following is the INCORRECT feature related to animal reproduction?

- A. Regeneration is not the same as reproduction
- B. In Amoeba, splitting of two cells takes place in any plane
- C. Seminal vesicle is a gland present in human males
- D. Fertilisation of egg takes place in the uterus in human female



Q70 General Science

Which of the following compounds possesses the highest boiling point?

- A. Methane
- B. Acetic acid
- C. Chloroform
- D. Ethanol



Q71 General Science

5 ml of a solution of NaOH is found to be completely neutralised by 5 ml of a given solution of HCl. If we take 10 ml of the same solution of NaOH, the amount of HCl solution required to neutralise it will be:

- A. 15 ml
- B. 2.5 ml
- C. 5 ml
- D. 10 ml



Q72 General Science

A current of 5 A flows through a conductor having resistance $2\ \Omega$. The potential difference (in volt) across the ends of the conductor is:

- A. 2.5
- B. 3
- C. 7
- D. 10



Q73 General Science

What will be the next homologous series member of compound C_6H_{10} ?

- A. C_7H_{10}
- B. C_7H_{12}
- C. C_7H_{14}
- D. C_7H_{16}



Q74 General Science

Which of the following organisms have spiracles?

- A. Earthworm
- B. Human
- C. Fish
- D. Cockroach

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q75 General Science

Identify the INCORRECT order for the number of valence shell electrons.

- A. $\text{Al} < \text{P} < \text{Si} < \text{S} < \text{Cl}$ ✓
- B. $\text{Li} < \text{Be} < \text{B} < \text{C} < \text{N}$
- C. $\text{Na} < \text{Mg} < \text{Al} < \text{P} < \text{Ar}$
- D. $\text{B} < \text{N} < \text{O} < \text{F} < \text{Ne}$

Q76 General Science

From total _____ elements, _____ elements were discovered through laboratory processes.

- A. 114, 22
- B. 118, 24 ✓
- C. 114, 20
- D. 118, 26

Q77 General Science

_____ is the chemical name of washing soda.

- A. Sodium carbonate trihydrate
- B. Sodium carbonate pentahydrate
- C. Sodium carbonate tetrahydrate
- D. Sodium carbonate decahydrate ✓



Q78 General Science

Identify the correct relation between radius of curvature 'R', object distance 'u' and image distance 'v' for a spherical mirror.

A. $R = \frac{2uv}{u + v}$



B. $R = \frac{uv}{2(u + v)}$

C. $R = \frac{2(u + v)}{uv}$

D. $R = \frac{(u + v)}{2uv}$

Q79 General Science

Two resistors R_1 and R_2 with resistances $2\ \Omega$ and $3\ \Omega$, respectively, are connected in series to a 15V battery source. The current across R_2 (in A) is:

A. 3



B. 7.5

C. 5

D. 15

Q80 General Science

Cork is impermeable to water and gases because of _____ found within its cells.

A. suberin



B. cellulose

C. cutin

D. lignin



Q81 General Awareness and Current Affairs

Which ministry has launched the world's first multicentre phase III clinical trial to assess Ayurveda's efficacy in Rheumatoid Arthritis treatment?

- A. Ministry of Health and Family Welfare
- B. Ministry of Ayush ☒
- C. Ministry of Chemicals and Fertilizers
- D. Ministry of Science and Technology

Q82 General Awareness and Current Affairs

Who became the youngest ever Indian to win a BWF Super 100 tournament, in 2022?

- A. Ashmita Chaliha
- B. Malvika Bansod
- C. Unnati Hooda ☒
- D. Mugdha Agrey

Q83 General Awareness and Current Affairs

What is the name of the holy book of Muslims, which describes the relationship between an omnipotent and omniscient God and his creations?

- A. Injil
- B. Sahih al-Bukhari
- C. Torah
- D. Quran ☒



Q84 General Awareness and Current Affairs

The Nubra, Shyok and Hunza are tributaries of the river _____.

- A. Ganga
- B. Indus
- C. Brahmaputra
- D. Sutlej



Q85 General Awareness and Current Affairs

In which year did the Indian government conduct its first nuclear test in the deserts of Pokhran?

- A. 1968
- B. 1981
- C. 1962
- D. 1974



Q86 General Awareness and Current Affairs HINDI - no English version saved

बोरदोईसिला (Bordoisila) तूफान, इनमें से किस भारतीय राज्य में उठता है?

- A. केरल
- B. महाराष्ट्र
- C. असम
- D. मध्य प्रदेश



Q87 General Awareness and Current Affairs

The First Finance Commission was constituted vide Presidential Order dated 22.11.1951 under the chairmanship of _____.

- A. Vijay Kelkar
- B. YV Reddy
- C. KC Neogy
- D. C Rangarajan



Q88 General Awareness and Current Affairs

In January 2022, which of these IITs launched the Global Center of Excellence in Affordable and Clean Energy (GCoE-ACE)?

- A. IIT Roorkee
- B. IISc Bengaluru
- C. IIT Dharwad
- D. IIT Hyderabad



Q89 General Awareness and Current Affairs

Which cultural festival of India is a ten-day festival of classical dance, folk art and light music, and is held every year between February and March at Shilpgram?

- A. Nishagandhi Festival
- B. Natyanjali Utsav
- C. Taj Mahotsav
- D. Hampi Dance Utsav



Q90 General Awareness and Current Affairs

In December 2021, who among the following won the Woman of the Year Award by World Athletics for grooming talent and encouraging young girls in India to take up sports and fight for gender equality?

- A. PT Usha
- B. Anju Bobby George
- C. PU Chitra
- D. Shiny Kurisingal Wilson

Q91 General Awareness and Current Affairs

The policy norms for Mission Vatsalya scheme implemented by the Ministry of Women and Child Development have been applicable from the 1st of which month in 2022:

- A. January
- B. March
- C. April
- D. August

Q92 General Awareness and Current Affairs

The 'Archaeological Survey of India' is headquartered in which of the following cities?

- A. Kolkata
- B. New Delhi
- C. Mumbai
- D. Chandigarh

Q93 General Awareness and Current Affairs

How many tiers of administration are there in the Panchayati Raj Institutions (in states having a population more than 2 million)?

- A. 1
- B. 3
- C. 5
- D. 6



Q94 General Awareness and Current Affairs

Which of the following in Indian Constitution has been taken from the Constitution of the United States?

- A. Parliamentary Government
- B. Procedure Established by Law
- C. Fundamental Duties
- D. Fundamental Rights



Q95 General Awareness and Current Affairs

How many Prime Ministers of India have been elected upto June 2022, who were also Chief Ministers of their respective states?

- A. 9
- B. 8
- C. 6
- D. 10



Q96 General Awareness and Current Affairs

The Central Government of India has reduced Agricultural Infrastructure Development Cess (AIDC) on Crude Palm Oil (CPO) from 7.5% to _____ with effect from 12th February 2022.

- A. 6%
- B. 5%
- C. 4%
- D. 3%



Q97 General Awareness and Current Affairs

As of July 2022, under the 'Nai Manzil' Scheme of the Ministry of Minority Affairs, the participant will get non-residential integrated education and skill training programme for 9 to 12 months of which a minimum _____ months should be devoted to skill training.

- A. two
- B. three
- C. four
- D. five



Q98 General Awareness and Current Affairs

In which year was the first Economic Survey presented as part of the Union Budget?

- A. 1947-48
- B. 1950-51
- C. 1953-54
- D. 1960-61



Q99 General Awareness and Current Affairs

On which river is India's smallest river island Umananda situated?

- A. Yamuna River
- B. Ganga River
- C. Saraswati River
- D. Brahmaputra River



Which of the following is NOT true about the demand curve?

- A. It reflects the law of demand.
- B. It is the plots of quantities demanded at various price.
- c. It is negatively sloped.
- D. It is the plots of quantities demanded at various time. ☒



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Ten years ago, a son was $\frac{1}{8}$ th of his father's age. Now, he is $\frac{9}{37}$ th of his father's present age. Find the present age of the father.

- A. 87 years
- B. 67 years
- C. 74 years
- D. 57 years



Q2 Mathematics

If p, q, r and s, the measures of the four angles of a quadrilateral, are in the ratio 3 : 5 : 4 : 6, then the value of 3p + 2r is:

- A. 340°
- B. 360°
- C. 330°
- D. 310°



Q3 Mathematics

A pair of parallel lines is intersected by a transversal such that $\angle 1$ and $\angle 2$ form a pair of interior angles on the same side of the transversal. If $m\angle 1 = 35^\circ$, what is the measure of $\angle 2$?

- A. 145°
- B. 55°
- C. 35°
- D. 65°



Q4 Mathematics

If the mean of a data is 65 and its mode is 23 then the median using empirical formula is:

- A. 52
- B. 51
- C. 53
- D. 54



Q5 Mathematics

A tradesman marked his goods at 26% above its cost price and then allowed a discount of 13%. His gain (in %) is:

A. 9.62



B. 9.26

C. 6.92

D. 6.29

Q6 Mathematics

Simplify:

$$a^2 + 9b^2 + c^2 - 6ab + 6bc - 2ac =$$

A. $(a - 3b + c)^2$

B. $(a + 3b + c)^2$

C. $(a - 3b - c)^2$



D. $(a - 3b - 2c)^2$

Q7 Mathematics

Mohan gets 12% increase in his sale amount in the first year and 15% increase in the second year, with that his present sale is ₹1,28,800, what was his sale two years ago?

A. ₹1,00,000



B. ₹1,50,000

C. ₹1,75,000

D. ₹1,25,000

Q8 Mathematics

A shopkeeper allows successive discount of 20% and 15% on an item of marked price ₹2,000. At what price did he sell the item?

A. ₹1,300

B. ₹1,200

C. ₹1,240

D. ₹1,360



Q9 Mathematics

The value of $1 + 3 + 5 + 7 + \dots + 21 =$

- A. 108
- B. 211
- C. 121
- D. 144



Q10 Mathematics

The smallest whole number that must be multiplied to 1083 to make it a perfect square, is:

- A. 4
- B. 3
- C. 2
- D. 11



Q11 Mathematics

One year ago, Krishna was four times as old as his daughter Kavitha. Six years hence, Krishna's age will be 12 years more than his daughter's age. Find the ratio of the present ages of Krishna and his daughter.

- A. 9:2
- B. 11:3
- C. 12:5
- D. 17:5



Q12 Mathematics

What is the least 5-digit number, which when divided by 15, 24, 35 and 42, the remainder in each case is 13?

- A. 10067
- B. 10093
- C. 10073
- D. 10106



Q13 Mathematics

Two banks, A and B, offered loans at 4.5% and 5.5% per annum, respectively. Ramesh borrowed an amount of ₹2,00,000 from each bank. Find the positive difference in the amounts of simple interest paid to the two banks by Ramesh after 2 years.

A. ₹ 8,000

B. ₹ 6,000

C. ₹ 2,000

D. ₹ 4,000 ✓

Q14 Mathematics

If $x : y = 7 : 3$, then $(x^2 + y^2) : (x^2 - y^2) = ?$

A. 5 : 2

B. 29 : 20 ✓

C. 5 : 1

D. 25 : 4

Q15 Mathematics

If A is an acute angle of triangle ABC, the $\frac{\cos A - \sin A + 1}{\cos A + \sin A - 1}$ is equal to:

A. $\cot A + \operatorname{cosec} A$ ✓B. $\cos A + \operatorname{cosec} A$ C. $\cot A + \sec A$ D. $\tan A + \cos A$ **Q16** Mathematics

A cube made of edge 18 m is completely filled with milk. The milk is transferred into a cuboid of length 27 m and height 7 m. The width of the cuboid is

A. 72.5 m

B. 54.6 m

C. 12.7 m

D. 30.8 m ✓



Q17 Mathematics

Two trains of same length are running on parallel tracks in the same direction at speeds of 56 m/s and 46 m/s. The faster train crosses the slower train in 26 sec. The length of each train is:

A. 100 m

B. 120 m

C. 140 m

D. 130 m ☒**Q18** Mathematics

Find the surface area of a sphere whose radius is 7 cm. [Use $\pi = \frac{22}{7}$]

A. 166 cm^2 B. 661 cm^2 C. 666 cm^2 D. 616 cm^2 ☒**Q19** Mathematics

The value of $\frac{2}{3} + \frac{1}{1+\frac{4}{5}} - \frac{5}{6}$ is:

A. $\frac{13}{18}$ B. $\frac{7}{18}$ ☒C. $\frac{11}{18}$ D. $\frac{5}{18}$ **Q20** Mathematics

Five-fourths of a number is greater than three-fourths of the number by 6. Find the number.

A. 8

B. 10

C. 12 ☒

D. 14



Q21 Mathematics

Pipe A is 3 times faster than pipe B. Both pipes together fill a tank in 36 min. How much time will pipe A alone take to fill the tank?

- A. 80 min
- B. 100 min
- C. 48 min
- D. 156 min

**Q22** Mathematics

The sum of two positive integers is 55. If their HCF and LCM are 5 and 120, respectively, then the sum of their reciprocals is _____.

- A. $\frac{12}{13}$
- B. $\frac{120}{13}$
- C. $\frac{11}{120}$
- D. $\frac{14}{6}$

**Q23** Mathematics

If one root of a quadratic equation, α , is half of the other root of the same equation, then find the quadratic equation.

- A. $x^2 - 3\alpha x + 2\alpha^2 = 0$
- B. $x^2 + 3\alpha x + 2\alpha^2 = 0$
- C. $x^2 - 3\alpha x - 2\alpha^2 = 0$
- D. $x^2 + 3\alpha x - 2\alpha^2 = 0$

**Q24** Mathematics

Find the roots of $\sqrt{3}m^2 + 10m + 7\sqrt{3} = 0$.

- A. $-\frac{7}{\sqrt{3}}$ and $-\sqrt{3}$
- B. $-\frac{7}{\sqrt{3}}$ and $\sqrt{3}$
- C. $\frac{7}{\sqrt{3}}$ and $-\sqrt{3}$
- D. $-\frac{7}{\sqrt{3}}$ and $-2\sqrt{3}$



Q25 Mathematics

The frequency distribution here gives the monthly consumption of electricity of 60 consumers of a locality. What is the median of the data?

Monthly consumption (in units)	Number of consumers
50 – 60	6
60 – 70	8
70 – 80	15
80 – 90	20
90 – 100	11

A. 80.5



B. 81.2

C. 82.4

D. 83.1

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

The table given below shows the number of students (girls and boys), in thousand numbers, who got admissions on merit basis in a certain well-recognised university 'XYZ' from four different places – J, K, L and M – over the years. Study the table and answer the question.

Places Years	J		K		L		M	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2016	12.5	10	14	7.5	7	10	6	9
2017	10	9	13	7	8.5	11	8	7
2018	11	9	10	8.5	8	6	5	4
2019	9.5	7	11	9	9	8	10	11
2020	10.5	6	12	10.5	10.5	9.5	14	12
2021	12	8	10	9.5	11	10	15	18

The total number of boys who got admission from places J and M in 2017 was exactly equal to the total number of girls who got admission from place M in which of the following years?

A. 2017

B. 2019

C. 2020

D. 2021



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Q27 General Intelligence and Reasoning

Five girls, Beena, Elisa, Hema, Ketaki and Zoya, are sitting around a circular table facing the centre of the table. Beena is sitting to the immediate left of Ketaki. Hema is sitting to the immediate right of Zoya. Only Ketaki is sitting between Beena and Elisa. Who is sitting to the immediate right of Elisa?

A. Ketaki

B. Hema

C. Zoya



D. Beena

Q28 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing the north. Rahul is at the 8th place from the left end of the row. Only 11 persons are sitting between Rahul and Samar. Samar is at some place towards the right of Rahul. Mohit is to the immediate left of Zeeshan, who is sitting at the extreme right end. Samar is at the 9th place from the extreme right end. If no other person is sitting in the row, what is the total number of persons seated?

A. 26

B. 27

C. 28



D. 29

Q29 General Intelligence and Reasoning

This question is based on the following three-letter words:

(Left) NAT PAL COT TAN (Right)

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel?

A. One



B. Two

C. Three

D. Four



Q30 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$$6 : 150 :: 4 : 36 :: 5 : ?$$

A. 78

B. 80



C. 82

D. 84

Q31 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

43, 80, 117, 154, ?

A. 196

B. 190

C. 193

D. 191



Q32 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

F _ L N _ S V _ Z C _

A. IPXF



B. IQXF

C. IPYF

D. IPXE

Q33 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$12.998 + 20.009 \div 4.998 - 2.999 \times 2.998 = ?$$

A. 8



B. 12

C. 16

D. 19



Q34 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'ANOTHER' is arranged in alphabetical order?

A. None

B. 1

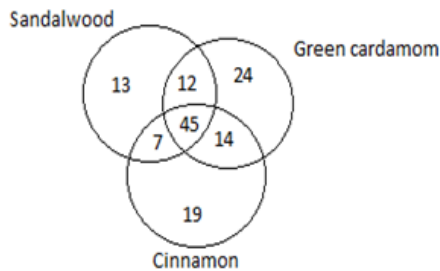


C. 2

D. 3

Q35 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of recipes in a cook book using the given ingredients.



How many recipes use exactly any two of the given ingredients?

A. 33



B. 12

C. 14

D. 7

Q36 General Intelligence and Reasoning

Parvati starts walking from point A and covers 35 m towards the south. From there, she takes a left turn and walks 60 m. Then, she takes a left turn and walks 15 m. After that, she takes a left turn and walks 90 m. Finally, she takes a right turn and walks 20 m to reach point D. How far and in which direction is point D from point A ? (All turns are 90 degree turns only)

A. 30 m, West



B. 30 m, East

C. 20 m, West

D. 20 m, South



Q37 General Intelligence and Reasoning

A statement is given followed by two possible conclusions I and II. Read all the information given in the statement carefully and decide which of the given conclusions can be concluded from the given information.

Statement:

An online teaching platform has reported to earn almost double through subscriptions ever since they started LIVE problem-solving classes on the platform.

Conclusions:

I. No other online teaching platform offers LIVE problem-solving classes.

II. Students who opt for LIVE problem-solving sessions on the said platform have to pay double the fees as compared to those who opt for regular classes.

- A. Only I can be concluded
- B. Only II can be concluded
- C. Both I and II can be concluded
- D. Neither I nor II can be concluded



Q38 General Intelligence and Reasoning

Each of A, B, C, D, E, F and G has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. C has the exam on Tuesday. Only one person has the exam between A and G, A has exam before G. D has the exam on the day immediately before A, but not on Thursday. F's exam is on one of the days before E but after B. E has exam on Sunday. Who among the following has the exam on Monday?

- A. E
- B. D
- C. B
- D. F



Q39 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	6	5	4	3	%	#	8
Codes	R	G	U	W	K	P	B

Conditions:

- (i) If the first element is an odd number and the last element is an even number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the second element is a symbol and the fifth element is an even number, the codes for these two (the second and the fifth elements) are to be interchanged.
- (iii) If the third element is a number and the fourth element is a symbol, both these elements (the third and the fourth elements) are to be coded as Y.

Question: 6 # % 3 8 5 # 4

A. RBKWPGPU



B. RPKWBGPU

C. RBYYPGPU

D. BUKWGPGR

Q40 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All wires are switches.

No switch is a pipe.

All bulbs are pipes.

Conclusions:

I. No wire is a pipe.

II. No bulb is a switch.

A. Only conclusion I follows

B. Only conclusion II follows

C. Both conclusions I and II follow



D. Neither conclusion I nor II follows



Q41 General Intelligence and Reasoning

If 1 is added to each odd digit and 1 is subtracted from each even digit in the number given below, what will be the difference in the digits that are third from the left and third from the right in the new number thus formed?

(Left) 86547231 (Right)

A. 3

B. 4

C. 5



D. 6

Q42 General Intelligence and Reasoning

The following table shows the number of two-wheelers sold by five automobile companies named K, L, M, N and O in three different years from 2019, 2020, 2021. Study the table and answer the question.

Companies	2019	2020	2021
K	210	240	320
L	655	345	225
M	235	340	765
N	265	325	650
O	650	345	555

What is the percentage share of sale of company M done in the year 2019 in the total sale of Company M in all three years taken together?

A. 15.3%

B. 16.4%

C. 17.5%



D. 19.8%



Q43 General Intelligence and Reasoning

Based on the given statement, two conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $T \geq C$, $B < D$, $C > B$

Conclusions:

1. $D = C$

2. $T > B$

A. Only conclusion 1 is true

B. Only conclusion 2 is true

C. Both conclusions 1 and 2 are true

D. Neither conclusion 1 nor 2 is true

Q44 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	8	3	!	&	4	#	6	@	\$	7
Code	Q	W	E	R	T	Y	U	L	P	K

Conditions:

- (i) If the second element is a symbol and the last is also a symbol, then these two symbols do not require coding.
- (ii) If the first element is an even number and the last is a symbol, the codes of the first and last elements are to be interchanged.
- (iii) If the question has more than two odd numbers, then all even numbers do not require coding.
- (iv) if none of the conditions apply, use the codes directly

Question: 7 # \$ 4 6 @ 4 ! 8 3

A. KYPYULTEQW

B. KYPTULTEQW

C. WYP4UL4EQK

D. KYP46L4E8W

Q45 General Intelligence and Reasoning

If the time in the mirror image of a 12-hour clock is 3:55, what is the actual time?

A. 8:25

B. 7:05

C. 7:25

D. 8:05



Q46 General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $J > H = N \geq B \leq C < E$

A. $H < B$

B. $B < J$



C. $N > C$

D. $N > E$

Q47 General Intelligence and Reasoning

If 1 is added to each even digit and 1 is subtracted from each odd digit in the number 457943246, what will be the sum of the digits that are fourth from the left and fourth from the right?

A. 8

B. 10



C. 12

D. 16

Q48 General Intelligence and Reasoning

How many such pairs of letters are there in the word 'ROASTERS' (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. One

B. Two

C. Three



D. Four



Q49 General Intelligence and Reasoning

Three statements are given followed by three conclusions I,II and III. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Choose which of the given conclusions logically follow/s from the given statements.

Statements:

1. All sugars are jaggery.
2. No jaggery is sweetener.
3. All sweeteners are fruits.

Conclusions:

- I. No sugar is sweetener.
- II. Some jaggeries are sweeteners.
- III. Some jaggeries are sugars.

A. Only conclusions I and II follow.

B. Only conclusions II and III follow.

C. All conclusions follow.

D. Only conclusion I and III follow.



Q50 General Intelligence and Reasoning

J, K, L, M, N, O and P are seven comedians sitting in a straight row facing north. O and L are immediate neighbours. Only two people sit to the left of K. L is to the immediate right of N. P is an immediate neighbour of both K and N. If J is at the extreme left end of the row, who sits at the extreme right end?

A. N

B. P

C. O



D. M

Q51 General Intelligence and Reasoning

Seven boxes, A, B, C, D, E, F and G, are kept one over the other but not necessarily in the same order. Exactly two boxes are kept between C and D with C placed above D. F is immediately below A. G is immediately above B. B is the third box from the top. Exactly two boxes are kept between D and E with D placed above E. Only one box is kept between E and A. Which box is kept just above E?

A. D

B. F



C. G

D. C



Q52 General Intelligence and Reasoning

Six poles, A, B, C, D, E and F, are located in the same colony. B is 20 m to the west of C. F is 60 m to the south of E. C is 30 m to the north of E. A is 60 m to the west of B. D is 30 m to the south of B. In which direction is A with reference to C?

A. East

B. West



C. North

D. South

Q53 General Intelligence and Reasoning

Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

PY – RW – TU

EN – GL – IJ

A. DE – EF – FG

B. MT – OR – QP



C. XC – YB – ZA

D. UV – TU – ST

Q54 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 are not allowed.)

(12, 61, 7)

(15, 51, 6)

A. (12, 46, 4)

B. (14, 78, 8)



C. (16, 70, 9)

D. (20, 54, 5)



Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

11, 31, 55, 84, 119, ?

A. 131

B. 142

C. 157

D. 161



General Science

25 Questions • Answer Key

Q56 General Science

_____ make an isomeric pair.

A. Propane and butane

B. Butane and 2-methyl propane



C. Butane and 2-ethyl butane

D. Propane and 2-methyl propane

Q57 General Science

Which of the following is a use of plaster of Paris?

(i) Manufacture of glass, soap and paper

(ii) As a cleaning agent for domestic purposes

(iii) Making toys, materials for decoration and for making surfaces smooth

(iv) For baking

A. only i

B. only ii

C. only iii



D. Only iv



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Q58 General Science

Carbonisation is a term used to describe the process of transforming dead plants into _____ over a long period of time.

- A. diesel
- B. petrol
- C. coal
- D. fossil



Q59 General Science

Select the element with the highest valency from among the following.

- A. Li
- B. Al
- C. Ca
- D. N



Q60 General Science

Which of the following formulae does NOT represent the heat produced in a conductor due to flow of electric current?

- A. $H = I^2 R t$
- B. $H = I R^2 t$
- C. $H = \frac{V^2}{R} t$
- D. $H = V I t$



Q61 General Science

_____ reduce (s) the size of large fat globules, allowing enzymes to work more effectively.

- A. Succus entericus
- B. Pancreatic juice
- C. Hydrochloric acid
- D. Bile salts



Q62 General Science

Match the following:

Formula	Name
i. CH_3COOH	a. Methane
ii. CHCl_3	b. Ethanol
iii. $\text{CH}_3\text{CH}_2\text{OH}$	c. Acetic acid
iv. CH_4	d. Chloroform

- A. i-c, ii-d, iii-a, iv-b
- B. i-a, ii-c, iii-b, iv-d
- C. i-a, ii-b, iii-c, iv-d
- D. i-c, ii-d, iii-b, iv-a ✓

Q63 General Science

We should refrain from using plastics because _____.

- A. plastics are easily degraded by insects
- B. enzymes are unable to break down plastics ✓
- C. plastics are not long-lasting
- D. plastics are water soluble

Q64 General Science

Which of the following is NOT TRUE about vegetative propagation in plants?

- A. Plants are grown from root, stem and leaves.
- B. Plants that have lost the capacity to produce seeds can be grown.
- C. Plants produced are genetically different from the parent plant. ✓
- D. Plants bear flowers and fruits earlier than those produced from seeds.



Q65 General Science

An object, 1.0 cm in height, is placed at a distance of 18.0 cm in front of a concave mirror of focal length 10.0 cm, on its principal axis. Its image has a height of _____ and is _____.

- A. more than 1.0 cm, erect
- B. more than 1.0 cm, inverted
- C. less than 1.0 cm, erect
- D. less than 1.0 cm, inverted

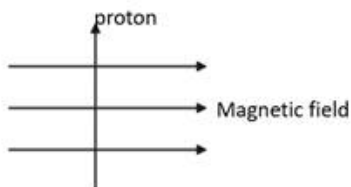
**Q66** General Science

The refractive indices of turpentine oil and glass are 1.47 and 1.52, respectively. A ray of light passes from turpentine oil to glass. The refractive index of glass with respect to turpentine oil is _____ and the ray bends _____ the normal in glass.

- A. 0.97, away from
- B. 0.97, towards
- C. 1.03, away from
- D. 1.03, towards

**Q67** General Science

A proton is projected into a magnetic field as shown in the figure, the direction of force experienced by it is :



- A. in the direction of motion of proton
- B. against the direction of motion of proton
- C. into the plane of paper
- D. outside the plane of paper



Q68 General Science

Which of the following stores starch, proteins and oil granules in a plant cell?

- A. Chloroplast
- B. Chromoplast
- C. Leucoplast
- D. Protoplast



Q69 General Science

The magnetic field strength inside a current carrying solenoid is:

- A. zero
- B. uniform and non-zero
- C. more at ends and less at centre
- D. less at ends and more at centre



Q70 General Science

Three resistors of $9\ \Omega$ each are connected in parallel. Their equivalent resistance is:

- A. $27\ \Omega$
- B. $18\ \Omega$
- C. $9\ \Omega$
- D. $3\ \Omega$



Q71 General Science

Which of the following is an example of 'Electrolytic Decomposition Reaction'?

- A. $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$
- B. $2\text{AgBr} \rightarrow 2\text{Ag} + \text{Br}_2$
- C. $\text{ZnCO}_3 \rightarrow \text{ZnO} + \text{CO}_2$
- D. $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$



Q72 General Science

Which of the following is NOT a change that marks the onset of puberty

- A. Sudden increase in height
- B. Growth of nails
- C. change in voice
- D. change in body shape



Q73 General Science

A concave mirror forms a real, inverted and diminished image of an object. Where is the object placed?

- A. Between focus and centre of curvature
- B. Between pole and focus
- C. Beyond centre of curvature
- D. At focus



Q74 General Science

Which of the following is/are weak acid(s)?

HCl, CH₃COOH, H₂SO₄, HNO₃, H₂CO₃, H₂SO₃

- A. HCl, CH₃COOH, H₂SO₄
- B. CH₃COOH, H₂CO₃
- C. H₂SO₄, HNO₃, H₂CO₃
- D. CH₃COOH, H₂SO₄, HNO₃, H₂CO₃



Q75 General Science

In plants, the cells of meristematic tissue undergo a process wherein they lose their ability to divide, take up a permanent shape and size and specialise to perform a specific function. What is this process known as?

- A. Differentiation
- B. Development
- C. Regeneration
- D. Proliferation



Q76 General Science

An object is placed on the principal axis of a concave lens of focal length 20 cm, at a distance of 10 cm. The magnification produced by the lens is _____ and the image is _____.

- A. more than 1, erect
- B. less than 1, erect
- C. more than 1, inverted
- D. less than 1, inverted



Q77 General Science

Which cell organelle detoxifies toxins and drugs?

- A. Mitochondria
- B. Golgi bodies
- C. Endoplasmic reticulum
- D. Ribosomes



Q78 General Science

Two bulbs A and B are rated 100 W and 25 W, respectively, at a given voltage. The ratio of resistance of bulb A to that of bulb B is:

- A. 1 : 4
- B. 4 : 1
- C. 1 : 2
- D. 2 : 1



Q79 General Science

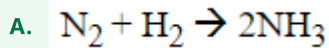
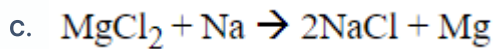
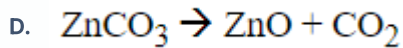
Which of the following groups represents zero valency?

- A. 12
- B. 16
- C. 14
- D. 18



Q80 General Science

Which of the following is an example of combination reaction?



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

What is the full form of NABARD?

A. National Bank for Agriculture and Rural Development



B. National Agriculture Bank Authority for Rural Development

C. National Bank for Rural Development

D. National Bank for Agriculture and Regional Development

Q82 General Awareness and Current Affairs

India and which country among the following agreed to line up a joint task force on a “proposal to construct a hydropower project” from investments of both countries in February 2022?

A. Nepal



B. Bhutan

C. Myanmar

D. Bangladesh

Q83 General Awareness and Current Affairs

As long as MP (marginal product) remains higher than the average product (AP), the average product _____.

A. continues to fall

B. remains constant

C. continues to rise



D. falls with diminishing rate



Q84 General Awareness and Current Affairs

Which Article of the Indian Constitution envisages the Election Commission of India (ECI), a constitutional body established by the Constitution of India, to conduct and regulate elections in the country?

A. Article 324



B. Article 148

C. Article 76

D. Article 350 B

Q85 General Awareness and Current Affairs

The portion of agricultural product that is sold by farmers in market is popularly known as _____.

A. minimum marketed product

B. permitted agriculture product

C. marketable agriculture product

D. marketed surplus



Q86 General Awareness and Current Affairs

Which type of forest is most commonly home to the Royal Bengal tiger?

A. Thorn Forests

B. Mountain Forests

C. Mangrove Forests



D. Deciduous Forests

Q87 General Awareness and Current Affairs

In which one of the following state will you experience 'Kaal Baisakhi'?

A. Punjab

B. Tamil Nadu

C. Gujarat

D. West Bengal



Q88 General Awareness and Current Affairs

The _____ city has been named as the host of the International Olympic Committee session in 2023?

A. Bengaluru

B. New Delhi

C. Mumbai



D. Pune

Q89 General Awareness and Current Affairs

On what date were the Consumer Protection (Direct Selling) Rules, 2021 introduced by the Government of India?

A. 28 December 2021



B. 26 December 2021

C. 25 December 2021

D. 24 December 2021

Q90 General Awareness and Current Affairs

The Digambara sect belongs to which of the following religions?

A. Buddhism

B. Jainism



C. Islam

D. Sikhism

Q91 General Awareness and Current Affairs

In July 2022, the Lok Sabha passed the Family Courts (Amendment) Bill, 2022, to overcome the issue of lack of jurisdiction of Family Courts in the States of Himachal Pradesh and _____.

A. Nagaland



B. Mizoram

C. Meghalaya

D. Sikkim



Q92 General Awareness and Current Affairs

In January 2022, who released 'Banking on electric vehicles in India' report in collaboration with Rocky Mountain Institute and RMI India?

- A. DRDO
- B. Ministry of Road Transport and Highways
- C. Ministry of Finance
- D. NITI Aayog



Q93 General Awareness and Current Affairs

_____ is an Indian regional political party in the state of Tamil Nadu and the union territory of Puducherry, established in 1972.

- A. AIADMK
- B. BJD
- C. DMDK
- D. INLD



Q94 General Awareness and Current Affairs

The doldrums are an area of _____ pressure around the equator, where prevailing winds are calm.

- A. low
- B. high
- C. Constant
- D. fluctuating



Q95 General Awareness and Current Affairs

Which Amendment in the Indian Constitution substituted the words 'sovereign democratic republic' with the words 'sovereign socialist secular democratic republic' and 'unity of the Nation' with the words 'unity and integrity of the Nation'?

A. 31st

B. 42nd



C. 53rd

D. 64th

Q96 General Awareness and Current Affairs

In which of the following states did NESTLE India Ltd. set up its first factory in 1961?

A. Kerala

B. Madhya Pradesh

C. Punjab



D. Haryana

Q97 General Awareness and Current Affairs

Which festival revives and preserves the rich culture of Nagaland, and showcases its extraordinary traditions?

A. Hornbill Festival



B. Losar Festival

C. Thrissur Pooram Festival

D. Thaipusam Festival



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Q98 General Awareness and Current Affairs

Which of the following is the first indigenous RT-PCR kit developed by 'CSIR – Central Drug Research Institute' for testing the omicron variant?

A. VinCom

B. Shanti

C. INDICoV-Om



D. Cowin

Q99 General Awareness and Current Affairs

Which Indian language is also recognised as an official language of Singapore and Sri Lanka?

A. Telugu

B. Kannada

C. Tamil



D. Bengali

Q100 General Awareness and Current Affairs

Who among the following became the first para-athlete of India to receive the Padma Bhushan in the year 2022?

A. Devendra Jhajharia



B. Harvinder Singh

C. Manoj Sarkar

D. Pramod Bhagat



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Which of the following is the quadratic equation whose roots are -2 and 4 ?

A. $2x^2 - 6x - 24 = 0$

B. $3x^2 - 5x - 24 = 0$

C. $3x^2 - 6x - 24 = 0$ ✓

D. $3x^2 - 6x - 20 = 0$

Q2 Mathematics

The ratio of the sum of all the interior angles to an exterior angle of a regular polygon is $24:1$. Find the number of sides of the polygon.

A. 80

B. 78

C. 10

D. 8 ✓

Q3 Mathematics

There are four prime numbers taken in ascending order. The product of the first three prime numbers is 1771 and the sum of the last two prime numbers is 82. What is the product of the last two prime numbers?

A. 1357 ✓

B. 1537

C. 1127

D. 1387

Q4 Mathematics

A train is moving in from north to south direction. It overtakes Raj and Madhur who are walking in the same direction at the rate of 2 km/h and 4 km/h in 9 sec and 10 sec , respectively. If the train is x metres long, find the value of x .

A. 90

B. 70

C. 50 ✓

D. 30



Q5 Mathematics

In how much time will a sum of money double itself at 10 per cent per annum rate of simple interest?

A. 10 years



B. 8 years

C. 12 years

D. 5 years

Q6 Mathematics

The value of $-48 \div [4 \times (6 - 5 + 1)] \div 24 =$

A. 12

B. -9

C. $-\frac{7}{4}$

D. $-\frac{1}{4}$



Q7 Mathematics

Simplify $\sqrt{729} - \sqrt{400}$.

A. 5

B. 6

C. 7



D. 8

Q8 Mathematics

The average age of Raj and his sister is 8 years. If Raj's age is 10 years, then find the age of his sister.

A. 8 years

B. 7 years

C. 6 years



D. 9 years



Q9 Mathematics

Find the fourth proportional of $4a + 7$, $11a + 3$ and $6a$, if $a = 2$.

A. 15

B. 20

C. 25

D. 30

Q10 Mathematics

Simplify:

$$(1.5a^2 - 2.5b^2)(1.5a^2 + 2.5b^2) + 6.25ab$$

A. $2.25a^4 - 6.25b^4 + 6.25ab$

B. $2.5a^4 - 6.25b^4 + 6.25ab$

C. $2.25a^4 - 6.5b^4 + 6.25ab$

D. $2.25a^4 - 6.25b^4$

Q11 Mathematics

If the selling price of an almirah is doubled, profit is tripled. Find the profit percentage.

A. 10%

B. 25%

C. 50%

D. 100%

Q12 Mathematics

An amount is divided between two friends in the ratio $2 : 5$. If the second part is ₹6 more than the first, then the initial amount is:

A. ₹12

B. ₹14

C. ₹13

D. ₹23



Q13 Mathematics

A 250-metre long train running at a speed of 100 km/h crosses another train coming from the opposite direction at a speed of 62 km/h in 10 seconds. What is the length of the second train?

A. 230 metres

B. 200 metres



C. 270 metres

D. 240 metres

Q14 Mathematics

The angles of a quadrilateral are in the ratio 2: 5: 7: 10. Find the difference between the greatest and the smallest angles of the quadrilateral.

A. 60°

B. 50°

C. 120°



D. 180°

Q15 Mathematics

If a and b are the roots of $x^2 - x - 12 = 0$, and $a > b$, then the quadratic equation in x whose roots are $(2a - 1)$ and $(2b + 1)$ is:

A. $x^2 - 2x + 35 = 0$

B. $x^2 - 2x - 35 = 0$



C. $x^2 - 4x - 45 = 0$

D. $x^2 - 4x + 45 = 0$

Q16 Mathematics

Simplify: $(1 + \tan^2 \theta)(1 - \sin \theta)(1 + \sin \theta)$.

A. -1

B. 0

C. 1



D. 2



Q17 Mathematics

Find the third proportional of 18 and 54.

A. 121

B. 144

C. 162



D. 172

Q18 Mathematics

In Munnar, a travel company has three 4-seater cars and two 8-seater maxi cabs. The rate of each passenger for a round trip in a car is ₹25 and for a round trip in a maxi cab is ₹20. The average occupancy of the seats is 100%. What is the average earning of each vehicle for one round trip?

A. ₹127

B. ₹126

C. ₹125

D. ₹124

**Q19** Mathematics

Find the double of the lower limit of the modal class in the given data.

CI	100-110	110-120	120-130	130-140	140-150
F	12	15	32	34	22

A. 280

B. 68

C. 260



D. 540

Q20 Mathematics

How many cylinders of radius 10 cm and height 20 cm can be filled with water from a cylinder of radius 20 cm and height 100 cm full of water?

A. 20



B. 30

C. 40

D. 60



Q21 Mathematics

The difference between two numbers is 42 and they are in the ratio 5 : 3. Find the smaller number.

A. 105

B. 36

C. 63



D. 21

Q22 Mathematics

If a man bought 6 pencils for ₹5, and sold them at 5 pencils for ₹6, then the gain percentage is _____

A. 44%



B. 43%

C. 42%

D. 41%

Q23 Mathematics

Convert $0.2\overline{36}$ into a vulgar fraction.

A. $\frac{17}{66}$

B. $\frac{13}{55}$



C. $\frac{9}{44}$

D. $\frac{7}{33}$

Q24 Mathematics

Which of the following pairs of numbers is co-prime?

A. (14, 21)

B. (17, 23)



C. (12, 24)

D. (15, 25)



Q25 Mathematics

The radius and height of a cylinder are in the ratio 2 : 1 Find its total surface area if curved surface area is 616 m^2 .

- A. 908 m^2
- B. 1512 m^2
- C. 1232 m^2
- D. 1848 m^2

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

FINE : GKQI :: MOST : NQVX :: SEAL : ?

- A. TPGD
- B. PGTD
- C. TGDP
- D. TGPD

**Q27** General Intelligence and Reasoning

In a class of 11 students, each scored differently. V's rank from the bottom is 6th, while D's rank from the top is 4th. T's rank from the top is exactly between the ranks of V and D. What is T's rank from the bottom?

- A. 5th
- B. 8th
- C. 7th
- D. 9th

**Q28** General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷' and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$24 + 16 \div 132 \times 11 - 3 = ?$$

- A. 40
- B. 42
- C. 44
- D. 46



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Q29 General Intelligence and Reasoning

Refer to the following letter and number series and answer the question.

(Left) G C 6 8 T 7 D 4 6 K 2 R Y 3 5 E S A 4 T Y 7 8 G T (Right)

If all the numbers are dropped from the series, how many letters are there in the English alphabetical order between the letter that is fourth from the right end and the letter that is sixth from the left end of the given series?

A. None

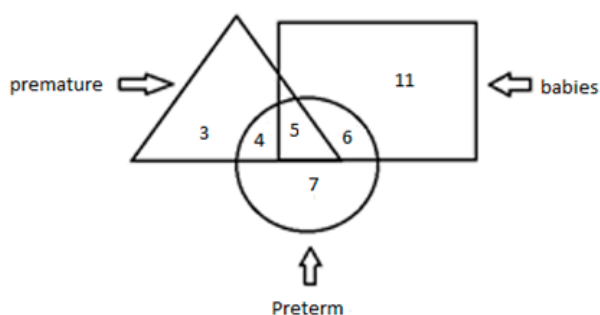
B. One

C. Two

D. Three

Q30 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such babies are there who are NEITHER premature NOR preterm?

A. 4

B. 5

C. 6

D. 11



Q31 General Intelligence and Reasoning

A decision is given followed by two statements I and II. Read all the information carefully and select the correct option.

Decision:

In order to promote tourism, Country W is declaring 20 of its cities as Heritage Sites.

Statements:

I. 4 of the 20 cities are located in hilly areas and have limited access to transport.

II. In the past whenever a city in Country W has been promoted for tourism, it has led to increased employment opportunities in that city.

- A. Both statements I and II strengthen the decision
- B. Statement I weakens the decision and statement II strengthens the decision ☒
- C. Both statements I and II weaken the decision
- D. Statement I is a neutral statement and statement II strengthens the decision

Q32 General Intelligence and Reasoning

How many such pairs of letters are there in the word 'DEVELOP' (in both forward and backward directions) each of which have as many letters between them in the word as there are in the English alphabetical order?

- A. 1
- B. 2 ☒
- C. 3
- D. 4

Q33 General Intelligence and Reasoning

How many such pairs of letters are there in the word 'ABILITY' (in both forward and backward directions) each of which have as many letters between them in the word as there are in the English alphabetical order?

- A. 1 ☒
- B. 2
- C. 3
- D. 4



Q34 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.

P _ T P _ S _ C T _ R S P C _ P R _ P _ T _ R S

A. C S P C R P T P

B. C R P P T S C P

C. C C P P P R S T

D. C R P C S P P T

Q35 General Intelligence and Reasoning

Five persons, A, B, C, D and E, are sitting in a straight line. All are facing the north direction. D sits to the immediate left of A. Only two persons are sitting between D and B. C sits second from the extreme right end of the line. Only two persons are sitting between C and E. Who is sitting to the immediate right of E?

A. A

B. B

C. C

D. D

Q36 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

23, 31, 95, 311, ?

A. 832

B. 823

C. 818

D. 876

Q37 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

8, 17, 33, 63, 114, 193, ?

A. 370

B. 377

C. 307

D. 347



Q38 General Intelligence and Reasoning

The following table shows the break-up of the costs (in ₹) incurred by a company in the production of five products, A to E. Study the table and answer the question.

Product	A	B	C	D	E
Raw material	400	200	700	300	400
Manufacturing	80	40	150	80	100
Advertisement	180	70	200	170	200
Labour	200	180	400	140	250
Miscellaneous	40	10	50	10	50
Total cost	900	500	1500	700	1000

Which of the following products has the maximum manufacturing cost in comparison to its total cost of production?

A. A

B. B

C. C

D. D

**Q39** General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$Q = R > S \leq T < U > V = Z$$

Conclusions:

1. $U > S$

2. $Q < T$

3. $S < V$

4. $Z > U$

A. 1



B. 2

C. 3

D. 4



Q40 General Intelligence and Reasoning

Sujlam started from a point facing towards the west, turned left and walked for 10 m, then turned right and walked for 12 m, then turned left and walked for 11 m, and then turned left again at point P and walked for 17 m. Prior to turning left at point P, he was facing in which direction?

(All turns are 90 degree turns only)

- A. East
- B. West
- C. North
- D. South



Q41 General Intelligence and Reasoning

In a certain code language, MUTINY is written as 25149202113 and MAGIC is written as 397113. How will NECTAR be written in the same language?

- A. 191253014
- B. 182203614
- C. 182103513
- D. 181203514



Q42 General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is NOT true based on the statement.

Statement: $B > F \geq P > L = K \leq W < M$

- A. $L < M$
- B. $F > K$
- C. $P = K$
- D. $B > L$



Q43 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$12 - 104 \times 8 + 5 \div 4 = ?$$

- A. 5
- B. 7
- C. 9
- D. 11



Q44 General Intelligence and Reasoning

In this question, a group of letters is coded using numbers as per the table given below and the conditions which follow.
The correct combination of codes following the conditions is your answer.

Letter/ Symbol	I	L	M	H	Y	O	C	E	R
Code	4	5	9	1	2	3	6	7	8

Conditions:

- (i) If the first element is a vowel and the last, a consonant, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is a consonant and the last, an vowel, the first and last elements are to be coded as 0.
- (iii) If both the second and the fifth elements are vowels, the fifth element is to be coded as the code for the second element and vice-versa.

Question: EICHER

A. 876417

B. 814767

C. 876147



D. 877416

Q45 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(5, 21, 2)

(7, 33, 4)

A. (8, 51, 9)



B. (11, 24, 3)

C. (6, 40, 8)

D. (10, 93, 3)

Q46 General Intelligence and Reasoning

Five students - 1, 2, 3, 4 and 5 - are sitting around a circular table facing the centre. 4 is sitting to the immediate right of 1 and immediate left of 2. 5 is sitting second to the left of 1. Which of the following statements is true?

A. 5 is sitting third to the right of 3.

B. 1 is the immediate neighbour of 5.

C. 3 is sitting between 5 and 1.



D. 2 is sitting between 4 and 1.



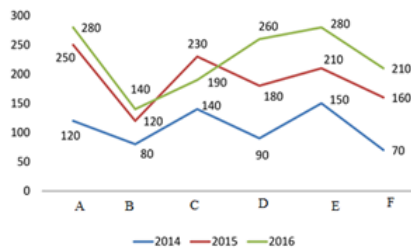
Q47 General Intelligence and Reasoning

Pole E is to the north of pole U and east of pole R. Pole N is to the west of pole U and east of pole I. Pole J is to the south of pole I. What is the position of pole R with respect to pole U?

- A. North
- B. South
- C. South-west
- D. North-west

**Q48** General Intelligence and Reasoning

The following line graph shows the number of admissions of students (in thousands) in six different districts, A, B, C, D, E and F, in three consecutive years, 2014, 2015 and 2016. Study the graph and answer the question.



What is the difference between the total number of admissions in district B for the given three years and the total number of admissions in district E for the first two consecutive years (2014 and 2015)?

- A. 80
- B. 20
- C. 40
- D. 25

**Q49** General Intelligence and Reasoning

In a queue of boys, there are exactly 8 boys standing between Suraj and Bheem. Suraj is 21st from the front, while Bheem is at the first position from the back. How many total boys are there in the queue?

- A. 29
- B. 31
- C. 30
- D. 32



Q50 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷' and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$28 - 2 + 80 \times 5 \div 14 = ?$$

A. 52

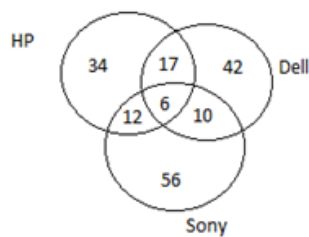
B. 54

C. 25

D. 45

Q51 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons using different brands of laptop in an IT office.



How many people use both Sony and Dell laptops?

A. 6

B. 10

C. 16

D. 20

Q52 General Intelligence and Reasoning

Find the approximate angle between the minute hand and the hour hand of a 12-hour clock when the time is 9:25.

A. 130 degrees

B. 150 degrees

C. 190 degrees

D. 100 degrees



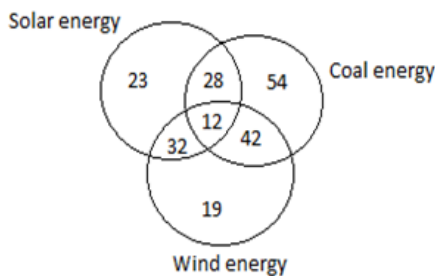
Q53 General Intelligence and Reasoning

A, B, C, D, E, F and G want to play a video game they purchased together. Each will get it on one day of the same week starting from Monday and ending on Sunday. No one gets it on same day of the week. A will play on Sunday. D will play immediately before A. B will play immediately after E. E will play on Wednesday. C will not get it on Monday. F gets it on a day between B and D. On which day will G get to play?

- A. Friday
- B. Thursday
- C. Monday
- D. Saturday

**Q54** General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons in a small village relying on different sources of energy for their daily needs.



How many people rely on both Solar energy and Coal energy?

- A. 28
- B. 12
- C. 77
- D. 40

**Q55** General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

13 : 96 :: 18 : 131 :: 14 : ?

- A. 100
- B. 102
- C. 103
- D. 104



Q56 General Science

How many hydrogen atoms will be added along with one carbon atom in the next member of a homologous series?

A. 1

B. 2



C. 3

D. 4

Q57 General Science

The sex of a person is determined by _____.

A. the chromosomes present in both sperm and ovum

B. the chromosomes present in sperm

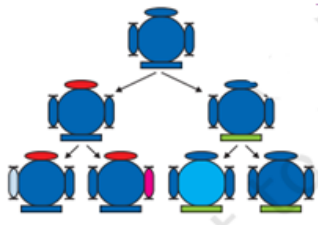


C. the chromosomes present in ovum

D. the chromosomes present in both sperm and ovum and dietary habits of parents

Q58 General Science

The figure below shows a single organism undergoing reproduction and the progeny with minor differences. What could be the reason for the variation?



A. Errors in protein formation

B. Errors in DNA copying



C. Gene being non-functional

D. Errors in RNA formation



Q59 General Science

Which of the following method(s) can be used to change the direction of force on a current carrying conductor?

- (i) Changing the magnitude of current
- (ii) Changing the strength of magnetic field
- (iii) Changing the direction of current

A. Only (i)

B. Only (iii)



C. Both (i) and (iii)

D. Both (ii) and (iii)

Q60 General Science

Identify the INCORRECT statement from among the following.

- A. Outside a bar magnet, the magnetic field lines are directed from north to south pole.
- B. A freely suspended bar magnet points in north-south direction.
- C. Repulsion is a sure test of magnetism.

D. A number of field lines intersect at a given point inside a magnetic field.



Q61 General Science

Pesticides, though non-biodegradable, are both beneficial and harmful for agriculture. Select the INCORRECT option regarding pesticides.

- A. They reduce chlorophyll content of the plant and hence affect photosynthesis
- B. They reduce plant growth
- C. They alter nitrogen metabolism, so less protein content in plants

D. They are used to control weeds, pests and plant diseases



Q62 General Science

In amoeba, the food is taken by the _____.

- A. mouth
- B. movement of flagella
- C. movement of cilia
- D. entire body surface area



Q63 General Science

Two metallic wires A and B are made of the same material. Wire A has length l and radius r while wire B has length $2l$ and radius $2r$. The ratio of the resistance of wire A to that of wire B is:

A. 1 : 2

B. 2 : 1



C. 1 : 4

D. 4 : 1

Q64 General Science

A ray of light bends towards the normal while travelling from medium A to medium B. Which of the following statements is/are correct?

(A) Medium A is optically denser than medium B.

(B) Speed of light is more in medium A than medium B.

(C) Refractive index of medium B is more than refractive index of medium A.

A. Both A and B

B. Both B and C



C. Both A and C

D. A, B and C

Q65 General Science

An object, 3.0 cm in height, is placed at a distance of 20.0 cm in front of a convex mirror of focal length 6.0 cm, on its principal axis. Its image has a height of _____ and is _____.

A. less than 3.0 cm, erect



B. more than 3.0 cm, erect

C. less than 3.0 cm, inverted

D. more than 3.0 cm, inverted



Q66 General Science

The Modern Periodic Table has _____ groups and _____ periods.

A. 18, 7



B. 17, 8

C. 18, 6

D. 18, 5

Q67 General Science

Which of the following excretory products is stored in the old xylem of the plants?

A. Resin



B. Morphin

C. Carbon dioxide

D. Citric acid

Q68 General Science

Sardar Sarovar Dam was constructed in Gujarat over the _____.

A. Ganga River

B. Mahanadi River

C. Narmada River



D. Sutlej River



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Q69 General Science

Four different experiments were conducted by students of Class X.

I. Navin took a beaker containing some aqueous solution of CuSO_4 and added a piece of magnesium strip in it.

II. Ayush took a beaker containing some aqueous solution of CuSO_4 and added some platinum pieces in it.

III. Sneha took a beaker containing some aqueous solution CuSO_4 and added some copper turnings in it.

IV. Akriti took a beaker containing some aqueous solution CuSO_4 and added a piece of silver wire in it.

Who among them was able to perform a displacement reaction?

A. Ayush

B. Navin



C. Akriti

D. Sneha

Q70 General Science

Which structure is responsible for maintaining the amount of water in amoeba?

A. Plasma membrane

B. Contractile vacuole



C. Food vacuole

D. Cytoplasm

Q71 General Science

Babu took some quantity of dilute nitric acid in a test tube and heated the test tube at 70°C for about 10 minutes. What was its effect on the pH of nitric acid?

A. It rose up

B. It decreased



C. It remained constant

D. It first increased and then decreased



Q72 General Science

According to Dobereiner, _____.

- A. the sum of atomic masses of the first and the second elements of the triad is equal to that of the third element
- B. the arithmetical mean of the atomic masses of the second and the third elements of the triad is equal to that of the first one
- C. the sum of atomic masses of the first and the third elements of the triad is equal to that of the second element
- D. the arithmetical mean of the atomic masses of the first and the third elements of the triad is equal to that of the second one ☒

Q73 General Science

What is the similarity between fermentation in yeast and anaerobic respiration taking place in muscle cells of humans?

- A. Take place in mitochondria
- B. Take place in Cytoplasm ☒
- C. Ethanol is formed
- D. Lactic acid is formed

Q74 General Science

Which form of carbon is used as a dry lubricant?

- A. Coal
- B. Coke
- C. Diamond
- D. Graphite ☒

Q75 General Science

Chlorine gas reacts with potassium iodide solution to form potassium chloride and iodine. This reaction is an example of a:

- A. combination reaction
- B. double displacement reaction
- C. decomposition reaction
- D. displacement reaction ☒



Q76 General Science

The S.I unit of resistivity is:

- A. ohm
- B. mho
- C. ohm m
- D. ohm/m



Q77 General Science

An object is placed at a distance of 30 cm in front of a concave mirror of focal length 15 cm. The image formed is:

- A. real and erect
- B. real and inverted
- C. virtual and erect
- D. virtual and inverted



Q78 General Science

Consider the below statements and identify the correct answer.

Statement-I: The chemical formula for baking soda is $\text{CaSO}_4 \frac{1}{2} \text{H}_2\text{O}$.

Statement-II: Baking soda is used for making toys, materials for decoration and for making surfaces smooth

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.



Q79 General Science

An object is placed on the principal axis of a convex lens of focal length 12 cm, at a distance of 18 cm. The magnification produced by the lens is _____ and the image is _____.

- A. less than 1, erect
- B. less than 1, inverted
- C. more than 1, erect
- D. more than 1, inverted



Q80 General Science

Two resistors A and B have resistances 5 ohm and 10 ohm, respectively. If they are connected in series to a voltage source of 5 V. The ratio of power developed in resistor A to that of power developed in resistor B will be:

A. 1 : 2



B. 1 : 4

C. 2 : 1

D. 4 : 1

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Identify the sportsperson who received the Major Dhyan Chand Khel Ratna Award 2021 in the wrestling discipline from the following options.

A. Sharad Kumar

B. Ravi Kumar



C. Suhash Yathiraj

D. Nishad Kumar

Q82 General Awareness and Current Affairs

In which of the following period do the monsoon winds tentatively reach Punjab, Western Uttar Pradesh and Haryana during a normal monsoon year?

A. First week of June

B. First week of July



C. First week of August

D. First week of May

Q83 General Awareness and Current Affairs

The headquarters of Central Institute of Indian Languages (CIIL) is situated in _____.

A. Bengaluru

B. Mysuru



C. Pondicherry

D. Chennai



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Q84 General Awareness and Current Affairs

Which of the following parallels of latitude is INCORRECTLY matched with its location?

A. Tropic of Cancer - North Hemisphere

B. Tropic of Capricorn - Eastern Hemisphere



C. Arctic Circle - North of the Equator

D. Antarctic Circle - South of the Equator

Q85 General Awareness and Current Affairs

Every year, which day is observed as the 'Minorities Rights Day' to uphold the right to freedom and equal opportunities for the ethnic minorities in India and create awareness about the respect and dignity of the minorities?

A. 27 February

B. 29 August

C. 18 December



D. 25 December

Q86 General Awareness and Current Affairs

With which sport is the Rovers Cup associated?

A. Cricket

B. Hockey

C. Football



D. Rowing

Q87 General Awareness and Current Affairs

According to the Constitution of India, in which of the following matters can only Union Legislature make laws?

A. Prison

B. Trade and Commerce

C. Agriculture

D. Post and Telegram



Q88 General Awareness and Current Affairs

As per the Ministry of New And Renewable Energy, which state has the highest wind power potential as on March 2021?

A. Gujarat



B. Tamil Nadu

C. Rajasthan

D. Karnataka

Q89 General Awareness and Current Affairs

Crop production does NOT involve considerable costs on which of the following?

A. Costs on seeds

B. Costs on fertilizers

C. Costs on pesticides

D. Costs on animal food



Q90 General Awareness and Current Affairs

What type of political party system does India have?

A. One-party system

B. Two-party system

C. Three-party system

D. Multi-party system



Q91 General Awareness and Current Affairs

As per Article 243B of the Indian Constitution, Panchayats at the intermediate level may NOT be constituted in a State having a population not exceeding _____.

- A. 5 lakhs
- B. 10 lakhs
- C. 20 lakhs
- D. 25 lakhs



Q92 General Awareness and Current Affairs

What is the theme selected by RBI as the 2022 theme for Financial Literacy week?

- A. Credit Discipline and Credit from Formal Institutions
- B. Go Digital, Go Secure
- C. Farmers
- D. Micro, Small and Medium Enterprises



Q93 General Awareness and Current Affairs

Where did the first Green Hydrogen Microgrid Project start in 2021?

- A. Maharashtra
- B. Andhra Pradesh
- C. Tamil Nadu
- D. Kerala



Q94 General Awareness and Current Affairs

_____ played a major role in the revival of Hinduism and the spread of his interpretation of Advaita Vedanta known as 'Neo-Vedanta' in the West.

- A. Swami Vivekananda
- B. Swami Dayanand
- C. Samrat Ashoka
- D. Sri Ramkrishna Paramhansa



Q95 General Awareness and Current Affairs

Who was the founder of the social reform movement for Sikhism - the Nirankari movement?

- A. Shri Sohan Singh
- B. Baba Balak Singh
- C. Baba Gurmeet Dev
- D. Baba Dyal Das



Q96 General Awareness and Current Affairs

How many times has The Factory Act been amended as on June 2022?

- A. 9
- B. 5
- C. 8
- D. 4



Q97 General Awareness and Current Affairs

In January 2022, with which university did Jio sign a pact for undertaking research and standardisation related activities in 6G technology?

- A. Canadian Institute of Health Research
- B. Indian Institute of Science Bengaluru
- C. University of Oulu, Finland
- D. Barcelona Institute of Science and Technology



Q98 General Awareness and Current Affairs

The Central Bank of Zimbabwe has been lowering rate of interests of the economy to boost growth. The bank is being _____ in its monetary policy stance.

A. dovish



B. hawkish

C. Accommodative

D. Neutral

Q99 General Awareness and Current Affairs

National Women's Day is celebrated on which date in India?

A. 13 January

B. 23 January

C. 13 February



D. 23 February

Q100 General Awareness and Current Affairs

The Longest Moustache competition is held at which of the following festivals/fairs?

A. Hornbill Festival

B. Pushkar Fair



C. Thrissur Pooram Festival

D. Kila Raipur Sports Festival



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Which vulgar fraction is equal in value to the mixed recurring decimal $0.3125125125\dots$?

A. $\frac{1561}{4995}$



B. $\frac{1783}{4995}$

C. $\frac{1653}{4995}$

D. $\frac{1967}{4995}$

Q2 Mathematics

In $\triangle PQR$, $\angle PQR = 90^\circ$, $m(\overline{PQ}) = 3$ cm and $m(\overline{PR}) = 6$ cm. What is the measure of $\angle PRQ$?

A. 30°



B. 45°

C. 60°

D. 70°

Q3 Mathematics

Today, age of the father is twice the sum of the ages of his 3 children. After 15 years father's age will be equal to the sum of the ages of his children. How old is the father 15 years from today?

A. 75 years

B. 85 years

C. 90 years

D. 95 years

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



Q4 Mathematics

I walk at a speed of 10 km/h and reach the destination in 2 hrs. If I increase my speed by 5 km/h, how early would I reach my destination?

- A. 20 min
- B. 30 min
- C. 40 min
- D. 50 min



Q5 Mathematics

The LCM of two numbers is 385 and their HCF is 7. If the sum of the two numbers is 112, then their difference is:

- A. 42
- B. 35
- C. 50
- D. 43



Q6 Mathematics

A shopkeeper offered successive discounts of 10% and 15% on an article having a marked price of ₹28,000. Find the selling price of the article.

- A. ₹21,420
- B. ₹21,240
- C. ₹22,140
- D. ₹21,402



Q7 Mathematics

The least number which, when diminished by 7, is divisible by 12, 16, 18 and 21 is:

- A. 1150
- B. 1051
- C. 1105
- D. 1015



Q8 Mathematics

Find the value of $\frac{\sqrt{729}}{15} \times \frac{25}{\sqrt{81}} \times \frac{15}{\sqrt{225}}$.

A. 4

B. 3

C. 2

D. 5



Q9 Mathematics

For the following data, find the weighted mean.

X_i 4 3 5 7 2 1

W_i 1 0 2 1 3 5

A. 5.6

B. 2.66

C. 8

D. 7.5



Q10 Mathematics

A sum was invested at a certain rate of simple interest per annum for 2 years. Had it been invested at 2% per annum more than the existing rate, the simple interest accrued in the 2 years would have been ₹240 more. Find the sum invested.

A. ₹8,000

B. ₹24,000

C. ₹6,000

D. ₹16,000



Q11 Mathematics

Two pipes A and B can fill the tank in 5 hours and 8 hours, respectively. Pipe C can empty the same tank in 10 hours. Find the time taken to fill the empty tank when all the pipes are opened simultaneously.

A. $4\frac{2}{9}$ hours

B. $4\frac{5}{9}$ hours

C. $4\frac{7}{9}$ hours

D. $4\frac{4}{9}$ hours

**Q12** Mathematics

Simplify $\frac{3^3 \times 2^4 \times 7^2}{3^2 \times 56}$.

A. 42

B. 36

C. 28

D. 70

**Q13** Mathematics

Find the mean proportional between 17 and 68.

A. 34

B. 38

C. 42

D. 46

**Q14** Mathematics

Simplify $(a + 2b - c)(b - c) + (a - c)2b + b^2$.

A. $3b^2 + 3ab - 5bc - ac$

B. $2b^2 + 3ab - 4bc + c$

C. $3b^2 + c^2 + 3ab - 5bc - ac$

D. $3ab - 5bc - ac - 2abc$



Q15 Mathematics

The roots of quadratic equation that satisfies $12x^2 = 27x$ are:

A. $1, \frac{3}{4}$

B. $1, \frac{4}{3}$

C. $0, \frac{9}{4}$ ✓

D. $0, \frac{3}{4}$

Q16 Mathematics

If the surface area of a spherical ball is 616 m^2 , its volume is:

A. 1238.33 m^3

B. 1786.35 m^3

C. 1657.29 m^3

D. 1437.33 m^3 ✓

Q17 Mathematics

A, B and C started a business with investments in the ratio $20 : 15 : 12$. After 3 months C withdrew half of his investment and after another 9 months, a profit of ₹ 3,23,000 is divided among them. The share of C is:

A. ₹1,14,000

B. ₹1,57,000

C. ₹57,000 ✓

D. ₹1,52,000

Q18 Mathematics

A parallelogram has one parallel side length of 12 cm and perpendicular distance between its base and other parallel side is 8 cm. Its area is _____.

A. 96 cm^2 ✓

B. 48 cm^2

C. 24 cm^2

D. 192 cm^2



Q19 Mathematics

Find the volume of a cuboid whose length is 12 m, breadth is 10 m, and height is 15 m.

A. 1800 m^3 ✓

B. 1800 m^2

C. 1500 m^3

D. 1500 m^2

Q20 Mathematics

Find the mean of the following data.

X	3	2	10	4	5
f	5	3	4	2	6

A. 6.52

B. 4.95 ✓

C. 8.65

D. 3.68

Q21 Mathematics

Solve $(a - b)^3 + (b - 2c)^3 + (-a + 2c)^3$.

A. $a - b + 2c$

B. $(a - b + 2c)^2$

C. $a - 2c + 4b$

D. $3((a - b)(b - 2c)(-a + 2c))$ ✓

Q22 Mathematics

In certain store, the profit is 260% of the cost. If the selling price is ₹7,200, then the cost price is:

A. ₹2,000 ✓

B. ₹2,200

C. ₹2,420

D. ₹3,000



Q23 Mathematics

What is the nature of the roots of $3x^2 - 6x + 5 = 0$?

- A. The roots are real and equal.
- B. The roots are real and distinct.
- C. The roots are real and more than 2.
- D. There are no real roots.



Q24 Mathematics

Chandra is 10 years younger than Chandrika. 5 years later Chandrika will be twice as old as Chandra. Find Chandrika's present age.

- A. 10 years
- B. 15 years
- C. 20 years
- D. 25 years



Q25 Mathematics

In triangle ABC, $AB = 3$ m, $BC = 4$ m, and $AC = 5$ m. In triangle PRQ, $PR = 4$ m, $PQ = 5$ m, and $RQ = 3$ m.

Which of the following is a correct order of congruency?

- A. $\triangle BAC$ congruent to $\triangle RPQ$
- B. $\triangle BCA$ congruent to $\triangle RPQ$
- C. $\triangle CBA$ congruent to $\triangle RPQ$
- D. $\triangle ABC$ congruent to $\triangle RPQ$



Q26 General Intelligence and Reasoning

Study the given number, symbol series and answer the question that follows.

8 @ 4 * 7 ^ 5 3 # 9 1 < 5 7 @ 4 \$ # 2 * 6 ! 4 & 9 < 6

How many such numbers are there which are immediately preceded by a symbol and immediately followed by an odd number?

A. 2

B. 3



C. 4

D. 5

Q27 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. E is sitting at any one of the sides and is the immediate neighbour of both B and D. C is sitting exactly opposite to D, and H is sitting exactly opposite to B. G is sitting second to the left of E and to the immediate left of D. F is exactly opposite to G. Who among the following is sitting exactly opposite to A?

A. E



B. G

C. F

D. B

Q28 General Intelligence and Reasoning

Sam steps out from his house and walks 160 m towards the east. He then takes a right turn and walks 50 m. He then turns right and walks 70 m. He then turns left and walks 35 m. He then turns right and walks 90 m to reach a gift shop. How far and in which direction is the gift shop from Sam's house? (All turns are 90 degree turns only)

A. 85 m, South



B. 85 m, North

C. 120 m, South

D. 120 m, North



Q29 General Intelligence and Reasoning

A decision is given followed by two statements I and II. Read all the information carefully and select the correct option.

Decision:

Company K has a wide chain of grocery stores and sweet shops across all cities and even villages of Country M. The CEO of Company K has decided to discontinue cash payments completely from next month onwards.

Statements:

I. As per the reports of the last 3 years, around 24% of payments each month were through cash.

II. 35% of the population of Country M is either illiterate or does not have access to bank accounts.

- A. Both statements I and II strengthen the decision
- B. Statement I weakens the decision and statement II is a neutral statement
- C. Both statements I and II weaken the decision ✓
- D. Statement I is a neutral statement and II weakens the decision

Q30 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

SEARCH : ESRAHC :: DESIGN : EDISNG :: LAYOUT : ?

- A. UYTLOA
- B. ALOYTU ✓
- C. UTYOLA
- D. AOLTYU

Q31 General Intelligence and Reasoning

In a certain code language, 'NATURE' is written as 'QYWSUC' and 'REASON' is written as 'UCDQRL'. How will 'LOTION' be written in that language?

- A. MNGVLQ
- B. NMVGQL
- C. OLWFRK
- D. OMWGRL ✓

Q32 General Intelligence and Reasoning

Six friends scored different marks in their annual psychology examination. Q scored more than exactly four friends. M scored more than exactly three friends. Both P and N scored more than T. Y scored the least marks. N is not the top scorer. Who scored the highest marks?

A. T

B. M

C. Q

D. P



Q33 General Intelligence and Reasoning

Each of A, B, C, D, E and F has an exam on a different day of a week starting from Monday and ending on Saturday of the same week. None of them have the exam before C and after B. F has the exam just after A and just before D. E has the exam on Tuesday and just before A. Who among the following has the exam on Friday?

A. F

B. D

C. A

D. B



Q34 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some prizes are caps.

Some caps are medals.

All prizes are masks.

Conclusions:

I. Some masks are caps.

II. Some masks are medals.

A. Only conclusion I follows

B. Only conclusion II follows

C. Both conclusions I and II follow

D. Neither conclusion I nor II follows



Q35 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

RBM 7, NXI 11, JTE 13, FPA 17, BLW 19, ?

A. XSO 21

B. XOS 21

C. FHA 23

D. XHS 23



Q36 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $U \leq W = V < Y > I \geq F > N$

Conclusions:

I. $Y > U$

II. $N < I$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true



D. Neither conclusion I nor II is true

Q37 General Intelligence and Reasoning

Shaily starts walking from her home and goes 45 m towards the east. She then takes a right turn and walks 85 m. She then turns left and walks 40 m. She then takes a final left turn and walks 85 m to reach an ATM. How far is the ATM from her home? (All turns are 90 degree turns only)

A. 80 m

B. 85 m



C. 40 m

D. 125 m



Q38 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing the north. Only 6 persons are sitting between Monika and Dipen. Monika is at the 8th place from the extreme right end of the row. Ketan is at some place towards the left of Monika. Ketan and Monika have exactly 3 persons sitting between them. Ketan is at the 10th place from the extreme left end. Dipen is sitting at the extreme right end. If no other person is sitting in the row, what is the total number of persons seated?

A. 20

B. 21



C. 22

D. 23

Q39 General Intelligence and Reasoning

Eight boxes, P, Q, R, S, T, U, V and W, are kept one over the other, but not necessarily in the same order. V is fourth from the top and immediately below R. W is kept at the topmost position and immediately above P. Only one box is there between S and T. T is kept below S, and U is kept above Q. How many boxes are there between T and Q?

A. Two

B. One

C. None



D. Three

Q40 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. A is sitting at one of the corners and is the immediate neighbour of E and F. D is sitting exactly opposite to A and to the immediate left of B. C is sitting at one of the corners and to the immediate right of F. G is not sitting at any of the corners. Who among the following is sitting exactly opposite to F?

A. G

B. B



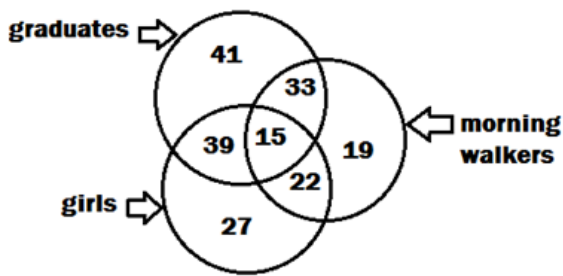
C. E

D. H



Q41 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



Which of the following statements is correct on the basis of the above diagram?

- A. The number of morning walkers who are also girls but not graduates is 19.
- B. The number of girls who are both graduates and morning walkers is 39.
- C. The number of graduates who are also girls but not morning walkers is 22.
- D. The number of graduates who are also morning walkers but not girls is 33. ✓

Q42 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

35 : 21 :: 20 : 12 :: 40 : ?

- A. 39
- B. 26
- C. 24 ✓
- D. 42



Q43 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(12, 313, 13)

(7, 50, 1)

A. (15, 150, 10)

B. (12, 158, 12)

C. (9, 90, 3)



D. (4, 125, 11)

Q44 General Intelligence and Reasoning

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 4681342, what will be difference between the highest and lowest digits thus formed?

A. 2

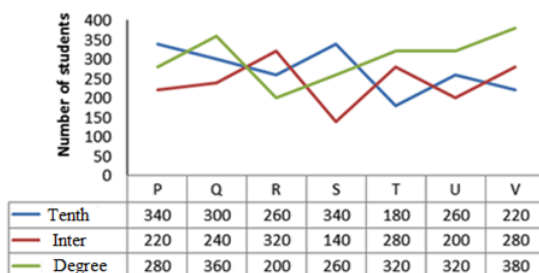
B. 4

C. 5

D. 6

**Q45** General Intelligence and Reasoning

The following line graph shows the educational qualifications of students (Tenth, Intermediate [Inter] and Degree) of seven districts, P, Q, R, S, T, U and V, of a state. Study the graph and answer the question.



What is the difference between the total number of students with Tenth qualification from all the districts together and the total number of students with Degree qualification from all the districts together?

A. 230

B. 240

C. 220



D. 210



Q46 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$(23.01 + 16.986) \div 2.023 \times 4.05 - 41.999 + 643.999 = ?$$

A. 542

B. 682

C. 745

D. 765

Q47 General Intelligence and Reasoning

What day of the week was 1 January 2009, if 1 January 2006 was a Sunday?

A. Wednesday

B. Thursday

C. Friday

D. Saturday

Q48 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	9	∞	8	4	$\div$	$\mp$	6	\$	!	2	=	5	7	3
Code	H	G	K	L	U	Q	S	U	W	Y	A	C	E	G

Conditions:

- (i) If the first element is a number and the last, a symbol, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an EVEN number and the last, an ODD number, the first and last elements are to be coded as &.
- (iii) If both the third and the fourth elements are prime numbers, the fourth element is to be coded as the code for the third element and vice-versa.

Question: 2675S!

A. WSCEUY

B. WUYECS

C. WSECUY

D. WECSUY



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Q49 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

25, 29, 38, 54, 79, ?

A. 96

B. 110

C. 115



D. 120

Q50 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word BREAKDOWN is arranged in alphabetical order?

A. 1

B. 2



C. 3

D. 4

Q51 General Intelligence and Reasoning

Study the given number series and answer the question that follows.

29, 74, 93, 75, 19, 52, 75, 94, 93, 71

If the ten's and one's position is interchanged for all the numbers, then which original number will form the largest and the smallest in the series, respectively?

A. 93 and 71

B. 19 and 29

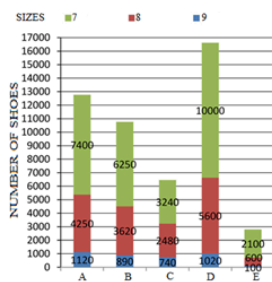
C. 93 and 94

D. 29 and 71



Q52 General Intelligence and Reasoning

Data regarding the sales of the number of shoes of sizes 7, 8 and 9 in five showrooms, A to E, is given in the following stacked bar chart. Study the chart and answer the question.



By approximately what percentage is the sales of shoes of size 8 more than the sales of shoes of size 9 in showroom C?

A. 215%

B. 225%

C. 235%



D. 335%

Q53 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$126.012 \times 14.987 - 603.045 = ? + 261.987$$

A. 875

B. 845

C. 1025

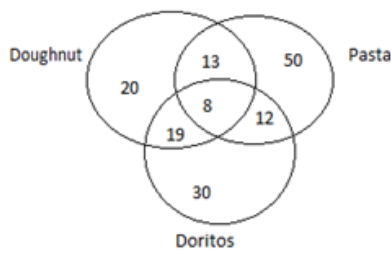


D. 1235



Q54 General Intelligence and Reasoning

Study the given diagram carefully and answer the following question. The numbers in different sections indicate the number of persons who eat certain foods in breakfast.



How many people eat Pasta but NOT Doughnut?

A. 62



B. 50

C. 71

D. 79

Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

5, 24, 46, 74, 111, 160, 224, ?

A. 306



B. 360

C. 305

D. 350

General Science

25 Questions • Answer Key

Q56 General Science

World Water Day is celebrated on _____.

A. 8 March

B. 22 March



C. 15 August

D. 26 August



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Q57 General Science

Which of the following is not the use of washing soda?

- (i) Manufacture of glass, soap and paper
- (ii) As a cleaning agent for domestic purposes
- (iii) For removing permanent hardness of water
- (iv) Baking cake

A. i

B. ii

C. iii

D. iv



Q58 General Science

The pattern of magnetic field lines due to a current carrying solenoid is similar to a:

A. bar magnet



B. horseshoe magnet

C. current carrying straight wire

D. current carrying circular loop

Q59 General Science

An electric device draws a current of 5 A when connected to a 220 V supply. The power of the electric device is:

A. 0.44 kW

B. 1.1 kW



C. 110 W

D. 440 W



Q60 General Science

Which of the following is NOT a main site of transpiration?

- A. Cuticle
- B. Lenticels
- C. Stomata
- D. Intracellular spaces



Q61 General Science

Which of the following optical devices can be used to produce a parallel beam of rays from a point source of light?

- (A) Convex lens
 - (B) Concave lens
 - (C) Concave mirror
 - (D) Convex mirror
- A. Both (A) and (B)
 - B. Both (A) and (C)
 - C. Both (B) and (C)
 - D. Both (A) and (D)



Q62 General Science

Identify the correct statement(s) from among the following.

- (a) The direction of magnetic field at a point can be found by placing a magnetic compass at that point.
 - (b) A freely suspended magnetic needle points in north-east direction.
 - (c) The magnetic field lines are denser near the poles of a magnet.
 - (d) Two magnetic field lines can intersect at a given point.
- A. Both (a) and (b)
 - B. Both (a) and (c)
 - C. Both (b) and (c)
 - D. Both (a) and (d)



Q63 General Science

Which of the following sexually transmitted diseases is transmitted by a virus?

- A. Cold
- B. AIDS
- C. Syphilis
- D. Gonorrhoea



Q64 General Science

An object of size 3.0 cm is placed in front of a concave mirror of focal length 18 cm, at a distance of 54 cm. The image formed is _____ and its height is _____.

- A. erect, 0.75 cm
- B. inverted, 0.75 cm
- C. erect, 1.5 cm
- D. inverted, 1.5 cm



Q65 General Science

Which of the following is the correct set of raw materials for washing soda preparation?

- A. NaCl, NH₃, CO₂
- B. NaCl, CO₂
- C. NaCl, NH₃
- D. NaCl and H₂O



Q66 General Science

What is the full form of UNEP?

- A. United Nations Educational Programme
- B. United Nations Environment Programme
- C. United Nations Environment Planning
- D. United Nations Educational Planning



Q67 General Science

Which option correctly shows the path that the sperms take when they are released from the human male reproductive system?

- A. Testis → Ureter → Urethra → Penis
- B. Testis → Vas deferens → Ureter → Penis
- C. Testis → Ureter → Vas deferens → Penis
- D. Testis → Vas deferens → Urethra → Penis



Q68 General Science

Rays coming from the sun are refracted by the atmosphere. Due to this, the apparent sunrise is about _____ the actual sunrise.

- A. 2 minutes after
- B. 2 minutes before
- C. 1 minute after
- D. 1 minute before



Q69 General Science

Which of the following is/are example(s) of exothermic reaction?

- (i) Making of slaked lime
- (ii) Burning of natural gas
- (iii) Respiration

- A. Only i
- B. Only ii
- C. Both i and ii
- D. All i, ii, iii



Q70 General Science

The atomic size _____ moving from left to right and _____ moving from up to down in the periodic table.

- A. decreases, increases
- B. decreases, decreases
- C. increases, decreases
- D. increases, increases



Q71 General Science

Which of the following sequences of events occurs during the formation of urine in the human body?

- A. Filtration, reabsorption, secretion ☒
- B. Filtration, secretion, reabsorption, secretion
- C. Secretion, filtration, reabsorption
- D. Reabsorption, filtration, secretion, storage

Q72 General Science

What is the average amount of urine that an adult human produces in 24 hours?

- A. 1-1.5 litres
- B. 1-1.8 litres
- C. 1.5-2 litres
- D. 1.5-2.5 litres

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q73 General Science

The S.I unit of resistance is equivalent to:

- A. volt/ampere ☒
- B. ampere/volt
- C. joule/coulomb
- D. coulomb/joule

Q74 General Science

The material most suitable for making the filament of an incandescent bulb is:

- A. tungsten ☒
- B. manganin
- C. tin-lead alloy
- D. nichrome

Q75 General Science

Reaction conditions are indicated at which place in the chemical equation?

- A. Only above the arrow
- B. Only below the arrow
- C. Above and/or below the arrow
- D. In the beginning of the equation



Q76 General Science

The reaction in which a single reactant splits into the two or more simpler products is called:

- A. displacement reaction
- B. double displacement reaction
- C. combination reaction
- D. decomposition reaction



Q77 General Science

Consider the below statements and identify the correct answer.

Statement I: Lithium, Sodium and Rubidium are elements of Dobereiner's triad.

Statement II: In triads, the atomic mass of the middle element was roughly the average of the atomic masses of the other two elements

- A. Statement I is correct, Statement II is incorrect.
- B. Statement II is correct, Statement I is incorrect.
- C. Both statements are correct.
- D. Both statements are incorrect.



Q78 General Science

Which of the following statements regarding fertilizers is FALSE?

- A. Nutrient amounts calculated in advance can be applied
- B. Leaches out with rains or irrigation water
- C. Never contaminate air and water
- D. Must be properly stored



Q79 General Science

Consider the below statements and identify the correct answer.

Statement I: Graphite is bad conductors of electricity.

Statement II: In graphite, each carbon atom is bonded to three other carbon atoms in the same plane giving a hexagonal array.

A. Statement I is correct, and Statement II is incorrect.

B. Statement II is correct, and Statement I is incorrect. ✓

C. Both the statements are correct.

D. Both the statements are incorrect.

Q80 General Science

An object is placed in front of a convex mirror at a point between infinity and the pole of the mirror. The image formed is:

A. real and erect

B. real and inverted

C. virtual and erect ✓

D. virtual and inverted

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The 'Garó', 'Khasi' and 'Jaintia' hills are part of which physical division of India?

A. The Himalayan Mountain

B. The Peninsular Plateau ✓

C. The Northern Plains

D. The Coastal Plains

Q82 General Awareness and Current Affairs

Which of the following longitudes is considered as the International Date Line?

A. 0°

B. 90° E

C. 90° W

D. 180° ✓



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Q83 General Awareness and Current Affairs

In February 2022, where was India's most powerful supercomputer Param Pravega launched?

- A. IIT Ropar
- B. IISc Bengaluru
- C. IIT Roorkee
- D. IIT Gandhinagar



Q84 General Awareness and Current Affairs

Which state is famous for celebrating the Pongal festival?

- A. Tamil Nadu
- B. Tripura
- C. Odisha
- D. Telangana



Q85 General Awareness and Current Affairs

Who is remembered as 'Deshbandhu', who served as the President of the Indian National Congress for one session in 1922 and co-founded the Swaraj Party with Motilal Nehru?

- A. Lala Lajpat Rai
- B. Gopal Krishna Gokhale
- C. Aurobindo Ghosh
- D. Chittaranjan Das



Q86 General Awareness and Current Affairs

In March 2022, which bank launched 'Project Banksakhi' in Odisha?

A. Bank of Maharashtra



B. Axis Bank

C. HDFC Bank

D. PNB Bank

Q87 General Awareness and Current Affairs

The Right to Education in the Indian Constitution was added by introducing a new Article, _____, in the Chapter on Fundamental Rights in 2002 by the 86th Constitutional Amendment.

A. 19A

B. 21A



C. 23A

D. 25A

Q88 General Awareness and Current Affairs

In March 2022, who unveiled a new brand 'VIDA' for its emerging mobility solutions and upcoming electric vehicles?

A. Tata Motors

B. Maruti Suzuki

C. Hyundai Motors

D. Hero Motocorp



Q89 General Awareness and Current Affairs

Which of the following educational Institutes won the Rashtriya Khel Protsahan Puruskar 2021 in the category 'Identification and Nurturing of Budding and Young Talent'?

- A. Indian Institute of Technology
- B. Manav Rachna Educational Institution
- C. Lingayas Institute of Management and Technology
- D. Maharashtra Institute of Technology

Q90 General Awareness and Current Affairs

Which of the following apps has been launched to make the Indian Parliament proceedings accessible to the public at large in January 2022?

- A. Digital Sansad
- B. Sansad Dekho Live
- C. Online Sansad Karyawahi
- D. Sansad Yojana

Q91 General Awareness and Current Affairs

Marathi, which is an Indo-Aryan language, is the _____ largest language spoken by 6.86% of the total population of India according to the 2011 census.

- A. Second
- B. Third
- C. Fourth
- D. Fifth

Q92 General Awareness and Current Affairs

According to Centre for Monitoring Indian Economy (CMIE), which state recorded the highest unemployment rate in June 2022?

- A. Gujarat
- B. Goa
- C. Kerala
- D. Haryana



Q93 General Awareness and Current Affairs

Securities sold by the Central Bank with a clear specification of repurchase date and price is called _____.

- A. repurchase agreement
- B. reverse repo
- C. Interest Rate Swap
- D. outright open market operations

Q94 General Awareness and Current Affairs

The 'Kangra' and 'Kullu' valley is situated in which state of India?

- A. Uttarakhand
- B. Himachal Pradesh
- C. Sikkim
- D. Arunachal Pradesh

Q95 General Awareness and Current Affairs

What is another term for 'pedology'?

- A. Phyto Geography
- B. Soil Geography
- C. Geomorphology
- D. Oceanography

Q96 General Awareness and Current Affairs

The Sarpanch or the president of the Gram Panchayat is elected by the ward members as per the State Act for a period of _____ years.

- A. 5
- B. 3
- C. 2
- D. 1



Q97 General Awareness and Current Affairs

As of March 2022, who is the President of the Indian Olympic Association?

A. Narinder Dhruv Batra



B. N Ramachandran

C. Nita Ambani

D. Abhay Singh Chautala

Q98 General Awareness and Current Affairs

Which state on 23 December 2021, passed Shakti Criminal Laws?

A. Kerala

B. Maharashtra



C. Karnataka

D. Assam

Q99 General Awareness and Current Affairs

Who among the following is the in charge of the Union Territories in the absence of the Chief Minister?

A. Chief Justice of India

B. Lieutenant Governor



C. President

D. Prime Minister



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Urgelling Gompa is found in the Indian state of _____.

A. Sikkim

B. Arunachal Pradesh



C. Himachal Pradesh

D. Uttarakhand



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Simplify $(2z - 5y)^2 + (5z + 2y)^2 - 25z^2$.

A. $19y^2 + 4z^2$

B. $29y^2 + 4z^2$ ✓

C. $29y^2 - 4z^2$

D. $19y^2 - 4z^2$

Q2 Mathematics

If $25x^3 = 1600$, then which of the following is a possible value of x ?

A. 4 ✓

B. 2

C. 3

D. 5

Q3 Mathematics

Find the mode of the given frequency distribution.

x	0-10	10-20	20-30	30-40	40-50
f	5	8	10	2	5

A. 20

B. 22 ✓

C. 24

D. 26



Q4 Mathematics

Find the greatest number by which when the numbers 57, 95 and 211 are divided, it leaves the same remainder in each case.

A. 1

B. 2



C. 3

D. 4

Q5 Mathematics

The marked price of a book is ₹900. A man bought the same for ₹693 after getting two successive discounts, the first being 12%. What was the second discount rate?

A. 11.5%

B. 12.5%



C. 13.5%

D. 14.5%

Q6 Mathematics

The cost of two chairs and three tables is ₹1,450. If a chair costs ₹250 less than a table, then find the cost of one table.

A. ₹350

B. ₹390



C. ₹440

D. ₹320

Q7 Mathematics

It takes two pipes A and B, running together, to fill a tank completely in 4 minutes. If it takes A, 6 minutes less than B, to fill the tank completely, then what will be the time taken by B alone to fill the tank completely?

A. 6 min

B. 12 min



C. 20 min

D. 15 min



Q8 Mathematics

ΔABC is similar to ΔFED and $AB = x$ cm, $BC = x + 2$ cm, $EF = 12$ cm, and $ED = 18$ cm. The value of x is _____.

- A. 2 cm
- B. -2 cm
- C. 4 cm
- D. -4 cm

**Q9 Mathematics**

A clock marked for ₹10,000 is available on successive discounts of 40% and $k\%$. If the selling price of the clock is ₹2,400, then find the value of k .

- A. 36%
- B. 60%
- C. 24%
- D. 40%

**Q10 Mathematics**

If $\Delta ABC \cong \Delta PQR$, which of the following need NOT be NECESSARILY true?

- A. $m(\overline{AB}) = m(\overline{PQ})$; $m(\overline{BC}) = m(\overline{QR})$; $m(\overline{CA}) = m(\overline{PR})$
- B. $\angle A = \angle P$; $\angle B = \angle Q$; $\angle C = \angle R$
- C. $m(\overline{AB}) = m(\overline{PQ})$; $m(\overline{BC}) = m(\overline{QR})$; $\angle A = \angle P$
- D. $m(\overline{AB}) = m(\overline{PQ})$; $m(\overline{BC}) = m(\overline{RP})$; $\angle A = \angle P$

**Q11 Mathematics**

If $\operatorname{cosec} 2A = \sec(A - 15^\circ)$, then find the measure of A (in degrees).

- A. 15
- B. 23
- C. 35
- D. 45



Q12 Mathematics

The ratio between the present ages of P and Q is 7 : 5, respectively. The ratio between P's age 5 years ago and Q's age 5 years hence is 1 : 1. What is the ratio between P's age 5 years hence and Q's age 5 years ago?

A. 2 : 1



B. 1 : 2

C. 3 : 2

D. 2 : 3

Q13 Mathematics

The equation $2x^2 + 7x + 6 = 0$ can be written as:

A. $(2x - 3)(x + 2) = 0$ B. $(2x + 3)(x + 2) = 0$ C. $(2x - 3)(x - 2) = 0$ D. $(2x + 3)(x - 2) = 0$ **Q14** Mathematics

A semi-circular field of radius 14 m needs to be fenced with a wire. Find the length of wire required.

A. 44 m

B. 46 m

C. 72 m



D. 80 m

Q15 Mathematics

The difference of the ages of two siblings is 7 years. If the sum of their ages is 21 years, how old is the younger of the siblings?

A. 14 years

B. 10 years

C. 7 years



D. 3 years



Q16 Mathematics

A sum of money is distributed among four persons A, B, C and D in the ratio 4: 7: 9: 3. If C gets ₹800 more than B, then find the amount that D gets.

A. ₹1,000

B. ₹1,200



C. ₹1,400

D. ₹1,500

Q17 Mathematics

A and B can together complete a piece of work in 9 days, B and C together can complete the same work in 18 days and C and A together can complete it in 27 days. In how many days can A, B, and C, working together complete the same work?

A. $8\frac{9}{11}$ daysB. $9\frac{7}{11}$ daysC. $9\frac{9}{11}$ daysD. $9\frac{8}{11}$ days**Q18** Mathematics

If $a^2 + b^2 = 50$ and $a \times b = 7$. Find $\frac{(a-b)}{(a+b)}$, where $a > b$.

A. $\frac{3}{4}$ B. $\frac{3}{5}$ C. $\frac{4}{3}$ D. $\frac{5}{3}$ 

Q19 Mathematics

Village A has a population of 72,000, which is decreasing at the rate of 1,000 per year. Village B has a population of 54,000, which is increasing at the rate of 800 per year. In how many years will the population of both the villages be the same?

A. 7

B. 10



C. 12

D. 15

Q20 Mathematics

The mean proportional of 0.25 and 0.64 is

A. 0.4



B. 0.5

C. 0.6

D. 0.7

Q21 Mathematics

Find the total surface area of a closed cuboid whose length, breadth and height are 16 cm, 12 cm, and 8 cm, respectively.

A. 823 cm^2 B. 382 cm^2 C. 832 cm^2 D. 238 cm^2 **Q22** Mathematics

If a sum of ₹3,500 is invested at 5% compound interest per annum, compounded annually, then what is the period for which the compound interest is ₹358.75?

A. 18 months

B. 20 months

C. 24 months



D. 15 months



Q23 Mathematics

How many numbers between 1 to 150 are divisible by 3 and 4 both?

A. 9

B. 10

C. 11

D. 12



Q24 Mathematics

The average of 70 values is 40. If each value is multiplied by 20, what will be the changed average?

A. 1400

B. 90

C. 800



D. 60

Q25 Mathematics

If one of the roots of a quadratic equation is $\frac{1}{2-\sqrt{2}}$, then find the quadratic equation.

A. $2x^2 - 4x + 1 = 0$



B. $\sqrt{2}x^2 + 3x + 2 = 0$

C. $\sqrt{2}x^2 + 3x - 2 = 0$

D. $-2x^2 + 3x + 5 = 0$



Q26 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(13, 84, 29)

(27, 122, 34)

A. (25, 90, 20)



B. (17, 45, 13)

C. (10, 56, 23)

D. (15, 57, 27)

Q27 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷' and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$15 + 12 \times 4 \div 5 - 2 = ?$$

A. 20

B. 22



C. 18

D. 28

Q28 General Intelligence and Reasoning

Five boxes F, E, T, C and S are placed one over the other but not necessarily in the same order. S is second from the top, while E is second from the bottom. C is neither at the top nor at the bottom. What is the position of C from the top?

A. Fifth

B. Fourth

C. Third



D. Second



Q29 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.

P _ Q _ P _ M _ Q _ P _ Q _ P

A. M P P Q Q Q M

B. M Q P Q P Q M

C. M Q P Q P M Q



D. M P Q P Q M Q

Q30 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

8 : 127 :: 5 : 49 :: 11 : ?

A. 214

B. 241



C. 103

D. 203

Q31 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) T Y A N E C M K E W A F H E Q A P M N B E D H E K U W S D A N M A W E (Right)

If all the vowels are dropped from the series, which of the following will be fifth from the right?

A. S



B. D

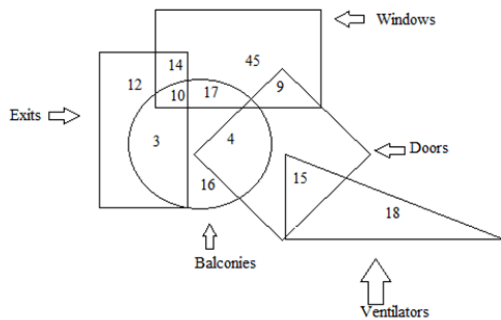
C. W

D. K



Q32 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of units.



How many such balconies are there that are either doors or windows?

A. 21



B. 17

C. 20

D. 16

Q33 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing the north. A sits fourth to the left of C and seventh to the left of B. B sits fifth to the left of D. There is only one person sitting between D and E. No person sits to the right of E. If no other person is sitting in the row, what is the total number of persons seated?

A. 13

B. 12

C. 11

D. 15

**Q34 General Intelligence and Reasoning**

Six persons, A, B, C, D, E and F, were born on different dates – 12th, 14th, 18th, 19th, 4th and 6th, of the same month. None of them were born after D and he was born just after E. Only three people were born before A. Only two people were born between C and E. B was not born after C. Who among the following was born on 12th?

A. B

B. C

C. F



D. A



Q35 General Intelligence and Reasoning

Pole C is to the south of pole H and east of pole R. Pole M is to the west of pole R. Pole A is to the south of pole M. What is the position of pole R with respect to the pole H?

- A. North
- B. South
- C. South-west
- D. South-east

Q36 General Intelligence and Reasoning

BU23G is related to GZ18L in a certain way. In the same way, LC41M is related to QH36R. To which of the following is GU18N related following the same logic?

- A. LZ13S
- B. LZ13H
- C. LP15J
- D. ZL3G

Q37 General Intelligence and Reasoning

What day of the week was 26 January 2003?

- A. Friday
- B. Saturday
- C. Sunday
- D. Monday

Q38 General Intelligence and Reasoning

Ananya, Jaya, Priya, Roma, Geeta and Deepa were having a picnic lunch around a circular table. They were facing the table's centre. Exactly two people sit between Roma and Priya. Roma sits second to the right of Ananya. Deepa was second to the left of Jaya. Who was to the immediate left of Deepa?

- A. Ananya
- B. Priya
- C. Roma
- D. Geeta



Q39 General Intelligence and Reasoning

Eight people, A, B, C, D, E, F, G and H, are sitting in a straight row, facing the south. B is sitting at one of the extreme ends and his immediate left neighbour is F. Only two people are sitting between F and D. C is sitting between D and H. Neither E nor A is sitting at the extreme end. How many people are sitting between F and G?

A. One

B. Two

C. Five



D. Four

Q40 General Intelligence and Reasoning

In a certain code language, 'ERGOT' is written as 'FTJSY' and 'SKELP' is written as 'TMHPU'. How will 'KESHA' be written in that language?

A. LGFVL

B. GLVEL

C. LGLVE

D. LGVLF

**Q41** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	1	%	8	4	0	2	\$	!	6	=	3	7	5	
Code	A	E	I	O	U	P	R	T	V	X	Z	B	D	F

Conditions:

- (i) If the first element is a number and the last, a symbol, the codes for these two (the first and the last elements) are to be interchanged.
- ii) If the first element is an EVEN number and the last, an ODD number, the first and last elements are to be coded as &.
- (iii) If both the second and the third elements are prime numbers, the third element is to be coded as the code for the second element.

Question: 2 \$ 3 7 3

A. & T B D &



B. & B T D &

C. B B T D R

D. R B T D B



Q42 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $C > X < N < S < D = K$

A. $C > N$

B. $N > D$

C. $K > N$



D. $X > K$

Q43 General Intelligence and Reasoning

Karan steps out of his house and walks 200 m towards the east. Then, he takes a right turn and walks 50 m. Then, he takes a right turn and walks 70 m. Then, he takes left turn and walks 35 m. Then, he takes a right turn and walks 130 m. Finally, he takes a final right turn and walks 45 m to reach his college. How far and in which direction is the college from Karan's house? (All turns are 90 degree turns only)

A. 50 m, North

B. 50 m, South

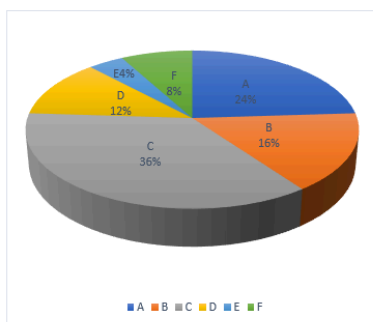
C. 40 m, North

D. 40 m, South

**Q44** General Intelligence and Reasoning

The following pie chart shows the percentage distribution of power to six districts, A to F, of a state. Study the chart and answer the question.

Total number of units generated = 5400



What is the average number of units distributed to districts C, D and E?

A. 935

B. 936



C. 1050

D. 1120



Q45 General Intelligence and Reasoning

A statement is given followed by two possible underlying assumptions I and II. Read all the information carefully and decide which of the given assumptions can be assumed by the given statement.

Statement:

Doctors suggest that for people who are deficient in Vitamin C and have a weakened digestive system, it is better to take Vitamin C supplements than to eat citrus fruits rich in Vitamin C.

Assumptions:

I. Anyone suffering from indigestion issues should stop eating citrus fruits.

II. The end result of both citric fruits and Vitamin C supplements is more or less similar

A. Only I can be assumed

B. Only II can be assumed

C. Both I and II can be assumed

D. Neither I nor II can be assumed



Q46 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word QUALITY is arranged in alphabetical order?

A. None

B. One



C. Two

D. Three

Q47 General Intelligence and Reasoning

Refer to the following number series and answer the question.

(Left) 2 5 4 3 7 8 6 7 9 4 3 7 8 6 2 3 4 8 9 4 8 7 6 4 3 7 2 8 9 7 5 3 2 4 5 9 (Right)

If all the even numbers are dropped from the series, which of the following will be sixth from the left?

A. 3



B. 5

C. 7

D. 9



Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

47, 48, 52, 79, 95, ?

A. 202

B. 220



C. 212

D. 221

Q49 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

12, 17, 32, 57, 92, ?

A. 112

B. 122

C. 137



D. 157

Q50 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$44.999 \div 8.998 + 23.996 \div 11.998 - 7.009 + 8.002 \times 1.998 = ?$$

A. 16



B. 20

C. 24

D. 28

Q51 General Intelligence and Reasoning

If '+' means '÷', '-' means '×', '×' means '+', '÷' means '-', what will come in place of the question mark (?) in the following equation?

$$9 \div 3 \times 21 + 7 - 17 = ?$$

A. 53

B. 33

C. 116

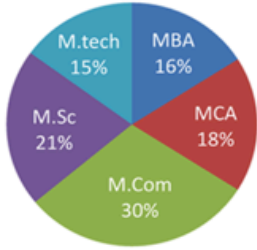
D. 57



Q52 General Intelligence and Reasoning

The following chart shows fee waiver seats in different courses in a university. Study the chart and answer the question.

Total number of students in the university = 15000



What is the total number of fee waiver seats in M.Tech and M.Com together?

A. 4250

B. 6750



C. 5000

D. 6800

Q53 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $H < Z > P = E > W > Q = U$

A. $H < P$

B. $Z > E$



C. $U = W$

D. $Q > E$

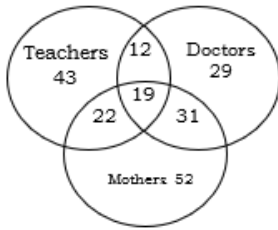


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Q54 General Intelligence and Reasoning

Study the diagram and answer the question that follows. The numbers in different sections indicate the number of persons. What is the sum of the two categories, that is teachers who are doctors and teachers who are mothers but excluding teachers who are doctors as well as mothers?



A. 34



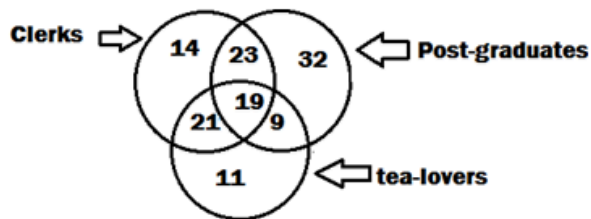
B. 31

C. 43

D. 50

Q55 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such tea-lovers are there who are also post-graduates but NOT clerks?

A. 9



B. 19

C. 28

D. 11



Q56 General Science

A ray of white light is incident on a refracting surface AB of a glass prism and emerges out of the other refracting surface AC. Consider the following statements:

- (a) The angle of refraction at surface AB is different for different colours of white light.
- (b) The angle of refraction at the surface AC is the same for different colours.

Which of the above statements is/are correct?

A. Only (a)



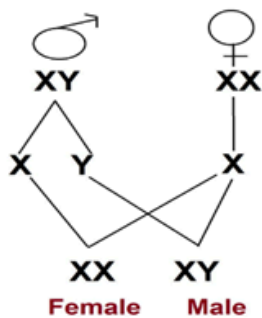
B. Only (b)

C. Both (a) and (b)

D. Neither (a) nor (b)

Q57 General Science

A flow chart of sex determination in human beings is shown below. Some conclusions that can be drawn from it are mentioned in the options. Select the INCORRECT option.



A. The female decides the sex of the offspring.



B. The male decides the sex of the offspring.

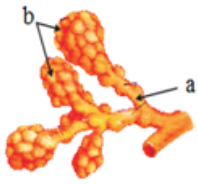
C. The chances of a child being male or female is 50%.

D. All children inherit X chromosome from their mother.



Q58 General Science

The diagram below shows a part of the respiratory system in humans. Which option shows the correct labelling of 'a' and 'b' and the function of 'b'?



- A. a - Bronchi, b - Alveoli (exchange of gases)
- B. a - Bronchioles, b - Alveoli (exchange of gases) ✓
- C. a - Bronchi, b - Bronchioles (exchange of gases)
- D. a - Bronchioles, b - Bronchi (exchange of gases)

Q59 General Science

In a cell that is NOT dividing, DNA is present as part of the _____.

- A. nucleoplasm
- B. chromosome
- C. gene
- D. chromatin material ✓

Q60 General Science

Which of the following property/properties are correct for the magnetic field lines around a bar magnet:

- (i) Magnetic field lines form closed loops
- (ii) Magnetic field lines do not intersect
- (iii) Outside the magnet, magnetic field lines go from south to north pole of the magnet.

- A. Only (i)
- B. Only(ii)
- C. Both (i) and (ii) ✓
- D. Both (ii) and (iii)



Q61 General Science

How are the gaseous waste products produced in the hard stem of big plants and trees removed by the plant?

- A. Through stomata
- B. Through lenticels
- C. Through transpiration
- D. Through osmosis

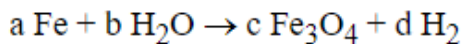
Q62 General Science

The power of a concave lens of focal length 25 cm is _____.

- A. -0.04 D
- B. 0.04 D
- C. -4.0 D
- D. 4.0 D

Q63 General Science

In a balanced chemical reaction, like the one shown below, the values of a, b, c and d respectively, are:



- A. 3,1,1,4
- B. 3,4,1,4
- C. 1,4,1,4
- D. 3,4,3,4

Q64 General Science

A ray of light, passing through the centre of curvature, is incident on a concave mirror. It is reflected by an angle of _____.

- A. 30°
- B. 20°
- C. 10°
- D. 0°



Q65 General Science

Which of the following properties are a sure test for magnetism?

- (a) Attractive property
- (b) Repulsive property
- (c) Directive property

A. Both (a) and (b)

B. Both (b) and (c)



C. Both (a) and (c)

D. (a), (b) and (c)

Q66 General Science

An object is placed at a distance of 24 cm in front of a convex mirror. Its image is formed at a distance at 12 cm behind the mirror. The focal length of the mirror is:

A. -8 cm

B. 8 cm

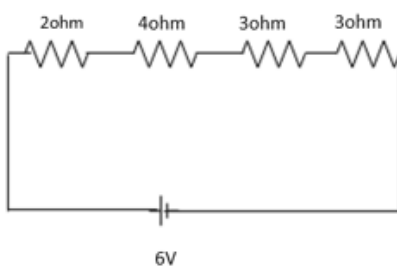
C. -24 cm

D. 24 cm



Q67 General Science

Which of the following options gives the current and equivalent resistance of the circuit in respective order?



A. 0.5 A, 12 Ω



B. 5 A, 12 Ω

C. 0.5 A, 6 Ω

D. 5 A, 6 Ω



Q68 General Science

Two resistances R_1 and R_2 are connected in parallel. Their equivalent resistance is:

A. $\frac{R_1 + R_2}{R_1 R_2}$

B. $\frac{R_1 R_2}{R_1 + R_2}$ ✓

C. $R_1 + R_2$

D. $R_1 R_2$

Q69 General Science

According to Newland's Law of Octaves, the properties of beryllium are similar to those of _____.

A. B

B. C

C. Al

D. Mg ✓

Q70 General Science

The most electronegative element in the periodic table is:

A. chlorine

B. fluorine ✓

C. oxygen

D. nitrogen



Q71 General Science

Select the option that correctly indicates which of the following statements are true.

When a piece of magnesium metal is placed in copper sulphate solution:

- (i) magnesium displaces copper from copper sulphate solution.
- (ii) the blue colour of copper sulphate solution fades.
- (iii) a red brown deposit of copper metal is formed on the magnesium piece.

A. i, ii and iii



B. i and ii

C. i and iii

D. ii and iii

Q72 General Science

Match the following:

Natural source	Acid
i. Vinegar	a. Oxalic acid
ii. Tomato	b. Citric acid
iii. Orange	c. Acetic acid

A. i-a, ii-b, iii-c

B. i-c, ii-b, iii-a

C. i-c, ii-a, iii-b



D. i-a, ii-c, iii-b



Q73 General Science

Which of the following properties is NOT exhibited or shown by carbon?

- A. Catenation
- B. Covalency
- C. Allotropy
- D. Metallic character



Q74 General Science

Which property/ properties of copper make it ideal for electrical transmission lines?

- (i) Low melting point
- (ii) High resistivity
- (iii) Low resistance

- A. Only (i)
- B. Only (iii)
- C. Both (i) and (ii)
- D. Both (i) and (iii)



Q75 General Science

‘Amrita Devi Bishnoi National Award for Wildlife Conservation’ is given in the memory of Amrita Devi Bishnoi. She sacrificed her life to save which trees and where?

- A. Khejri trees, Rajasthan
- B. Sal trees, West Bengal
- C. Sal trees, Rajasthan
- D. Khejri trees, West Bengal



Q76 General Science

Recycling is one of the best methods to decrease the amount of waste generated. Some of its benefits are given below. Which of the following is NOT an advantage of recycling?

- A. It reduces waste sent to landfills.
- B. It prevents pollution.
- C. It is of economic benefit, as it creates jobs.
- D. It is expensive and uses energy.



Q77 General Science

Consider the below statements and identify the correct answer.

Statement-I: An Olfactory indicator is a material whose smell varies depending on whether it is mixed with an acidic or basic solution.

Statement-II: Onion, clove oil and vanilla extract are examples of some olfactory indicators

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.



Q78 General Science

All of the methods mentioned below are effective preventive methods of HIV infection that can be practiced. Select the one that is NOT practiced.

- A. Safe and protected sex
- B. Use of available vaccines
- C. Use of sterile injection needles
- D. Safe blood transfusion method



Q79 General Science

If a substance gains hydrogen during reaction, it is said to be:

- A. reduced
- B. oxidised
- C. decomposed
- D. neutralised



Q80 General Science

Which molecule is known as the 'Energy Currency' of the cell

A. Pyruvic acid

B. Glucose

C. ADP

D. ATP



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Gandhi Jayanti is celebrated every year on 2nd October as a national festival. In which year was Mahatma Gandhi's 150th birth anniversary?

A. 2018

B. 2019

C. 2020

D. 2021



Q82 General Awareness and Current Affairs

Which of the following Indian language constitutes third most spoken language in the world as per Forbes data published in August 2021?

A. Bengali

B. Telugu

C. Hindi

D. Odia



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Q83 General Awareness and Current Affairs

Which factor is NOT a parameter for declaring an area as an urban area?

- A. At least 75% of male population engaged in non-agricultural occupation
- B. Density of population of at least 400 persons per square kilometre
- C. A minimum population of 5000
- D. At least 60% of the population lie above poverty line ✓

Q84 General Awareness and Current Affairs

Digha Nikaya consists of _____ long (dīgha) discourses (suttas), divided into three sections known respectively as the Sīlakkhandha, the Mahāvagga, and the Pātheaya.

- A. 25
- B. 31
- C. 34 ✓
- D. 39

Q85 General Awareness and Current Affairs

The Right to Education for all between _____ years of age is included in Article 21-A of Fundamental Rights in the Constitution of India.

- A. 5 to 10
- B. 6 to 14 ✓
- C. 6 to 18
- D. 6 to 12

Q86 General Awareness and Current Affairs

Which Indian state was the first to make rooftop rainwater harvesting structure mandatory for all homes?

- A. Chhattisgarh
- B. Telangana
- C. Karnataka
- D. Tamil Nadu ✓



Q87 General Awareness and Current Affairs

Where was the 14th National Wheelchair Fencing Championship – 2021-22 held between 25 and 27 February 2022?

- A. Assam
- B. Odisha
- C. West Bengal
- D. Jharkhand



Q88 General Awareness and Current Affairs

Which of the following is the first indigenous drug to treat COVID-19 developed jointly by the Centre for Cellular and Molecular Biology (CCMB), VINS Bioproducts and the University of Hyderabad (UoH)?

- A. Moderena
- B. Vincov-19
- C. Covavex 22
- D. Covishield



Q89 General Awareness and Current Affairs

Which of the following schedules of the Indian Constitution describes the number of seats represented in the Council of States from each state and Union Territory?

- A. Third Schedule
- B. Second Schedule
- C. Fourth Schedule
- D. First Schedule



Q90 General Awareness and Current Affairs

SEWA Cooperative Bank was first initiated in _____ in 1974.

- A. Ahmedabad
- B. Chennai
- C. Jaipur
- D. Varanasi



Q91 General Awareness and Current Affairs

In March 2022, which State Assembly became the first to implement the National e-Vidhan Application (NeVA) programme to become paperless?

- A. Assam
- B. Nagaland
- C. Rajasthan
- D. Mizoram

Q92 General Awareness and Current Affairs

Who was the first Indian citizen to receive the Nobel Prize in literature?

- A. Swami Vivekananda
- B. Rabindranath Tagore
- C. Sarojini Naidu
- D. Sully Prudhomme

Q93 General Awareness and Current Affairs

Which technology company launched a Cyber Security Centre in Bengaluru in February 2022, to tackle cyber-attacks?

- A. HCL
- B. IBM
- C. Apple
- D. Dell

Q94 General Awareness and Current Affairs HINDI - no English version saved

औषधीय पौधे 'अर्जुन' का उपयोग किस रोग के उपचार में किया जाता है?

- A. मधुमेह और उच्च रक्तचाप
- B. मसूड़ों की सूजन और छालों
- C. उच्च रक्तचाप और कान के दर्द
- D. अस्थमा और सर्दी



Q95 General Awareness and Current Affairs

Which of the following is a qualitative instrument of credit control used by the Reserve Bank of India?

A. Moral suasion



B. Open market operations

C. Bank rate

D. Repo rate

Q96 General Awareness and Current Affairs

In the context of Industrial Policy Resolution 1956, which of the following is a correct statement?

a) Schedule A comprised of industries exclusively owned by the state.

b) Schedule B comprised of small-scale industries.

c) Schedule C comprised of the remaining industries.

A. Only a and b

B. Only b and c

C. Only a and c



D. All of a, b, and c

Q97 General Awareness and Current Affairs

Which social sector organization has the vision and mission of 'every child in school and learning well' as of July 2022?

A. Pratham



B. Goonj

C. Nanhi Kali

D. Care India



Q98 General Awareness and Current Affairs

Find the marginal product.

Labour	Total Product	Marginal Product
1	10	10
2	28	?
3	40	?
4	50	?

A. 18, 12 and 10



B. 14, 13.33 and 12.50

C. 9, 4 and 2.50

D. 5, 9.33 and 10

Q99 General Awareness and Current Affairs

Identify the world's largest river line island formed by the Brahmaputra.

A. Sandwip Island

B. Majuli Island



C. Sumba Island

D. Diglipur Island

Q100 General Awareness and Current Affairs

Which Kabaddi team won the title of Pro Kabaddi League 2022 for the first time by defeating three-time champions Patna Pirates?

A. Pink Panthers

B. Gujrat Giants

C. Dabang Delhi



D. Bengaluru Bulls



Mathematics

25 Questions · Answer Key

Q1 Mathematics HINDI - no English version saved

राम की आयु भीम की आयु से 6 वर्ष कम है। 3 वर्ष के बाद भीम की आयु राम से दोगुनी होगी। राम की वर्तमान आयु ज्ञात कीजिए।

A. 3 वर्ष



B. 4 वर्ष

C. 5 वर्ष

D. 6 वर्ष

Q2 Mathematics HINDI - no English version saved

यदि $x - \frac{1}{x} = 8$ है, तो $x^3 - \frac{1}{x^3}$ का मान ज्ञात कीजिए।

A. 425

B. 489

C. 541

D. 536



Q3 Mathematics HINDI - no English version saved

$0.4\overline{32}$ को $\frac{p}{q}$ के रूप में व्यक्त कीजिए, जहां p और q पूर्णांक हैं, और $q \neq 0$ है।

A. $\frac{495}{214}$ B. $\frac{214}{495}$ C. $\frac{173}{465}$ D. $\frac{465}{173}$ 

Q4 Mathematics HINDI - no English version saved

यदि 27 और n का लघुत्तम समापवर्त्य (LCM) 54 है, और महत्तम समापवर्तक (HCF) 9 है, तो n का मान ज्ञात कीजिए।

A. 18



B. 36

C. 54

D. 24

Q5 Mathematics HINDI - no English version saved

₹275 के अंकित मूल्य वाली किसी वस्तु को 5% छूट पर बेचा जाता है। विक्रेता को फिर भी 4.5% का लाभ प्राप्त होता है। उसने इसके लिए कितना भुगतान किया था?

A. ₹125

B. ₹200

C. ₹250



D. ₹225

Q6 Mathematics HINDI - no English version saved

त्रिभुज ABC और PQR में, $AB = AC$, $\angle C = \angle P$ और $\angle B = \angle Q$ है। तो दोनों त्रिभुज _____।

A. समद्विबाहु तथा सर्वांगसम हैं।

B. समद्विबाहु हैं, किंतु सर्वांगसम नहीं हैं।



C. सर्वांगसम हैं, किंतु समद्विबाहु नहीं हैं।

D. न तो सर्वांगसम हैं, और न ही समद्विबाहु हैं।

Q7 Mathematics HINDI - no English version saved

एक चोर ने एक पुलिसकर्मी को 150 m की दूरी से देखा। चोर तुरंत 13 km/h की चाल से भागने लगा और पुलिसकर्मी ने 14 km/h की चाल से उसका पीछा किया। 6 मिनट की दौड़ के बाद उनके बीच की दूरी ज्ञात करें।

A. 100 m

B. 125 m

C. 50 m



D. 75 m



Q8 Mathematics HINDI - no English version saved

वह द्विघात समीकरण ज्ञात कीजिए, जिसके मूल, द्विघात समीकरण $2x^2 + 4x - 1 = 0$ के मूलों के योग और गुणनफल के बराबर हों।

A. $2x^2 + 5x + 2 = 0$



B. $2x^2 - x + 5 = 0$

C. $x^2 + 2x + 5 = 0$

D. $-x^2 + 5x + 1 = 0$

Q9 Mathematics HINDI - no English version saved

X हर महीने अपनी आय का 16% यात्रा पर, 40% किराने के सामान पर, और 14% पारिवारिक चिकित्सा खर्च पर व्यय करता है। उसके पास ₹9,630 की राशि शेष बचती है। उसकी वार्षिक आय ज्ञात कीजिए।

A. ₹3,85,200



B. ₹2,85,200

C. ₹32,100

D. ₹23,767

Q10 Mathematics HINDI - no English version saved

दो संख्याओं के लघुत्तम समापवर्त्य (LCM) और महत्तम समापवर्तक (HCF) का अनुपात 3 : 1 है, और उन संख्याओं का गुणनफल 432 है। लघुत्तम समापवर्त्य (LCM) और महत्तम समापवर्तक (HCF) का मान क्रमशः ज्ञात कीजिए।

A. 36 और 12



B. 24 और 18

C. 72 और 24

D. 54 और 8



Q11 Mathematics HINDI - no English version saved

यदि $4 + 4^{n+5} = 260$ है, तो 5^{n+3} का मान ज्ञात कीजिए।

A. 49

B. 36

C. 25



D. 16

Q12 Mathematics HINDI - no English version saved

यदि A एक न्यून कोण है, और $\tan^2 A + \sec A = 11$ है, तो $\cot A$ का मान ज्ञात कीजिए।

A. $\frac{1}{2\sqrt{7}}$

B. $\frac{1}{2\sqrt{5}}$

C. $\frac{1}{2\sqrt{2}}$



D. $\frac{1}{2\sqrt{3}}$

Q13 Mathematics HINDI - no English version saved

$x^2 - 2x + 3 = 0$ एक _____ है।

A. द्विघात समीकरण



B. घन समीकरण

C. द्विघात बहुपद

D. घन बहुपद

Q14 Mathematics HINDI - no English version saved

यदि किसी संख्या का एक तिहाई स्वयं उस संख्या से 4 कम है, तो वह संख्या ज्ञात कीजिए।

A. 3

B. 4

C. 5

D. 6



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Q15 Mathematics HINDI - no English version saved

यदि $(2x + 7y) : (4x - 3y) :: 8 : 3$ है, तो $x:y$ का मान ज्ञात कीजिए।

A. 26 : 45

B. 20 : 19

C. 45 : 26



D. 11 : 13

Q16 Mathematics HINDI - no English version saved

यदि किसी विशेष डेटा समुच्चय की माध्यिका और बहुलक क्रमशः 12 और 15 है, तो एक अनुभवजन्य संबंध का उपयोग करते हुए, उसी डेटा समुच्चय के माध्य का मान ज्ञात करें।

A. 12

B. 11

C. 10

D. 10.5



Q17 Mathematics HINDI - no English version saved

एक समलंबाकार मैदान PQRS में, $PQ \parallel RS$, $PQ = 12\text{ m}$, $RS = 22\text{ m}$ है, PQ और RS के बीच की दूरी 14 m है। इसमें समान क्षेत्रफलों में दो फसलों की बुवाई की जानी है। प्रत्येक फसल के लिए उपलब्ध क्षेत्रफल ज्ञात कीजिए।

A. 119 m^2



B. 238 m^2

C. 190 m^2

D. 213 m^2

Q18 Mathematics HINDI - no English version saved

किसी दिए गए आंकड़ों के लिए, माध्य और बहुलक का अंतर 72 है। माध्य, माध्यिका और बहुलक के बीच के प्रयोगसिद्ध संबंध का उपयोग करके, इसके माध्य और माध्यिका का अंतर ज्ञात कीजिए।

A. 32

B. 28

C. 26

D. 24



Q19 Mathematics HINDI - no English version saved

यदि ₹9,375 की राशि, अर्ध-वार्षिक चक्रवृद्धि आधार पर गणनीय 8% वार्षिक चक्रवृद्धि ब्याज दर पर निवेश की जाती है, तो एक वर्ष बाद प्राप्त होने वाला मिश्रधन ज्ञात कीजिए।

A. ₹10,220

B. ₹10,430

C. ₹10,140



D. ₹10,300

Q20 Mathematics HINDI - no English version saved

एक दुकानदार को अपने माल का अंकित मूल्य, क्रय मूल्य से कितने प्रतिशत अधिक रखना चाहिए, ताकि अंकित मूल्य पर 8% की छूट देने के बाद भी उसे 15% का लाभ हो?

A. 25%



B. 27%

C. 30%

D. 40%

Q21 Mathematics HINDI - no English version saved

एक समांतर चतुर्भुज ABCD में, AD और AC के मध्य बिंदुओं को मिलाने वाली रेखा की लंबाई 2 इकाई है। यदि समांतर चतुर्भुज का परिमाण 20 इकाई है, तो AD की लंबाई ज्ञात कीजिए।

A. 8 इकाई

B. 5 इकाई

C. 4 इकाई

D. 6 इकाई



Q22 Mathematics HINDI - no English version saved

मोहन की आयु रोहन की आयु की 150% है। सोहन की आयु रोहन की आयु की 250% है। यदि इन तीनों व्यक्तियों की आयु का योग 60 वर्ष है, तो रोहन की आयु ज्ञात कीजिए।

A. 12 वर्ष



B. 13 वर्ष

C. 14 वर्ष

D. 15 वर्ष



Q23 Mathematics HINDI - no English version saved

5 cm लंबाई, 10 cm चौड़ाई और 15 cm ऊंचाई वाला एक बॉक्स बनाने के लिए आवश्यक प्लास्टिक शीट का क्षेत्रफल ज्ञात कीजिए।

A. 550 cm^2



B. 500 cm^2

C. 600 cm^2

D. 650 cm^2

Q24 Mathematics HINDI - no English version saved

देवेंद्र एक कार्य को 20 दिन में पूरा कर सकता है, जबकि ईश्वर उसी कार्य को 25 दिन में पूरा कर सकता है। यदि वे देवेंद्र से शुरू करके एक-एक दिन छोड़कर बारी-बारी से कार्य करते हैं, तो कार्य पूरा होने में कितने दिन लगेंगे?

A. $25\frac{3}{5}$ दिन

B. $24\frac{4}{5}$ दिन

C. $23\frac{2}{5}$ दिन

D. $22\frac{1}{5}$ दिन



Q25 Mathematics HINDI - no English version saved

यदि $5 \times 7 - [23 - \{35 - (20 - x)\}] = 42$ है, तो x का मान ज्ञात कीजिए।

A. 17

B. -17

C. -15

D. 15



Q26 General Intelligence and Reasoning HINDI - no English version saved

P, Q, R, S, T और U में से प्रत्येक की परीक्षा सोमवार से शुरू होकर उसी सप्ताह के शनिवार को समाप्त होने वाले सप्ताह के अलग-अलग दिनों में होती है। R की परीक्षा मंगलवार को है। P और R के बीच केवल एक छात्र की परीक्षा है। Q की परीक्षा, P के ठीक बाद वाले दिन है। उनमें से किसी की भी परीक्षा U से पहले नहीं है, और S की परीक्षा, R के ठीक बाद वाले दिन है। T की परीक्षा किस दिन है?

A. शुक्रवार

B. शनिवार



C. बुधवार

D. गुरुवार

Q27 General Intelligence and Reasoning HINDI - no English version saved

उस संख्या का चयन कीजिए, जो निम्नलिखित श्रेणी में प्रश्न चिह्न (?) के स्थान पर आएगी।

25, 29, 23, 25, 21, ?, 19, 17

A. 27

B. 31

C. 21



D. 19

Q28 General Intelligence and Reasoning HINDI - no English version saved

नीचे एक कथन और उसके बाद विकल्पों में चार निष्कर्ष दिए गए हैं। बताएं कि कौन सा निष्कर्ष दिए गए कथन के आधार पर सत्य है?

कथन: $B > D > H < T = P < A$

A. $B > H$ B. $T > D$ C. $T = A$ D. $B < T$ 

Q29 General Intelligence and Reasoning HINDI - no English version saved

A, B, C, D, E और F में से प्रत्येक को, उनके संबंधित व्याख्यानों के लिए, सोमवार से शुरू होकर शनिवार को समाप्त होने वाले एक ही सप्ताह के अलग-अलग दिन आवंटित किए गए हैं। रविवार को कोई व्याख्यान नहीं होता है। सबसे वरिष्ठ व्यक्ति होने की वजह से, B को शनिवार का दिन आवंटित किया जाता है। दूसरा सबसे वरिष्ठ व्यक्ति होने की वजह से, D को शुक्रवार का दिन आवंटित किया जाता है। सबसे कनिष्ठ व्यक्ति C को सोमवार का दिन आवंटित किया जाता है। ठीक तीन व्यक्ति, E से पहले अपना व्याख्यान देते हैं। व्याख्यान देने हेतु F के लिए कौन सा दिन शेष है?

A. मंगलवार



B. बुधवार

C. गुरुवार

D. सोमवार

Q30 General Intelligence and Reasoning HINDI - no English version saved

निम्नलिखित में से कौन सा विकल्प उस निकटतम लगभग मान को दर्शाता है, जो निम्नलिखित समीकरण में प्रश्न चिह्न (?) के स्थान पर आएगा?

$$(\sqrt{530} + 85 \div 24 \times 4 - \sqrt{255}) \div 3 = ?$$

A. 1

B. 15

C. 7

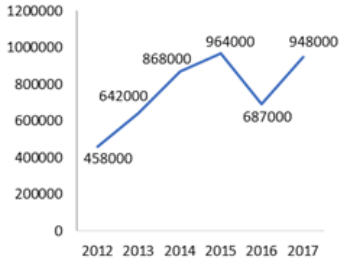


D. 4



Q31 General Intelligence and Reasoning HINDI - no English version saved

निम्नांकित लाइन-ग्राफ 2012 से 2017 तक भारत में गेहूं के उत्पादन (टन में) को दर्शाता है। ग्राफ का अध्ययन कीजिए, और पूछे गए प्रश्न का उत्तर दीजिए।



वर्ष 2018 में, यदि गेहूं का उत्पादन पिछले वर्ष की तुलना में 10% कम हो जाता है, तो वर्ष 2018 और वर्ष 2015 में गेहूं के उत्पादनों (टन में) का अंतर कितना होगा?

A. 1,15,800

B. 1,10,800

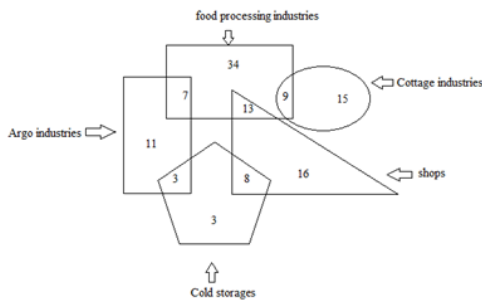


C. 1,10,820

D. 1,15,820

Q32 General Intelligence and Reasoning HINDI - no English version saved

दिए गए आरेख का ध्यानपूर्वक अध्ययन कीजिए, और पूछे गए प्रश्न का उत्तर दीजिए। विभिन्न भागों में दी गई संख्याएं इकाइयों की संख्या को दर्शाती हैं।



ऐसे कुल कितने आर्गो उद्योग (Argo industries) हैं, जो या तो खाद्य प्रसंस्करण उद्योग हैं, (food processing industries) या कोल्ड स्टोरेज (cold storages) हैं?

A. 11

B. 3

C. 7

D. 10



Q33 General Intelligence and Reasoning HINDI - no English version saved

निम्नलिखित संख्या और प्रतीक श्रृंखला के आधार पर पूछे गए प्रश्न का उत्तर दीजिए।

(बाएं) 4 5 & 20 % 7 2 4 @ 6 11 & 2 8 25 # 3 5 6 & * 9 (दाएं)

उपरोक्त श्रृंखला में ऐसी कितनी संख्याएं हैं, जिनमें से प्रत्येक के ठीक पहले एक प्रतीक है, और ठीक बाद भी एक प्रतीक है?

A. शून्य

B. एक



C. दो

D. तीन

Q34 General Intelligence and Reasoning HINDI - no English version saved

एक निर्णय और उसके बाद दो कथन I और II दिए गए हैं। दी गई जानकारी का ध्यानपूर्वक अध्ययन कीजिए, और सही विकल्प का चयन कीजिए।

निर्णय:

टेलीकॉम कंपनी D के प्रबंधन ने अगले 2 महीने के लिए उनकी भर्ती (हायरिंग) प्रक्रिया को स्थगित करने का निर्णय लिया है।

कथन:

I. कंपनी D ने अभी-अभी देश की सबसे बड़ी परियोजना पर हस्ताक्षर किए हैं, जिसके कुछ सप्ताह में शुरू होने की उम्मीद है, और इसे समय पर पूरा करने के लिए उन्हें एक विशाल कार्यबल की आवश्यकता होगी।

II. प्रबंधन में बदलाव के कारण, कंपनी D में नौकरी छोड़ने की दर में 12% की वृद्धि हुई है।

A. कथन I और II, दोनों निर्णय का समर्थन करते हैं।

B. कथन I निर्णय का समर्थन नहीं करता है, और कथन II एक तटस्थ कथन है।

C. कथन I और II, दोनों निर्णय का समर्थन नहीं करते हैं।



D. कथन I एक तटस्थ कथन है, और कथन II निर्णय का समर्थन करता है।



Q35 General Intelligence and Reasoning HINDI - no English version saved

दिए गए तीन-अक्षर वाले अक्षर-समूहों पर आधारित प्रश्न का उत्तर दें।

(बाएं) TED, LAY, HOC, CET, RGE (दाएं)

दाईं ओर से पहले अक्षर-समूह के दूसरे अक्षर और बाईं ओर से पहले अक्षर-समूह के दूसरे अक्षर के बीच अंग्रेजी वर्णमाला क्रम में कितने अक्षर हैं?

A. एक



B. दो

C. शून्य

D. तीन

Q36 General Intelligence and Reasoning HINDI - no English version saved

उस संख्या का चयन कीजिए, जो निम्नलिखित श्रेणी में प्रश्न चिह्न (?) के स्थान पर आएगी।

11, 44, 85, 129, 181, 236, ?

A. 279

B. 297

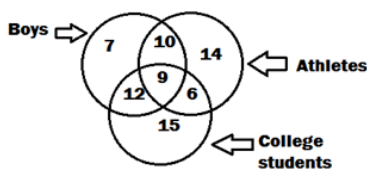
C. 299



D. 289

Q37 General Intelligence and Reasoning HINDI - no English version saved

दिए गए आरेख का ध्यानपूर्वक अध्ययन करें, और पूछे गए प्रश्न का उत्तर दें। विभिन्न भागों में दी गई संख्याएं व्यक्तियों की संख्या को दर्शाती हैं।



Boys - लड़के

Athletes - एथलीट

College Students - कॉलेज के विद्यार्थी

ऐसे कितने लड़के हैं, जो कॉलेज के विद्यार्थी और एथलीट भी हैं?

A. 6

B. 9



C. 12

D. 10

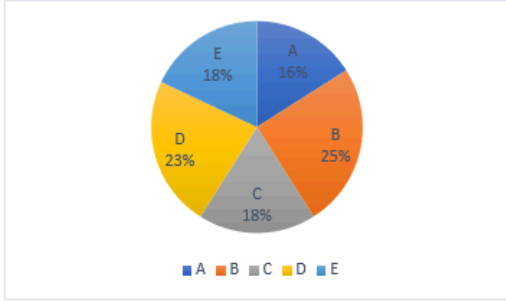


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Q38 General Intelligence and Reasoning HINDI - no English version saved

निम्नांकित पाई चार्ट भारत में पांच राज्यों - A से E में चावल के उत्पादन (% में) से संबंधित जानकारी प्रदान करता है। चार्ट का अध्ययन कीजिए, और पूछे गए प्रश्न का उत्तर दीजिए।



राज्य C में चावल का उत्पादन, राज्य B में चावल के उत्पादन से कितने प्रतिशत कम है?

A. 28%



B. 32%

C. 35%

D. 40%

Q39 General Intelligence and Reasoning HINDI - no English version saved

उस अक्षरांकिक समूह का चयन कीजिए, जो दी गई शृंखला में प्रश्न चिह्न (?) के स्थान पर आकर शृंखला को तार्किक रूप से पूर्ण करेगा।

शृंखला: D5A, F9C, H13E, J17G, ?

A. J25L

B. I21L

C. L21I



D. L25J

Q40 General Intelligence and Reasoning HINDI - no English version saved

आठ व्यक्ति - A, B, C, D, E, F, G और H, एक सीधी पंक्ति में उत्तर की ओर मुख करके बैठे हैं। H, बाएं सिरे से तीसरे स्थान पर है। A, H के दाईं ओर ठीक बगल में बैठा है। A और D के बीच केवल तीन व्यक्ति हैं। G, D के बाईं ओर दूसरे स्थान पर है, तथा G के ठीक बगल में F और C बैठे हैं। E और C के बीच केवल चार व्यक्ति हैं। B और F के बीच कितने व्यक्ति हैं?

A. एक

B. दो

C. तीन



D. चार



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Q41 General Intelligence and Reasoning HINDI - no English version saved

तीन कथन और उनके बाद दो निष्कर्ष I और II दिए गए हैं। कथनों को सत्य मानते हुए विचार करें, भले ही वे सामान्यतः ज्ञात तथ्यों से भिन्न प्रतीत होते हों, और बताएं कि कौन से निष्कर्ष तार्किक रूप से कथनों का पालन करते हैं?

कथन:

कोई कंप्यूटर रिमोट नहीं है।

कुछ टेलीविजन मशीनें हैं।

सभी मशीनें कंप्यूटर हैं।

निष्कर्ष:

I. कोई रिमोट मशीन नहीं है।

II. कुछ कंप्यूटर टेलीविजन हैं।

A. केवल निष्कर्ष I पालन करता है।

B. केवल निष्कर्ष II पालन करता है।

C. निष्कर्ष I और II दोनों पालन करते हैं।



D. या तो निष्कर्ष I या II पालन करता है।

Q42 General Intelligence and Reasoning HINDI - no English version saved

उस विकल्प का चयन करें, जिसका पांचवें अक्षर-समूह से वही संबंध है, जो दूसरे अक्षर-समूह का पहले अक्षर-समूह से है, और चौथे अक्षर-समूह का तीसरे अक्षर-समूह से है।

CLEAR : ENGCT :: MIGHT : OKIJV :: TRUCK : ?

A. USVDL

B. VTWEM



C. VSWDM

D. UTVEL

Q43 General Intelligence and Reasoning HINDI - no English version saved

छह व्यक्तियों - P, Q, R, S, T और U में से प्रत्येक की लंबाई अलग-अलग है। P सबसे लंबा व्यक्ति है। R केवल एक अन्य व्यक्ति से लंबा है। S, U से लंबा है। U, R से लंबा है। ठीक तीन व्यक्तियों की लंबाई T और Q के बीच है, जबकि T, Q से लंबा है। सभी छह व्यक्तियों में से किसकी लंबाई सबसे कम है?

A. Q



B. S

C. U

D. T



घंटे वाली सुई 18 मिनट में कितना कोण बनाएगी?

A. 7.5° B. 9° ✓C. 10.5° D. 12°

शहनाज अपने घर से निकलकर पश्चिम की ओर 500 m चलती है। वहां से वह बाएं मुड़ती है, और 250 m चलती है। फिर वह बाएं मुड़ती है, और 750 m चलती है। फिर वह पुनः बाएं मुड़ती है, और 250 m चलती है। अब वह अपने घर से किस दिशा में और कितनी दूर है? (सभी मोड़ केवल 90 डिग्री वाले मोड़ हैं)

A. पूर्व, 250 m ✓

B. पश्चिम, 250 m

C. पश्चिम, 500 m

D. उत्तर, 250 m

एक कक्षा के सभी 40 छात्र उत्तर की ओर मुख करके एक सीधी पंक्ति में खड़े हैं। अशोक दाएं सिरे से 21वें स्थान पर है, जबकि अली बाएं सिरे से 15वें स्थान पर है। अशोक और अली के बीच कितने छात्र खड़े हैं?

A. एक

B. दो

C. तीन

D. चार ✓

उस विकल्प का चयन करें, जिसका पांचवीं संख्या से वही संबंध है, जो दूसरी संख्या का पहली संख्या से है, और चौथी संख्या का तीसरी संख्या से है।

34 : 51 :: 28 : 42 :: 46 : ?

A. 35

B. 26

C. 53

D. 69 ✓



Q48 General Intelligence and Reasoning HINDI - no English version saved

दिए गए समीकरण में किन दो चिहनों के स्थान परस्पर बदल देने पर समीकरण संतुलित हो जाएगा?
$$\{[(102 + 42) - (4 \times 3)] \div (2 - 4)\} \times 3 = 36$$

A. +, ×

B. ÷, +

C. -, +



D. ÷, ×

Q49 General Intelligence and Reasoning HINDI - no English version saved

एक निश्चित कूट भाषा में, 'MODEST' को 'QSHZNO' और 'OPTION' को 'STXDJI' लिखा जाता है। उसी कूट भाषा में 'MEDIUM' को किस प्रकार लिखा जाएगा?

A. QHIYMQ

B. QIHDPH



C. QDIHHP

D. QIHMYQ

Q50 General Intelligence and Reasoning HINDI - no English version saved

दी गई संख्या श्रेणी का अध्ययन करें, और पूछे गए प्रश्न का उत्तर दें।

2, 6, _, 8, 2, _, 7, 5, _, 4, 7, 2, _, 3, 6, 9, 2, 2, _, 6

निम्न में से किस समूह की संख्याओं को उपरोक्त श्रेणी के रिक्त स्थानों में क्रमिक रूप से रखे जाने पर श्रेणी तार्किक रूप से पूर्ण हो जाएगी?

A. 4, 2, 2, 3, 8

B. 8, 5, 3, 2, 6

C. 4, 2, 3, 3, 8

D. 7, 5, 2, 2, 6



Q51 General Intelligence and Reasoning HINDI - no English version saved

एक निश्चित कूट भाषा में, 'SUJLAM' को 'TTKKBL' लिखा जाता है, और 'CHOKY' को 'DGPJZ' लिखा जाता है। उसी कूट भाषा में 'CURDX' को किस प्रकार लिखा जाएगा?

A. TDPCY

B. DTSCY



C. TDPSC

D. TDSYC



Q52 General Intelligence and Reasoning HINDI - no English version saved

एक वर्गाकार मेज आठ कुर्सियों से घिरी हुई थी, उनमें से चार मेज के कोनों पर थीं, जबकि चार अन्य मेज की भुजाओं के ठीक मध्य में थीं। छह क्लर्क D, E, F, G, H और I, इस वर्गाकार मेज के चारों ओर मेज के केंद्र की ओर मुख करके बैठे थे। मेज के दो कोनों पर पड़ी कुर्सियां खाली थीं। E और I एक-दूसरे के विकर्णतः सम्मुख कोनों पर बैठे थे। H, G के बाईं ओर दूसरे स्थान पर था। D, F के दाईं ओर दूसरे स्थान पर था। G, E के दाईं ओर ठीक बगल में बैठा था। इनमें से कौन H के सामने था?

A. खाली कुर्सी

B. I

C. F



D. D

Q53 General Intelligence and Reasoning HINDI - no English version saved

उस समुच्चय का चयन कीजिए, जिसमें दी गई संख्याओं के बीच वही संबंध है, जो नीचे दिए गए समुच्चयों की संख्याओं के बीच है।

(नोट: संक्रियाएं संख्याओं को उनके संघटक अंकों में विभक्त किए बिना, संपूर्ण संख्याओं पर की जानी चाहिए।

उदाहरणार्थ - 13 पर की जाने वाली संक्रियाएं, जैसे - जोड़ना / हटाना / गुणा करना इत्यादि 13 पर ही की जानी चाहिए। 13 को 1 और 3 में विभक्त करने, और फिर 1 और 3 पर गणितीय संक्रियाएं करने की अनुमति नहीं है।)

(3, 8, 1)

(8, 48, 4)

A. (8, 50, 2)

B. (5, 10, 4)

C. (7, 42, 3)

D. (8, 55, 3)



Q54 General Intelligence and Reasoning HINDI - no English version saved

शनमुख एक बैंक से निकलकर दक्षिण दिशा की ओर 90 m चलती है। फिर वह दाएं मुड़ती है, और 110 m चलती है। फिर वह दाएं मुड़ती है, और 90 m चलती है। अंततः वह पुनः दाएं मुड़ती है, और 220 m चलती है। अब वह बैंक के सापेक्ष किस दिशा में है? (सभी मोड़ केवल 90 डिग्री वाले मोड़ हैं)

A. पूर्व



B. पश्चिम

C. उत्तर

D. दक्षिण



Q55 General Intelligence and Reasoning HINDI - no English version saved

यदि निम्नलिखित समीकरण में '+' और '-' के स्थान परस्पर बदल दिए जाते हैं, और साथ ही 'x' और '÷' के स्थान परस्पर बदल दिए जाते हैं, तो समीकरण में प्रश्न चिह्न (?) के स्थान पर कितना मान आएगा?

$$49 - 4 \div 120 \times 8 + 100 = ?$$

A. 3

B. 6

C. 9



D. 12

General Science

25 Questions • Answer Key

Q56 General Science HINDI - no English version saved

मेंडेलीफ द्वारा किन तत्वों का नामकरण उसी समूह में उनके पूर्ववर्ती तत्वों के नाम से पहले शब्द 'एका (एक)' लगाकर किया गया था?

A. स्कैंडियम, गैलियम और जर्मेनियम



B. बोरॉन, एल्यूमीनियम और गैलियम

C. नाइट्रोजन, फॉस्फोरस और आर्सेनिक

D. कार्बन, सिलिकॉन, जर्मेनियम

Q57 General Science HINDI - no English version saved

एक अवतल दर्पण, 16.0 cm त्रिज्या वाले किसी गोले के पृष्ठ के एक भाग से बनाया गया है। इसका मुख्य फोकस, इसके ध्रुव से _____ की दूरी पर होगा।

A. 4.0 cm

B. 8.0 cm



C. 16.0 cm

D. 32.0 cm

Q58 General Science HINDI - no English version saved

मानव नर द्वारा उत्पन्न आधे युग्मकों में कौन सा गुणसूत्र पूरक होगा?

A. 22 + X



B. 22 + XX

C. 22 + XY

D. 23 + X



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Q59 General Science HINDI - no English version saved

एक प्रकाश किरण, एक 20 cm वक्रता त्रिज्या वाले उत्तल दर्पण (ध्रुव P) के बिंदु M पर आपतित होती है। यह समान पथ के अनुदिश वापस परावर्तित होती है, और इसके वक्रता केंद्र C से आती हुई प्रतीत होती है। नई कार्तीय चिह्न परिपाटी का पालन करते हुए, $PC =$ _____ होगा।

A. -10 cm

B. 10 cm

C. -20 cm

D. 20 cm



Q60 General Science HINDI - no English version saved

किसी 1.0-cm लंबी वस्तु को एक 8 cm फोकस दूरी वाले उत्तल लेंस के मुख्य अक्ष पर 12 cm की दूरी पर रखा गया है। निर्मित प्रतिबिंब की ऊंचाई _____ होगी।

A. 1 cm

B. 1.5 cm

C. 2.0 cm

D. 3.0 cm



Q61 General Science HINDI - no English version saved

L लंबाई और A अनुप्रस्थ काट के क्षेत्रफल वाले एक तार का प्रतिरोध 0.5Ω है। समान पदार्थ से निर्मित, समान लंबाई (L) और 2A अनुप्रस्थ काट के क्षेत्रफल वाले तार का प्रतिरोध _____ होगा।

A. 1.0Ω

B. 0.25Ω

C. 0.5Ω

D. 4.0Ω



निम्न में से कौन सा आमाशय में बनने वाला एक प्रोटीन पाचक एंजाइम है?

- A. माल्टेस (Maltase)
- B. पेप्सिन (Pepsin) ✓
- C. HCl
- D. एंटरोकाइनेज (Enterokinase)

नीचे दिए गए कथनों पर विचार कीजिए, और सही उत्तर का चयन कीजिए।

कथन-I: ब्लीचिंग पाउडर का रासायनिक सूत्र CaOCl_2 है।

कथन-II: ब्लीचिंग पाउडर तनु अम्लों के साथ अभिक्रिया करके क्लोरीन उत्पन्न करता है।

- A. दोनों कथन सत्य हैं। ✓
- B. दोनों कथन असत्य हैं।
- C. कथन-I सत्य है, और कथन-II असत्य है।
- D. कथन-II सत्य है, और कथन-I असत्य है।

n फेरों (turns) और प्रवाहित धारा I वाली किसी परिनालिका के अंदर उत्पन्न चुंबकीय क्षेत्र का परिमाण _____ के समानुपाती होता है।

- A. nI ✓
- B. nI^2
- C. n^2I
- D. n^2I^2



Q65 General Science HINDI - no English version saved

निम्नलिखित में से कौन सी प्रकाशीय परिघटना सूर्योदय और सूर्यास्त के समय सूर्य की चक्रिका के चपटी प्रतीत होने को परिभाषित कर सकती है?

- A. वायुमंडलीय अपवर्तन ✓
- B. प्रकाश का प्रकीर्णन
- C. पूर्ण आंतरिक परावर्तन
- D. प्रकाश का वर्ण-विक्षेपण

Q66 General Science HINDI - no English version saved

निम्न में से कौन सा विकल्प पारितंत्र में ऊर्जा प्रवाह के सही क्रम को निरूपित करता है?

- A. मांसाहारी ← शाकाहारी ← उत्पादक ← सूर्य का प्रकाश ✓
- B. मांसाहारी → शाकाहारी → उत्पादक → सूर्य का प्रकाश
- C. शीर्ष मांसाहारी → उत्पादक → शाकाहारी → सूर्य का प्रकाश
- D. शीर्ष मांसाहारी ← उत्पादक ← शाकाहारी ← सूर्य का प्रकाश

Q67 General Science HINDI - no English version saved

जीवों का निम्न में से कौन सा समूह अन्य पौधों और जीवों को मारे बिना उनसे पोषण प्राप्त करता है?

- A. अमरबेल, ऑर्किड, यीस्ट, मशरूम
- B. कुटकी, जोंक, अमरबेल, ऑर्किड
- C. जूं, फीताकृमि, जोंक, अमरबेल ✓
- D. फीताकृमि, शेर, यीस्ट, जूं

Q68 General Science HINDI - no English version saved

किस यौगिक को निर्जलन अभिकर्मक माना जा सकता है?

- A. एथेनॉल
- B. सांद्र सल्फ्यूरिक अम्ल ✓
- C. एथेनोइक अम्ल
- D. एथीन



Q69 General Science HINDI - no English version saved

क्रमशः $10\ \Omega$ और $20\ \Omega$ के दो प्रतिरोध A और B, 6 V की बैटरी के साथ समानांतर क्रम में संयोजित हैं। 1 सेकंड में बैटरी द्वारा परिपथ को आपूर्ति की गई कुल ऊर्जा _____ होगी।

A. 1.2 J

B. 1.8 J

C. 3.6 J

D. 5.4 J



Q70 General Science HINDI - no English version saved

पौधों में उत्सर्जन के संबंध में निम्नलिखित कथनों में से एक के अलावा अन्य सभी सही हैं। उस गलत कथन की पहचान कीजिए।

A. उत्सर्जन का तात्पर्य शरीर के अपशिष्ट उत्पादों को बाहर निकालना है।

B. पौधे अपशिष्ट उत्पादों का उत्सर्जन करते हैं, किंतु बहुत धीमी गति से करते हैं।

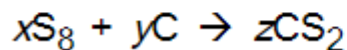
C. पौधे अपशिष्ट उत्पादों का उत्सर्जन बहुत कम मात्रा में करते हैं।

D. पौधों में उनके अपशिष्ट उत्पादों के निष्कासन के लिए कई विशिष्ट अंग होते हैं।



Q71 General Science HINDI - no English version saved

दी गई संतुलित रासायनिक अभिक्रिया में, x , y , और z के मान क्रमशः क्या होंगे?



A. 2, 3, 6

B. 1, 3, 5

C. 2, 6, 3

D. 1, 4, 4



Q72 General Science HINDI - no English version saved

चुंबकीय क्षेत्र में परिवर्तन के कारण कुंडली में उत्पन्न प्रेरित विभवांतर के परिमाण को बढ़ाने के लिए इनमें से किस विधि का उपयोग किया जा सकता है?

- (i) कुंडली में फेरों की संख्या में वृद्धि करना
- (ii) चुंबकीय क्षेत्र की प्रबलता में वृद्धि करना
- (iii) कुंडली के तार की प्रतिरोधकता में वृद्धि करना

- A. केवल (i)
- B. केवल (ii)
- C. (i) और (ii) दोनों
- D. (i) और (iii) दोनों

Q73 General Science HINDI - no English version saved

'इन विट्रो फर्टिलाइज़ेशन (IVF)' विधि में शिशुओं का जन्म निम्न में से किस प्रक्रिया द्वारा होता है?

- A. शुक्राणु और डिंब का बाह्य निषेचन
- B. परखनली के अंदर गर्भ का विकास
- C. एकल माता-पिता से गर्भ का विकास
- D. शुक्राणु और डिंब का आंतरिक निषेचन और भ्रूण का बाह्य विकास

Q74 General Science HINDI - no English version saved

क्रमशः $12\ \Omega$ और $24\ \Omega$ के दो प्रतिरोध A और B, $6\ V$ की बैटरी के साथ श्रेणी क्रम में संयोजित हैं। 1 सेकंड में प्रतिरोधों में क्षय होने वाली कुल ऊष्मा _____ होगी।

- A. $0.15\ J$
- B. $0.30\ J$
- C. $1.0\ J$
- D. $4.5\ J$



निम्नलिखित में से कौन सा अम्ल-क्षारक सूचक नहीं है?

- A. लिटमस
- B. मेथिल ऑरेंज
- C. फीनॉलफ्थेलिन
- D. स्टार्च पेपर



यदि कोई पदार्थ अभिक्रिया के दौरान ऑक्सीजन ग्रहण करता है, तो उसे _____ कहा जाता है।

- A. अपचयित हुआ
- B. ऑक्सीकृत हुआ
- C. विघटित हुआ
- D. उदासीनीकृत हुआ



जब लेड नाइट्रेट को गर्म किया जाता है, तो लेड ऑक्साइड, ऑक्सीजन गैस और एक भूरे रंग की रहस्यमयी गैस बनती है। वह रहस्यमयी गैस कौन सी है?

- A. नाइट्रस ऑक्साइड
- B. कार्बन डाइऑक्साइड
- C. कार्बन मोनोऑक्साइड
- D. नाइट्रोजन डाइऑक्साइड



निम्नलिखित में से कौन सा जीव पचमढ़ी बायोस्फीयर रिज़र्व में पाए जाने वाले जीवों में शामिल है?

- A. सांभर
- B. चिंकारा
- C. कस्तूरी मृग
- D. बारासिंघा



एक विशेष जंतु ऊतक द्वारा किए जाने वाले कुछ कार्यों का उल्लेख नीचे किया गया है:

- a. यह अंगों के अंदर के अवकाश को भर देता है
- b. यह आंतरिक अंगों का सहारा देता है
- c. यह ऊतकों की मरम्मत में सहायक होता है

नीचे दिए गए विकल्पों में से इस ऊतक की पहचान कीजिए।

- A. वसा ऊतक (Adipose tissue)
- B. अवकाशी ऊतक (Areolar tissue) ✓
- C. उपकला ऊतक (Epithelial Tissue)
- D. पेशी ऊतक (Muscular tissue)

निम्न में से कौन सी मेंडलीफ के आवर्त वर्गीकरण की विशेषता नहीं है?

- A. समस्थानिकों की सही स्थिति। ✓
- B. उन्होंने तत्वों को समूहों और आवर्तों के रूप में सारणीबद्ध रूप में व्यवस्थित किया था।
- C. उन्होंने तत्वों को भौतिक और रासायनिक, दोनों गुणधर्मों के आधार पर व्यवस्थित किया था।
- D. वह कुछ अनुपस्थित तत्वों के गुणधर्मों की भविष्यवाणी कर सके थे, जिनकी खोज बाद में हुई।

भारत के किन तीन शहरों में उच्च न्यायालयों की स्थापना सबसे पहले की गई थी?

- A. दिल्ली, मद्रास और बॉम्बे
- B. कलकत्ता, बॉम्बे और दिल्ली
- C. कलकत्ता, दिल्ली और मद्रास
- D. कलकत्ता, बॉम्बे और मद्रास ✓



Q82 General Awareness and Current Affairs HINDI - no English version saved

अप्रैल 2022 में, नीति (NITI) आयोग और यूनिसेफ इंडिया (UNICEF India) ने किस मुद्दे पर ध्यान केंद्रित करते हुए SDGs पर एक आशय-वक्तव्य (Statement of Intent) पर हस्ताक्षर किए?

A. स्वास्थ्य

B. शिक्षा

C. बच्चे



D. युवा

Q83 General Awareness and Current Affairs HINDI - no English version saved

निम्नलिखित में से किसने सर्वप्रथम भारत के लिए संविधान सभा के गठन का प्रस्ताव रखा था?

A. केएम मुंशी

B. बीएन राव

C. एमएन राँय



D. सच्चिदानंद सिन्हा

Q84 General Awareness and Current Affairs HINDI - no English version saved

निम्नलिखित में से किस वर्ष में इंडियन ऑयल कॉर्पोरेशन की स्थापना हुई थी?

A. 1995

B. 1959



C. 1963

D. 1965



Q85 General Awareness and Current Affairs HINDI - no English version saved

पैरा-बैडमिंटन के संवर्धन हेतु नीति के एक अंग के रूप में, भारत की पहली पैरा-बैडमिंटन अकादमी, जनवरी 2022 में किस शहर में शुरू की गई है?

A. भोपाल

B. लखनऊ



C. रायपुर

D. नागपुर

Q86 General Awareness and Current Affairs HINDI - no English version saved

कौन सी नदी प्रणाली मध्य प्रदेश की बस्तर पहाड़ियों से निकलती है?

A. महानदी नदी प्रणाली



B. कावेरी नदी प्रणाली

C. कृष्णा नदी प्रणाली

D. ताप्ती नदी प्रणाली

Q87 General Awareness and Current Affairs HINDI - no English version saved

हरियाणा सरकार द्वारा 24 मार्च 2021 को कौन सी कोविड-रोधी योजना शुरू की गई थी?

A. संजीवनी परियोजना



B. रामबाण परियोजना

C. कोविड मुक्त हरियाणा परियोजना

D. जीरो कोविड परियोजना



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Q88 General Awareness and Current Affairs HINDI - no English version saved

ऋग्वेद चार वेदों में से पवित्रतम वेद है, जिसमें 10,600 ऋचाओं के _____ सूक्तों के 10 अध्याय (जिन्हें मंडल कहा जाता है) शामिल हैं।

A. 1,028



B. 1,128

C. 1,230

D. 1,210

Q89 General Awareness and Current Affairs HINDI - no English version saved

22 अप्रैल 2022 को शुरू की गई डॉ. अंबेडकर उत्कृष्टता केंद्र (DACE) योजना को लागू करने के लिए कितने केंद्रीय विश्वविद्यालयों का चयन किया गया है?

A. 31



B. 4

C. 12

D. 17

Q90 General Awareness and Current Affairs HINDI - no English version saved

इनमें से कौन सा मौलिक अधिकार भारतीय संविधान के अनुच्छेद 16 में शामिल है?

A. विधि के समक्ष समता

B. लोक नियोजन में अवसर की समता



C. उपाधियों का अंत

D. अस्पृश्यता का अंत

Q91 General Awareness and Current Affairs HINDI - no English version saved

भारतीय भाषा संस्थान _____ में स्थित है।

A. नई दिल्ली

B. हैदराबाद

C. कोलकाता

D. मैसूर



MPC = MPS होने पर निवेश गुणक का मान कितना होता है?

- A. 1
- B. 2
- C. 10
- D. अनंत

निम्न को सुमेलित कीजिए।

घटनाएं	वर्ष
1. साइमन कमीशन का भारत आना	a. 1919
2. क्रिप्स मिशन का भारत आना	b. 1928
3. जलियांवाला बाग नरसंहार	c. 1942
4. चौरी-चौरा की घटना	d. 1922

- A. 1-b, 2-c, 3-a, 4-d
- B. 1-a, 2-b, 3-c, 4-d
- C. 1-d, 2-c, 3-a, 4-b
- D. 1-b, 2-a, 3-c, 4-d

सेंटर फॉर मॉनिटरिंग इंडियन इकोनॉमी (CMIE) के आंकड़ों के अनुसार, 2021 में भारत का औसत मासिक महिला रोजगार, 2020 की तुलना में _____ अधिक था।

- A. 4.9%
- B. 5%
- C. 5.2%
- D. 6%



निम्नलिखित में से किस महोत्सव को 'ग्रामीण ओलंपिक' भी कहा जाता है?

- A. पुष्कर मेला
- B. ओणम महोत्सव
- C. किला रायपुर खेल महोत्सव ✓
- D. ड्री महोत्सव

2022 विश्व कप के दौरान ICC महिला विश्व कप के इतिहास में सर्वाधिक विकेट लेने वाली गेंदबाज होने का गौरव किसे प्राप्त है?

- A. झूलन गोस्वामी ✓
- B. मेघना सिंह
- C. रेणुका सिंह
- D. पूनम यादव

उत्तर-पूर्वी भारत, पश्चिमी घाट के कुछ हिस्सों, अंडमान एवं निकोबार, ऊपरी असम, पूर्वी हिमालय के निचले ढलान, ओडिशा, हिमालय की तलहटी, भाबर और तराई क्षेत्रों में किस प्रकार की वनस्पति होती है?

- A. उष्णकटिबंधीय सदाबहार वन ✓
- B. उष्णकटिबंधीय नम पर्णपाती वन
- C. उपोष्णकटिबंधीय पर्वतीय वन
- D. शुष्क पर्णपाती वन



Q98 General Awareness and Current Affairs HINDI - no English version saved

IIT-मद्रास द्वारा विकसित भारत के प्रथम पॉलीसेंट्रिक प्रोस्थेटिक घुटने (polycentric prosthetic knee) का नाम क्या है?

- A. पहल (Pehal)
- B. कदम (Kadam) ✓
- C. स्वतंत्र (Svatantr)
- D. आत्म निर्भर (Atma Nirbhar)

Q99 General Awareness and Current Affairs HINDI - no English version saved

किस वर्ष में उपभोक्ता संरक्षण विधेयक को संसद के दोनों सदनों द्वारा पारित किया गया, और राष्ट्रपति की सहमति प्राप्त हुई?

- A. 1980
- B. 1982
- C. 1984
- D. 1986 ✓

Q100 General Awareness and Current Affairs HINDI - no English version saved

निम्नलिखित में से किसका निर्वाचन नगर निगम में होता है?

- A. पार्षद ✓
- B. आयुक्त
- C. प्रशासनिक कर्मचारी वर्ग
- D. सुरक्षा कर्मचारी वर्ग



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Raghu invests ₹5,00,000 in the name of his daughter, who is 16 years old, in a scheme that pays 5% compound interest per annum, compounded annually. What will be the total amount due to the daughter when she turns 18 years old?

A. ₹ 5,52,150

B. ₹5,51,520

C. ₹ 5,15,250

D. ₹5,51,250



Q2 Mathematics

Express $0.13\overline{241}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{3307}{24975}$ B. $\frac{3807}{24975}$ C. $\frac{3337}{24160}$ D. $\frac{3287}{21780}$

Q3 Mathematics

A dishonest dealer professes to sell his goods at cost price but uses a false weight and thus gains 20%. For a kilogram he uses a weight of how many grams?

A. 750.5 gm

B. 708.06 gm

C. 833.33 gm



D. 785.5 gm



Q4 Mathematics

A retailer would have made a profit of 18% if he sold an article at its marked price. If he allowed a discount of 10% on the marked price, what would his actual profit on that article have been?

A. 6.2%



B. 5.5%

C. 4.6%

D. 7.1%

Q5 Mathematics

For a given data, if mean and mode are 42 and 60, respectively, then find the median of the data using empirical relation.

A. 48



B. 46

C. 44

D. 50

Q6 Mathematics

A and B together can complete a work in 12 days. A alone can complete it in 20 days. If B does the work only for the first half of the day daily, then in how many days will A and B together complete the work?

A. $\frac{22}{3}$ days

B. $\frac{43}{2}$ days

C. 15 days



D. $\frac{40}{3}$ days

Q7 Mathematics

Find the measure of each exterior angle of a regular octagon.

A. 120°

B. 60°

C. 135°

D. 45°



Q8 Mathematics

Find the surface area of a sphere with a diameter $\frac{1}{2}$ cm.

A. $\pi^2 \text{ cm}^2$

B. $\frac{\pi}{4} \text{ cm}^2$ ✓

C. $\frac{\pi}{2} \text{ cm}^2$

D. $2\pi^2 \text{ cm}^2$

Q9 Mathematics

The sum of the prime factors of $9^6 \times 12^4 \times 7^7$ is:

A. 14

B. 13

C. 11

D. 12 ✓

Q10 Mathematics

If a and b are the roots of the equation $x^2 - 5x - 14 = 0$, then the value of $a^3b^2 + a^2b^3$ is:

A. 670

B. 790

C. 840

D. 980 ✓

Q11 Mathematics

If $x = 2 + \sqrt{5}$ and $y = 2 - \sqrt{5}$, then the value of $x^2 + y^2$ is:

A. 18 ✓

B. 16

C. 20

D. 22



Q12 Mathematics

Simplify $6^2 + 3^2 + 2^4$.

A. 61



B. 45

C. 52

D. 63

Q13 Mathematics

A and B can complete a piece of work in 10 days and 12 days, respectively. If they work on alternate days beginning with A, then in how many days will the work be completed?

A. 10

B. $10\frac{5}{6}$



C. $10\frac{1}{4}$

D. $10\frac{1}{2}$

Q14 Mathematics

If, for $x > 0$, the mean of 22.5, 56, 42.5, $2x+1$, $x-2$, $3x$, 36 is 30; then the value of x is _____.

A. 7

B. 9



C. 4

D. 6

Q15 Mathematics

Find the remainder, when $171 \times 172 \times 173$ is divided by 17.

A. 9

B. 6



C. 7

D. 8



Q16 Mathematics

A 3-digit number is such that the unit digit, tens digit and hundreds digit are in the ratio 1 : 2 : 3. The sum of this number and its reversed number is 1332. Find the number

A. 414

B. 246

C. 123

D. 369



Q17 Mathematics

The value of $2 - \frac{\sin^2 \alpha}{1 - \cos \alpha} + \frac{1 - \cos \alpha}{\sin \alpha} - \frac{\sin \alpha}{1 + \cos \alpha}$ is

A. $1 + \cos \alpha$

B. $1 - \cos \alpha$



C. $1 + \sin \alpha$

D. $1 - \sin \alpha$

Q18 Mathematics

Which of the following is true?

a) Every trapezium is a parallelogram.

b) Every parallelogram is a square.

c) Every rectangle is a square.

d) Every square is a rhombus.

A. both a and b

B. only a

C. only d



D. only c



Q19 Mathematics

A's salary is 20% less than B's salary. By how much per cent is B's salary more than A's?

A. 25%



B. 20%

C. 15%

D. 17%

Q20 Mathematics

Ramya got married 10 years ago. Now her age is $1\frac{1}{5}$ times her age at the time of marriage. Her daughter's age is one-tenth of her present age. Find her daughter's present age.

A. 12 years

B. 6 years



C. 8 years

D. 20 years

Q21 Mathematics

Bhuvan's salary was first decreased by 16% and subsequently increased by 25%. Find the net percentage change in his salary.

A. 5% increase



B. 10% increase

C. 5% decrease

D. 10% decrease

Q22 Mathematics

If $x^3 - 3x + 6 = 0$, then it is:

A. a quadratic equation

B. not a quadratic equation



C. a quadratic expression

D. a linear equation



Q23 Mathematics

Solve: $3(5x^2 - 7) - 5(3x^2 + 2x - 7) = -16$

A. 2

B. 3



C. 4

D. 5

Q24 Mathematics

If the breadth and height of a closed cuboid are, respectively, 25% and 50% of its length of 12 cm, then find the total surface area of this cuboid.

A. 63 cm^2

B. 522 cm^2

C. 126 cm^2

D. 252 cm^2

**Q25** Mathematics

The sum of the ages of five children born at the intervals of three years each is 60 years. What is the age of the youngest child?

A. 4 years

B. 5 years

C. 6 years



D. 7 years

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Hisar is to the north of Bhiwani, Bhiwani is to the west of New Delhi, Rohtak is to the south of Panipat and to the east of New Delhi. What is the position of Hisar with respect to Panipat?

A. East

B. West



C. North

D. South



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Q27 General Intelligence and Reasoning

Q started from a point and walked towards the south for 42 m and reached point A. Q then turned right from point A and walked 2 m, he then turned right again and walked 30 m. Q turned left now and walked 10 m, he then turned left again and walked 30 m. How far is Q from point A?

(All turns are 90 degree turns only)

A. 52 m

B. 42 m

C. 12 m



D. 30 m

Q28 General Intelligence and Reasoning

Nirmal and Sushma are standing in a queue of people facing north. Nirmal is at the 20th position from the extreme left end, and Sushma is at the 10th position from the extreme right end. The positions of Nirmal and Sushma are interchanged due to some criteria based on age. If the new position of Nirmal is 30th from the extreme left end, then what is the new position of Sushma from the extreme right end?

A. 20th



B. 18th

C. 25th

D. 30th

Q29 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	4	α	5	9	÷	±	8	\$	!	3	@	6	7	2
Code	C	G	K	Q	W	R	T	V	X	D	A	E	H	G

Conditions:

- (i) If the first element is a number and the last, a symbol, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an EVEN number and the last, an ODD number, the first and last elements are to be coded as !.
- (iii) If both the third and the fourth elements are prime numbers, the fourth element is to be coded as the code for the third element and vice-versa.

Question: 8 \$ 5 2 @

A. TVKGA

B. AVGKT



C. TVGKA

D. AVKGT



Q30 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

18 : 63 :: 44 : 154 :: 54 : ?

A. 138

B. 179

C. 189



D. 146

Q31 General Intelligence and Reasoning

The following table shows the population of six different cities, A, B, C, D, E and F, the ratio of males to females among them and the ratio of adults to children in the total population. Study the table and answer the question.

City	Population	Male : Female	Adult : Children
A	410400	13 : 11	5 : 3
B	369900	5 : 4	7 : 2
C	442800	5 : 7	7 : 5
D	465500	17 : 18	4 : 3
E	499500	5 : 4	5 : 4
F	424500	8 : 7	17 : 13

What is the difference between the total number of adults and the total number children in city A?

A. 1,04,600

B. 1,02,600



C. 1,12,600

D. 1,02,000

Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

7, 18, 34, 72, 142, ?

A. 288



B. 282

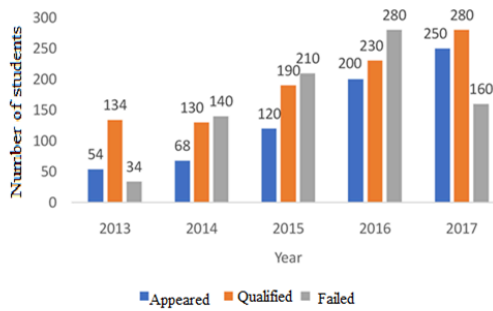
C. 228

D. 298



Q33 General Intelligence and Reasoning

The following bar graph gives the information on the number of students who appeared, qualified and failed in a bank PO exam (in hundreds) in different years. Study the graph and answer the question.



By what percentage is the average number of students who failed in the given five years more than the number of students who failed in 2017?

- A. 2%
- B. 3%
- C. 4%
- D. 5%



Q34 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Students have complained that questions outside the prescribed syllabus were asked in the X standard board exams this year.

Arguments:

- I. The pass percentage in the X standard board exams has declined by 8 percent this year.
- II. The number of students scoring over 60 percent in the X standard board exams has shown an increase of 15 per cent this year.

- A. Argument I weakens, while argument II strengthens the statement
- B. Argument II weakens, while argument I strengthens the statement
- C. Both arguments I and II weaken the statement
- D. Both arguments I and II strengthen the statement



Q35 General Intelligence and Reasoning

Nine people, 1 to 9, are sitting in a straight row, facing the north. 8 is sitting in the middle of the row and his immediate left and right neighbours are 5 and 1, respectively. 9 is sitting at one of the extreme ends and his immediate right neighbour is 2. Only five people are there between 2 and 3. 3 is sitting between 7 and 6. 1 and 7 are immediate neighbours. How many people are there between 4 and 6?

- A. One
- B. Two
- C. Five
- D. Four



Q36 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$99.01 \div 10.93 + 6.987 \times 16.01 = ?$$

- A. 133
- B. 145
- C. 129
- D. 121



Q37 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

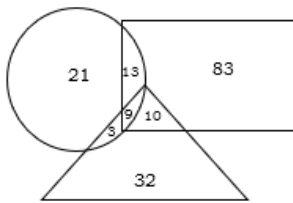
TDK-4, XHO-9, BLS-16, FPW-25, ?

- A. JTA-36
- B. JTB-36
- C. JUA-36
- D. JTA-64



Q38 General Intelligence and Reasoning

In the following diagram, the circle represents girls, the triangle represents science students, and the rectangle represents PG students. The numbers in different sections indicate the number of persons. How many PG students are girls who are NOT science students?



A. 12

B. 13



C. 19

D. 22

Q39 General Intelligence and Reasoning

If each of the digits in the number 63547981 is arranged in ascending order from left to right, then the position of how many digits will remain unchanged as compared to that in the original number?

A. One

B. Two



C. Three

D. Four

Q40 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$10 + 152 \times 19 - 2 \div 3 = ?$$

A. 2

B. 4

C. 6

D. 8



Q41 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3, 9, 25, 53, 157, ?

A. 300

B. 307

C. 317



D. 371

Q42 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 6. E lives on the floor immediately below F's floor. D lives on the 2nd floor. C lives on the floor immediately below A's floor. F does not live on the 5th floor. On which floor does B live?

A. 1st



B. 3rd

C. 5th

D. 6th

Q43 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

MGB : NTY

THK : GSP

A. LCP : OXJ

B. QDF : JWU



C. MER : NVH

D. CHX : XIC



Q44 General Intelligence and Reasoning

In a college, the Art room, the Library, the Gym, the Labs, the Storerooms, the Staffrooms and the Classrooms are there on seven different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 7. No other floors are there below the Library, and the Library is immediately below the Gym. Only two floors are there between the Gym and the Classrooms. Both the Labs and the Staffrooms are on even numbered floors. Only three floors are there between the Storerooms and the Art room. The Storerooms are immediately below the Labs. Which of the following is/are there on floor number 4?

- A. Art room
- B. Storerooms
- C. Labs
- D. Staffrooms



Q45 General Intelligence and Reasoning

Refer to the following letter, number and symbol series and answer the question.

(Left) G B D F H & 8 * T % 7 D 4 @ 6 K & 2 R P Q T @ Y # 3 5 E * S (Right)

How many such symbols are there in the series which are immediately preceded by a letter and also immediately followed by a number?

- A. One
- B. Two
- C. Three
- D. Four



Q46 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

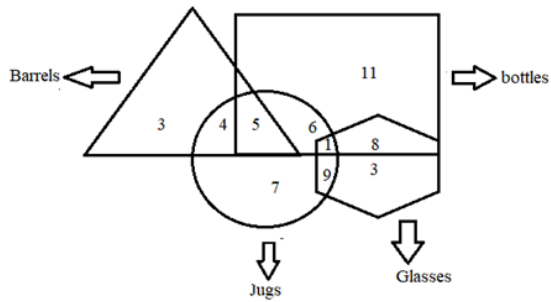
6 : 33 :: 11 : 58 :: 18 : ?

- A. 105
- B. 98
- C. 93
- D. 150



Q47 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of articles.



How many such barrels are there that are only jugs?

A. 4



B. 5

C. 6

D. 1

Q48 General Intelligence and Reasoning

Eight students, 1 to 8, are sitting around a circular table facing the centre. 1 is the immediate neighbour of both 8 and 2. 3 is sitting second to the right of 1. 1 is sitting second to the right of 7. 5 is the immediate neighbour of 6 and 4. How many students were sitting between 5 and 1?

A. One

B. Two

C. Three



D. None

Q49 General Intelligence and Reasoning

How many such pairs of letters are there in the word HINDUSTAN (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. 1

B. 2

C. 3



D. 4



Q50 General Intelligence and Reasoning

Among six students, K, L, M, N, O and P, each scores different marks in an examination. M scores more marks than only three other students. K scores more marks than N. P scores less marks than M. O scores more marks than L. P scores more marks than K. L scores more marks than M. Who scores the highest marks among all six students?

A. O



B. P

C. K

D. N

Q51 General Intelligence and Reasoning

At what time between 2 o'clock and 3 o'clock will the hands of a clock be together?

A. $10\frac{10}{11}$ past 2



B. $11\frac{12}{11}$ past 2

C. $6\frac{5}{11}$ past 2

D. $3\frac{5}{11}$ past 2

Q52 General Intelligence and Reasoning

How many such pairs of letters are there in the word TOMORROW (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. 1



B. 2

C. 3

D. 4

Q53 General Intelligence and Reasoning

Among six persons, K, L, M, N, O and P, each one has a different age. P is older than only three other persons. N is older than L. O is younger than L. M is older than K. P is younger than K. Who is the second youngest among all six persons?

A. O

B. N

C. L



D. K



Q54 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	22	56	33	#	46	&	64	@	%	37	57
Code	L	K	J	H	G	F	D	S	A	P	B

Conditions:

- (i) If the first element is a symbol and the last element is a number, then replace these two (first and last) elements with %.
- (ii) If the second element is a number and the second last is a symbol, the codes of the first and last elements are to be interchanged.
- (iii) If the question has an equal quantity of even and odd numbers, then replace the even numbers with * and odd numbers with <

Question: # 22 64 % 33 & 37 @

A. HLDAJFPS

B. #LDAJFP@

C. H**A33F37S

D. H**A<F<S

**Q55 General Intelligence and Reasoning**

Given below are three statements and three conclusions. Take the statements to be true even if they are at variance with commonly known facts, and decide whether the conclusion/s follow/s the given statements.

Statements:

- I. All pen drives are hard drives.
- II. Some hard drives are chips.
- III. All chips are keyboards.

Conclusions:

- I. Some keyboards are pen drives.
- II. Some chips are pen drives.
- III. Some keyboards are hard drives.

A. Only conclusion I follows

B. Conclusions I and III follow

C. Only conclusion III follows



D. All the conclusions follow



Q56 General Science

Which of the following diseases is NOT sexually transmitted?

- A. AIDS
- B. Syphilis
- C. Hepatitis B
- D. Tuberculosis



Q57 General Science

A lens having power 8 D is kept in contact with another lens having power -4 D. The lens combination will act as a:

- A. convex lens having focal length 25 cm
- B. concave lens having focal length 25 cm
- C. convex lens having focal length 50 cm
- D. concave lens having focal length 50 cm



Q58 General Science

Which of the following reactions will be considered as a double displacement reaction?

- A. $\text{MgO} + \text{H}_2\text{O} \rightarrow \text{Mg}(\text{OH})_2$
- B. $\text{Zn} + \text{FeCl}_3 \rightarrow \text{ZnCl}_2 + \text{Fe}$
- C. $\text{H}_2\text{CO}_3 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- D. $\text{HCl} + \text{KOH} \rightarrow \text{KCl} + \text{H}_2\text{O}$



Q59 General Science

The potential difference across a copper wire is 2.0 V when a current of 0.4 A flows through it. The resistance of the wire is:

- A. 0.2Ω
- B. 0.5Ω
- C. 2.5Ω
- D. 5.0Ω



Q60 General Science

In the conservation of forests, stakeholders play a very important role. Which of the following are NOT the stakeholders in the forest?

- A. Forest Department of the Government
- B. The people who live in and around the forest and depend on forest produce
- C. People living in urban areas ✓
- D. Wildlife and nature enthusiasts

Q61 General Science

It is found that during dispersion of white light by a glass prism, the more a colour component is bent, the more is the refractive index of the glass for that colour component. If μ_Y , μ_V and μ_G are refractive indices for yellow, violet and green lights, respectively, then which of the following relations between them is correct?

- A. $\mu_G > \mu_Y > \mu_V$
- B. $\mu_Y > \mu_V > \mu_G$
- C. $\mu_V > \mu_G > \mu_Y$ ✓
- D. $\mu_Y = \mu_V = \mu_G$

Q62 General Science

The first step to practice waste management is segregation. Select the INCORRECT option with regard to segregation of waste into different categories.

- A. Segregation helps to reduce the money spent on disposal of waste
- B. It increases the amount of waste going into landfills ✓
- C. It prevents items suitable for recycling from being thrown away
- D. It helps to identify materials that can be sold to earn revenue

Q63 General Science

An object is placed in front of a concave mirror of focal length 12 cm, at a distance of 8 cm. Its image is formed at a distance of:

- A. 24 cm ✓
- B. 12 cm
- C. 8 cm
- D. 4.8 cm



Q64 General Science

Consider the following statements about magnetic field due to a current-carrying solenoid:

- (a) The magnetic field is uniform inside the solenoid.
- (b) One end of the solenoid behaves like the north pole and the other like the south pole of a bar magnet.

Which of the above statements is/are correct?

A. Both (a) and (b)



B. Neither (a) nor (b)

C. Only (a)

D. Only (b)

Q65 General Science

Some features of villi of the small intestine in humans are given below:

- (i) They are finger-like with very thin walls
- (ii) Provide a large surface area
- (iii) Have small pores for food to pass
- (iv) Richly supplied by blood capillaries

Which option/options shows/show the features that enable the villi to absorb food?

A. Only (i)

B. Only (ii) and (iii)

C. Only (i) and (iii)

D. (i), (ii) and (iv)



Q66 General Science

Consider the following statements about magnetic field due to a current-carrying straight conductor:

- (a) The direction of the south pole of a compass needle at a point gives the direction of the magnetic field at that point.
- (b) The direction of the magnetic field lines gets reversed if the direction of the current in the conductor is reversed.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Neither (a) nor (b)
- D. Both (a) and (b)



Q67 General Science

Which of the following groups of three elements each constitutes Dobereiner's triads?

- A. Li, Mg, Al
- B. Cl, H, Si
- C. Ca, Ba, F
- D. Cl, Br, I



Q68 General Science

Mendel worked with a number of contrasting visible characters of garden pea. Some of them were:

- a) Round and wrinkled seeds
- b) tall and short plants
- c) white and violet flowers

Which of these are the recessive traits in the pea plant?

- A. Wrinkled, short and violet
- B. Round, short and white
- C. Wrinkled, short and white
- D. Violet, short and round



Q69 General Science

Where in the human body does pyruvate undergo aerobic breakdown?

- A. Cytoplasm
- B. Nucleus
- C. Mitochondria
- D. Muscles



Q70 General Science

A concave mirror converges light rays from the sun at 10 cm from the mirror. If an object is placed 20 cm from the mirror, the image is formed:

- A. 20 cm in front of the mirror
- B. 20 cm behind the mirror
- C. 10 cm in front of the mirror
- D. 10 cm behind the mirror



Q71 General Science

All of the statements given below regarding inhalation in humans are correct except one. Which one is NOT correct?

- a) Ribs move inward and diaphragm is raised.
- b) Ribs are lifted up and diaphragm becomes flat.
- c) Chest cavity becomes larger.
- d) Air is sucked into the lungs.

- A. b
- B. a
- C. c
- D. d



Q72 General Science

Consider the below statements and identify the correct answer.

Statement-I: Salts of strong acid and a strong base are neutral with pH value of 7.

Statement-II: Salts of a strong acid and weak base are acidic with pH value less than 7.

- A. Both the statements are true. ✓
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

Q73 General Science

Long chain compounds formed by Silicon are:

- A. Very stable
- B. Less polarizable
- C. Very reactive ✓
- D. More Ionic

Q74 General Science

Two resistors, A of $10\ \Omega$ and B of $30\ \Omega$, are connected in series to a battery of 6 V. The total heat dissipated in the resistors in 1 second is:

- A. 0.45 J
- B. 0.90 J ✓
- C. 2.4 J
- D. 4.8 J

Q75 General Science

Silver chloride turns into silver and chlorine gas in the presence of ultraviolet radiation. This is an example of:

- A. thermal decomposition reaction
- B. double displacement reaction
- C. redox reaction
- D. photolytic decomposition reaction ✓



Q76 General Science

Two resistors, A of $6\ \Omega$ and B of $12\ \Omega$, are connected in parallel to a battery of 3 V. The total energy supplied by the battery to the circuit in 1 second is:

- A. 0.75 J
- B. 1.5 J
- C. 2.25 J
- D. 4.5 J



Q77 General Science

Consider the below statements and identify the correct answer.

Statement I: Atomic radius increases in moving from left to right along a period.

Statement II: Nuclear charge increases in moving from left to right along a period.

- A. Both statements are correct. Statement II is correct explanation of Statement I.
- B. Both statements are correct. Statement I is correct explanation of Statement II.
- C. Only Statement I is correct.
- D. Only Statement II is correct.



Q78 General Science

What is the process called when a substance's spontaneous movement from a high concentration to a low concentration takes place?

- A. Diffusion
- B. Osmosis
- C. Gaseous exchange
- D. Circulation



Q79 General Science

Formation of methyl chloride from methane and chlorine gas is which type of reaction?

- A. Combustion reaction
- B. Oxidation reaction
- C. Addition reaction
- D. Substitution reaction



Q80 General Science

Which compounds are required to manufacture baking soda?

- A. Sodium hydroxide and water
- B. Water and bleaching powder
- C. Water and sodium carbonate
- D. Common salt, carbon dioxide and ammonia



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

India's first wholly owned women's industrial park opened in March 2022 in Hyderabad. This park has been promoted by which organization in collaboration with the Government of Telangana?

- A. Sabala Organisation
- B. FICCI Ladies Organisation
- C. Self Employed Women's Association
- D. Confederation of Women Entrepreneurs



Q82 General Awareness and Current Affairs

Which of the following types of coal is known to have the highest carbon content in it?

- A. Bituminous
- B. Sub-bituminous
- C. Anthracite
- D. Lignite



Q83 General Awareness and Current Affairs

From which of the following countries has the Freedom of Trade feature been taken by the Indian Constitution?

- A. Ireland
- B. Germany
- C. Australia
- D. USSR



Q84 General Awareness and Current Affairs

‘Families increase savings to offset the increased government dissaving.’

Who among the following has given the above mentioned theory?

- A. David Ricardo
- B. Takeshi Amemiya
- C. Walter Adams
- D. BR Ambedkar



Q85 General Awareness and Current Affairs

According to Article 24 of the Constitution of India which deals with the Right against Exploitation, what is the minimum age fixed by the government to work in a factory or mine?

- A. 18 years
- B. 21 years
- C. 16 years
- D. 14 years



Q86 General Awareness and Current Affairs

Which institution governs the area that is in transition from rural to urban?

- A. Gram Sabha
- B. Gram Panchayat
- C. City Councils
- D. Panchayat Samitis



Q87 General Awareness and Current Affairs

On 14 February 2022, ISRO (Indian Space Research Organisation) launched which of the following satellites?

- A. EOS-04
- B. EOS-03
- C. CMS-01
- D. EOS-01



Q88 General Awareness and Current Affairs

Which of the following cities is famous for the iconic 'Kumbh Mela'?

- A. Prayagraj
- B. Ahmedabad
- C. Lucknow
- D. Surat



Q89 General Awareness and Current Affairs

The Secretary General of the Rajya Saba is appointed by who among the following?

- A. Chairman of Rajya Sabha
- B. President
- C. Attorney General
- D. Prime Minister



Q90 General Awareness and Current Affairs

Who was the first Deputy Chairman of the Planning Commission of India?

- A. KC Neogy
- B. Gulzarilal Nanda
- C. Jawaharlal Nehru
- D. Vallabhbhai Jhaverbhai Patel

Q91 General Awareness and Current Affairs

If Average Production is decreasing, then what will be the effect on Marginal Production?

- A. It will be less than Average Production
- B. It will be the same as Average Production
- C. It will be more than Average Production
- D. It will have a positive slope

Q92 General Awareness and Current Affairs

Who presented a draft bill in the Parliament – The National Anti-Doping Bill, 2021 – to regulate anti-doping activities in sports?

- A. Rajyavardhan Singh Rathore
- B. Kiran Rijiju
- C. Anurag Thakur
- D. Sandeep Singh

Q93 General Awareness and Current Affairs

Where was the first session of Indian National Congress held?

- A. Bombay
- B. Madras
- C. Lucknow
- D. Patna



Q94 General Awareness and Current Affairs

Which of the following is the non-metallic form of mineral?

- A. Silver
- B. Lead
- C. Bauxite
- D. Mica



Q95 General Awareness and Current Affairs

Books that contain the records of Christ's life are known as _____.

- A. Torahs
- B. Sermons
- C. Gospels
- D. Psalms



Q96 General Awareness and Current Affairs

What is the name of a river in central India with a total length of about 724 km, which originates from Betul, Madhya Pradesh, and joins the Arabian Sea?

- A. Godavari River
- B. Tapi River
- C. Kaveri River
- D. Krishna River



Q97 General Awareness and Current Affairs

In September 2021, which state government launched the Nirbhaya Ek Pahal scheme under Phase 3 of Mission Shakti?

- A. Chhattisgarh
- B. Goa
- C. Uttar Pradesh
- D. Rajasthan



Q98 General Awareness and Current Affairs

As a part of policy to promote 'Sports for Unity' National Games Gujarat 2022 is proposed to have a total of how many sports?

- A. 28
- B. 30
- C. 32
- D. 36



Q99 General Awareness and Current Affairs

Which of the following statements about Classical Language is INCORRECT?

- A. High antiquity of a language's early texts over a period of 1500-2000 years for it to be considered classical.
- B. The literary tradition be original and not borrowed from another speech community for a language to be classical .
- C. The classical language and literature being distinct from modern for a language to be classical.
- D. At least two million people must speak the language for it to be considered classical.



Q100 General Awareness and Current Affairs

Which of the following institutions launched the microfinance movement in India on a pilot basis in 1992?

- A. SIDBI
- B. NABARD
- C. IFCI
- D. IIFCL



Mathematics

25 Questions · Answer Key

Q1 Mathematics

Which of the identities given below is NOT true?

A. $\sec^2\theta - \tan^2\theta = 1$

B. $\tan^2\theta + \cot^2\theta = 1$ ✓

C. $\operatorname{cosec}^2\theta - \cot^2\theta = 1$

D. $\sin^2\theta + \cos^2\theta = 1$

Q2 Mathematics

The value of

$$\left\{ \left(234^5 - 243^8 + \frac{1}{72} \right)^{-8} \right\}^0 + 8 =$$

A. 234

B. 10

C. 9 ✓

D. 243

Q3 Mathematics

The ratio of milk to water in 10 litres of a mixture is 3: 2. If this ratio is to be made 2: 3, then the quantity of water to be added further to the mixture is:

A. 10 litres

B. 8 litres

C. 5 litres ✓

D. 12 litres

Q4 Mathematics

A man brought some fruits at 14 for ₹30 and sold them at 7 for ₹20. What is his profit percentage?

A. 30%

B. 33.33% ✓

C. 36.33%

D. 20%



Q5 Mathematics

The internal bisectors of $\angle B$ and $\angle C$ of $\triangle ABC$ meet at D. If $\angle A = 75^\circ$, the $\angle BDC$ is:

A. 127.5°



B. 112.5°

C. 105.5°

D. 102.5°

Q6 Mathematics

If $\text{GCD}(108, 36) = \text{GCD}(x, 72)$ then what is the minimum possible value of x ?

A. 24

B. 36



C. 12

D. 72

Q7 Mathematics

By what per cent does the curved surface area of a cylinder decrease, if the radius is increased by 10% and the height is decreased by 40%?

A. 20%

B. 34%



C. 51.6%

D. 24.3%

Q8 Mathematics

If a person covers a distance of 90 km at a speed of 45 km/h and another distance of 150 km at a speed of 50 km/h, then his average speed for the whole journey is:

A. 48 km/h



B. 47 km/h

C. 49 km/h

D. 46 km/h



Q9 Mathematics

The value of $\frac{1}{4} + \frac{2}{5} \div \left[\left\{ 2\frac{1}{5} - 2 \right\} \times 5 \right] - \frac{2}{3} \times \frac{3}{5}$ is:

A. $\frac{3}{5}$

B. $\frac{5}{6}$

C. $\frac{1}{4}$

D. $\frac{2}{3}$



Q10 Mathematics

Find the sum of the roots of the quadratic equation $7x^2 + 28x + 1 = 0$.

A. 28

B. -4

C. 1

D. $-\frac{1}{7}$



Q11 Mathematics

If $a + b = 48$ and $ab = 56$, then what is the value of $a^3 + b^3$?

A. 1,20,528

B. 1,20,825

C. 1,02,258

D. 1,02,528



Q12 Mathematics

Which of the following is true for a square?

- a) All angles equal
- b) All sides parallel
- c) Diagonals equal
- d) All sides equal

A. a, b, c

B. a, c, d



C. b, c, d

D. a, b

Q13 Mathematics

A dishonest shopkeeper claims to sell rice at the cost price of ₹95 per kg, but the weight he uses has 1 kg written on it, while it actually weighs 950 gms. The profit he thus earns on selling rice having an actual weight of 100 kg rice is:

A. ₹275

B. ₹375

C. ₹475

D. ₹500



Q14 Mathematics

If T denotes the sum of money, M denotes the number of years and P denotes the rate of interest, then the compound interest is given by:

A. $M(1 + T/100)^P - T$

B. $M(1 + M/100)^P$

C. $T(1 + P/100)^M - T$



D. $T(1 + P/100)^M$



Q15 Mathematics

Find the median of the given frequency distribution.

Class Interval	0-10	10-20	20-30	30-40	40-50
f	10	8	7	9	12

A. $\frac{190}{7}$



B. $\frac{250}{7}$

C. $\frac{290}{7}$

D. $\frac{150}{7}$

Q16 Mathematics

Using $\pi = \frac{22}{7}$, find the total surface area of a cylinder whose radius of base is 7 cm and height is 8 cm.

A. 625 cm^2

B. 660 cm^2



C. 665 cm^2

D. 710 cm^2

Q17 Mathematics

The fraction equivalent to 0.4363636..... is:

A. $\frac{42}{100}$

B. $\frac{236}{99}$

C. $\frac{24}{55}$



D. $\frac{42}{99}$



Q18 Mathematics

Meenu alone can do a work in 16 days. Simi alone can do it in 12 days. If Raj joins them, they three together can complete the work in 4 days. How long will Raj alone take to finish the work?

A. 23 days

B. $\frac{12}{7}$ days

C. $\frac{48}{5}$ days



D. $\frac{111}{2}$ days

Q19 Mathematics

P, Q and R can do a piece of work in 9 days, 18 days and 12 days, respectively. They start the work, with P working on Day 1, Q working on Day 2 and R working on Day 3, and then continuing with this cycle till the work got is completed. How many days will be needed to complete this work in this manner?

A. 11 days

B. 12 days



C. 15 days

D. 16 days

Q20 Mathematics

The population of a village was 4,00,000. It increased by 20% in the first year and increased by 30% in the second year. Its population after these two years is _____.

A. 5,20,000

B. 5,40,000

C. 6,25,000

D. 6,24,000

**Q21** Mathematics

If the roots of quadratic equation $(2 - p)x^2 + 2px - (p + 1) = 0$ are equal, then the value of p is:

A. 2

B. -2



C. -1

D. 1



Q22 Mathematics HINDI - no English version saved

$2x - 3y + 7z$ और $4z - 5x$ के योगफल को $12x - z$ से घटाएं।

A. $3x + 3y - 3z$

B. $4x + 7y$

C. $15x + 3y - 12z$ ✓

D. $1x + 12y - 12z$

Q23 Mathematics

Find the negative root of $3x^2 + 12x - 15 = 0$.

A. $x = -1$

B. $x = -5$ ✓

C. $x = 5$

D. $x = 1$

Q24 Mathematics

The prime factorisation of the number 266805 is:

A. $3 \times 5 \times 7^3 \times 11^2$

B. $3^3 \times 5^2 \times 7 \times 11^2$

C. $3^2 \times 5 \times 7^2 \times 11^2$ ✓

D. $3^4 \times 5^2 \times 7^2 \times 11^2$

Q25 Mathematics

If the opposite angles of a cyclic quadrilateral are in the ratio 3 : 7, then the measure of the bigger angle among the two is

A. 105°

B. 140°

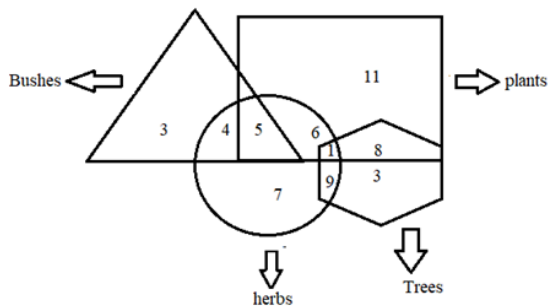
C. 70°

D. 126° ✓



Q26 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of things.



How many such trees are there that are also plants but NEITHER herbs NOR bushes?

A. 1

B. 9

C. 8



D. 3

Q27 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

BLG : DHM

GMQ : IIW

A. CNH : EJM



B. QDR : TZX

C. ULF : WGL

D. YPJ : ATP

Q28 General Intelligence and Reasoning

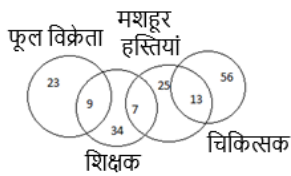
Select correct combination of mathematical signs to sequentially replace the @ signs and balance the following equation.

$$28 @ 7 @ 12 @ 6 @ 8$$

A. $\times, =, -, \div$ B. $\div, \times, =, -$ C. $\times, \div, =, -$ D. $\div, \times, =, \times$ 

Q29 General Intelligence and Reasoning HINDI - no English version saved

दिए गए आरेख का ध्यानपूर्वक अध्ययन कीजिए, और पूछे गए प्रश्न का उत्तर दीजिए। विभिन्न भागों में दी गई संख्याएं, व्यक्तियों की संख्या को दर्शाती हैं।



कितने व्यक्ति शिक्षक होने के साथ साथ फूल विक्रेता भी हैं?

A. 9



B. 7

C. 34

D. 43

Q30 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word ABDUCT is arranged in alphabetical order?

A. 1

B. 2



C. 3

D. 4

Q31 General Intelligence and Reasoning

In this question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $Z > G \geq W < Y = V > L < N$

Conclusions:

I. $V < G$

II. $Z < W$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true



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Q32 General Intelligence and Reasoning

If 9 May 2016 was a Monday, then what day of the week was 2 September 2016?

- A. Sunday
- B. Tuesday
- C. Thursday
- D. Friday

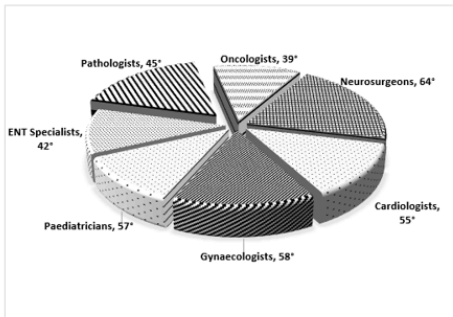
**Q33** General Intelligence and Reasoning

Amit steps out of his house and walks 76 m towards the north. He takes a right turn and walks 23 m. He takes a right turn again and walks 61 m. Then he takes a left turn and walks 20 m. Then he takes a right turn and walks 34 m. He takes a final right turn and walks 43 m to reach a library. How far and in which direction is the library from Amit's house? (All turns are 90 degree turns only)

- A. 19 m, North
- B. 19 m, South
- C. 34 m, North
- D. 34 m, South

**Q34** General Intelligence and Reasoning

The given circle graph shows the specialists in a well-recognised private hospital during a particular year (in the form of central angle). Study the circle graph and answer the question.



If the total number of all the mentioned specialists during the year in the hospital was 120, then how many pathologists were there in the hospital?

- A. 12
- B. 10
- C. 11
- D. 15



Q35 General Intelligence and Reasoning

Each of D, E, G, H, S, T, and Y has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. G's exam is on one of the days before H. E has the exam on Thursday. Only two person have exams between S and E. D has the exam on the day immediately after S. T has the exam on the day immediately before Y, but not on Saturday. G does not have the exam on Sunday. Who among the following has the exam on Friday?

A. Y

B. T

C. G

D. H

Q36 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(4, 50, 6)

(2, 18, 4)

A. (5, 62, 6)

B. (15, 162, 3)

C. (12, 60, 5)

D. (2, 125, 3)

Q37 General Intelligence and Reasoning

Refer to the given letter, number and symbol series and answer the question that follows.

(Left) * Y S 2 # C 2 4 & 7 F & 2 @ R 4 € G 4 £ 9 (Right)

How many such letters are there in the series each of which is immediately preceded by a symbol and also immediately followed by a number?

A. 1

B. 2

C. 3

D. 4



Q38 General Intelligence and Reasoning

A decision is given followed by two statements I and II. Read all the information carefully and select the correct option.

Decision:

In many cities of Country S only hybrid cars are allowed in the centre of the city in order to control pollution. Following the same, Country M has also decided to implement this in some tier-I cities.

Statements:

I. Unlike Country S, public transport is not well connected in most of the tier-I cities in Country M.

II. As per recent reports, the biggest contributor of pollution in Country M are transport trucks and two-wheelers.

- A. Both statements I and II weaken the decision ☒
- B. Statement I weakens the decision and statement II is a neutral statement
- C. Both statements I and II strengthen the decision
- D. Statement I is a neutral statement and statement II strengthens the decision

Q39 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(12, 9, 4)

(25, 25, 5)

- A. (15, 12, 7)
- B. (20, 12, 10)
- C. (14, 10, 7)
- D. (12, 16, 3) ☒

Q40 General Intelligence and Reasoning

L, M, N, O, P, Q, R and S are sitting in a straight row, facing south. R and S are at the extreme ends of the row. O and Q are immediate neighbours. Only L sits between N and P. M sits to the immediate right of N. O sits to the immediate left of P. S sits to the immediate left of Q. Who sits to the immediate left of R?

- A. M ☒
- B. P
- C. O
- D. Q



Q41 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons in a family with different professions.



How many members of the family are clerks as well as potters?

A. 20

B. 12

C. 18



D. 48

Q42 General Intelligence and Reasoning

If each of the digits in the number 243978615 is arranged in ascending order from left to right, the position of how many digits will remain unchanged as compared to that in the original number?

A. 4

B. 3

C. 2

D. 1



Q43 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	3	#	4	7	@	%	>	2	!	?	5	8	\$	9
Code	S	F	T	J	D	G	E	X	V	W	K	U	P	M

Conditions:

- (i) If the first element is a symbol and the last a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last an even number, the first and the last elements are to be coded as Ø.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '3 @ 2 % 8' be coded?

A. Ø G V E Ø

B. Ø D X G Ø

C. S D X G U

D. S G V E U

Q44 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. E is sitting at one of the corners and to the immediate left of F and immediate right of A. H, G and C are exactly sitting opposite to E, A and F, respectively. D is sitting to the immediate right of C. Who among the following is sitting to the immediate right of B?

A. F

B. E

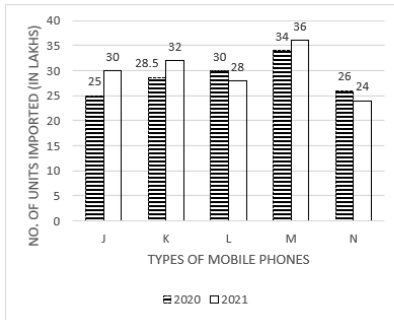
C. G

D. D



Q45 General Intelligence and Reasoning

The given bar graph shows the total number of different types of mobile phones J, K, L, M and N (in lakhs) imported by a company in 2020 and 2021. Study the bar graph and answer the question.



Which of the following types of mobile phones has the minimum percentage change (increase or decrease) from 2020 to 2021 in the number of mobile phones imported?

A. J

B. L

C. M



D. N

Q46 General Intelligence and Reasoning

1, 2, 3, 4, 5 and 6 are six cakes with different weights in a bakery. Only two cakes are heavier than 4. 2 is heavier than 1 but lighter than 6. 6 is lighter than 4. 3 is not the heaviest cake. Which of the following cakes is the heaviest?

A. 5



B. 3

C. 2

D. 1

Q47 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) and complete the given alpha-numeric series?

I2, J3, L7, O16, S32, ?

A. Y60

B. X57



C. X60

D. W55



Q48 General Intelligence and Reasoning

Seven boxes, A, B, C, D, E, F and G, are kept one over the other, but not necessarily in the same order. G is kept fourth from the bottom and immediately below E and immediately above B. There are three boxes between C and F. D is kept at the bottom-most position. Which among the following can be the number of boxes kept between A and F?

A. Four



B. Three

C. Two

D. Five

Q49 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 248 382 425 127 335 (Right)

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

NOTE - All operations to be done from left to right.

If 3 is added to the first digit of every number, in how many numbers will the first digit be exactly divisible by the second digit?

A. 2



B. 3

C. 1

D. 4

Q50 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3, 8, 14, 30, 58, ?

A. 122

B. 116

C. 120

D. 118



Q51 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	=	\$	6	8	<	?	/	2	5	!	@	7	3	^
Code	G	L	F	M	E	N	D	P	C	R	T	B	V	A

Conditions:

- If the first element is a symbol and the last a number, then the first and last elements are to be coded as © and ¥, respectively.
- If the first element is an odd number and the last an even number, the codes for these two are to be interchanged.
- If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '5 \$ = 2 ^ 8' be coded?

A. MLGPAC



B. CLGPAM

C. ©LGPA¥

D. MGLPAC

Q52 General Intelligence and Reasoning

Five boxes G, T, Y, R and U are placed one over the other but not necessarily in the same order. Exactly two boxes are placed between T and Y, but T is neither at the bottom nor at the top. What are the probable positions that T can take from the bottom?

A. First and Third

B. Second and Third

C. Third and Fourth

D. Second and Fourth

**Q53 General Intelligence and Reasoning**

Sheena steps out from her apartment and walks 9 m towards the south. She takes a right turn and walks 43 m. She takes a right turn again and walks 38 m. Again, she takes a right turn and walks 43 m. She takes a right turn again and walks 12 m. Again, she takes a right turn again and walks 26 m. She then takes a left turn and walks 17 m. She takes a left turn again and walks 12 m to reach point A. How far and in which direction is point A from Sheena's apartment? (All turns are 90 degree turns only)

A. 14 m, East

B. 14 m, West



C. 17 m, East

D. 17 m, West



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Q54 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

15, 21, 33, 51, 75, ?

A. 78

B. 95

C. 105



D. 108

Q55 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$15.95 - 4.01 + 13.99 \times 5.13 = ?$$

A. 77

B. 82



C. 80

D. 75

General Science

25 Questions • Answer Key

Q56 General Science

Periodicity among elements in Newlands Octaves was observed up to _____ only.

A. C

B. Cr

C. Co

D. Ca



Q57 General Science

A 2.5-cm-tall object is placed on the principal axis of a concave lens of focal length 16 cm, at a distance of 24 cm. The height of the image formed is _____.

A. 1.0 cm



B. 1.5 cm

C. 2.0 cm

D. 2.5 cm



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Q58 General Science

The radius of curvature of a convex mirror is 15 cm. Following New Cartesian Sign Convention, the principal focus is located at $x =$ _____.

A. -7.5 cm

B. 7.5 cm



C. -15 cm

D. 15 cm

Q59 General Science

A 200 W bulb is connected to a 220 V source. The current through the bulb is:

A. 0.91 A



B. 0.45 A

C. 2.2 A

D. 1.1 A

Q60 General Science

What is the measurement of an ostrich egg?

A. 170 mm $\times$ 130 mm



B. 170 μ m $\times$ 130 μ m

C. 170 cm $\times$ 130 cm

D. 170 m $\times$ 130 m

Q61 General Science

Two coils, A and B, such that A is connected to a battery through a key and B is connected to a galvanometer, are arranged parallel and close to each other. During which of the following duration will the phenomenon of electromagnetic induction be observed?

(a) Two minutes after closing the key.

(b) During the interval the key is taken out.

A. Only (a)

B. Only (b)



C. Both (a) and (b)

D. Neither (a) nor (b)



Q62 General Science

Consider the below statements and identify the correct answer.

Statement-I: The chemical formula for washing soda is Na_2CO_3 .

Statement-II: It is used for removing permanent hardness of water.

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

Q63 General Science

The number of σ -bonds, π -bonds and the total bonds in benzene molecule, respectively, are:

- A. 6, 3, 15
- B. 12, 3, 15
- C. 6, 6, 18
- D. 6, 6, 12

Q64 General Science

Identify the double displacement reaction from the following.

- A. $\text{Na}_2\text{SO}_4 (\text{aq}) + \text{BaCl}_2 (\text{aq}) \rightarrow \text{BaSO}_4 (\text{s}) + 2\text{NaCl} (\text{aq})$
- B. $\text{Fe}(\text{s}) + \text{CuSO}_4 (\text{aq}) \rightarrow \text{FeSO}_4 (\text{aq}) + \text{Cu} (\text{s})$
- C. $\text{Zn}(\text{s}) + \text{CuSO}_4 (\text{aq}) \rightarrow \text{ZnSO}_4 (\text{aq}) + \text{Cu} (\text{s})$
- D. $\text{Pb}(\text{s}) + \text{CuCl}_2 (\text{aq}) \rightarrow \text{PbCl}_2 (\text{aq}) + \text{Cu} (\text{s})$

Q65 General Science

Which of the following metals are more reactive than hydrogen?

Mg, Zn, Hg, Ag, Sn, Pb, Au, Fe, Na

- A. Mg, Zn, Hg, Pb, Fe, Na
- B. Mg, Zn, Sn, Pb, Fe, Na
- C. Mg, Zn, Sn, Pb, Au, Na
- D. Mg, Zn, Ag, Pb, Fe, Na



Q66 General Science

Deficiency of which hormone is responsible for diabetes mellitus?

- A. Oxytocin
- B. Adrenalin
- C. Insulin
- D. Thyroxin



Q67 General Science

A convex mirror is made from a section of the surface of a sphere of radius 10.0 cm. Its principal focus is at a distance of _____ from its pole.

- A. 40.0 cm
- B. 20.0 cm
- C. 10.0 cm
- D. 5.0 cm



Q68 General Science

What causes migrating birds to travel to far-off lands?

- A. They fly to change their habitat.
- B. They fly to see their family.
- C. They fly to get some exercise.
- D. They fly to lay eggs.



Q69 General Science

A beam of white light passes through a glass prism and a spectrum is obtained. The colour component that bends the least is _____.

- A. yellow
- B. red
- C. green
- D. violet



Q70 General Science HINDI - no English version saved

यदि कोई महिला परिवार बढ़ाने की योजना बना रही है, तो निम्नलिखित में से कौन सा उसके लिए सहायक नहीं होगा?

- A. उच्च प्रोटीन युक्त खाद्य पदार्थों का सेवन करना
- B. स्वस्थ शारीरिक वजन बनाए रखना या रखने का प्रयास करना
- C. धूम्रपान और शराब का सेवन
- D. घर में तनाव मुक्त वातावरण

Q71 General Science

Which of the following has the maximum electrical resistivity?

Aluminium, Mercury, Glass, Manganin

- A. Mercury
- B. Aluminium
- C. Manganin
- D. Glass

Q72 General Science

Without photosynthesis, _____ removal is the main exchange activity at night.

- A. oxygen
- B. hydrogen
- C. carbon dioxide
- D. water

Q73 General Science

_____ can be used for composting.

- A. E-waste
- B. Kitchen waste
- C. Industrial waste
- D. Medical waste



Q74 General Science

In which of the following situations will the potential difference induced in the coil be the maximum?

- (a) A bar magnet moving with a speed of 2 m/s towards a stationary coil
- (b) A coil moving with a speed of 2 m/s towards a stationary bar magnet
- (c) A coil and a bar magnet moving in the same direction with the speed of 2 m/s.
- (d) A coil and a bar magnet moving towards each other with the speed of 2 m/s.

A. (a)

B. (b)

C. (c)

D. (d)



Q75 General Science

Shreya adds some calcium hydroxide in a test tube containing concentrated sulphuric acid. The main product of the reaction will be:

A. calcium chloride

B. calcium acetate

C. calcium hydroxide

D. calcium sulphate



Q76 General Science

The total number of shared electrons in N_2 are _____.

A. 3

B. 4

C. 6

D. 8



Q77 General Science

The resistance of a wire of length L and area of cross-section A is $0.2\ \Omega$. The resistance of a wire of the same material, but of length $2L$ and area of cross-section $4A$ will be:

A. $0.1\ \Omega$



B. $0.2\ \Omega$

C. $0.4\ \Omega$

D. $10\ \Omega$

Q78 General Science

What is the excretory product of aquatic animals?

A. Urea

B. Ammonia



C. Uric acid

D. Creatinine

Q79 General Science

Which of the following is/are NOT an endocrine gland in our body?

A. Pituitary gland

B. Thyroid gland

C. Adrenal gland

D. Salivary glands



Q80 General Science

What is the order of K, L and M shells in terms of the total number of electrons?

A. $K > M > L$

B. $M > L > K$



C. $L > K > M$

D. $L > M > K$



Q81 General Awareness and Current Affairs

In which sport did the Indian men's team win a medal at the Olympics in 2021?

- A. Football
- B. Volleyball
- C. Hockey
- D. Handball



Q82 General Awareness and Current Affairs

The relationship between variable input and output, keeping all other inputs constant is called _____.

- A. marginal product
- B. total product of variable input
- C. law of variable proportions
- D. law of diminishing marginal product



Q83 General Awareness and Current Affairs

In which of the following states is the Pachmarhi Bio-reserve located?

- A. Punjab
- B. Madhya Pradesh
- C. Odisha
- D. West Bengal



Q84 General Awareness and Current Affairs

Identify the language which is declared as a 'classical language' by the Government of India in the year 2005 from following?

- A. Telugu
- B. Odia
- C. Sanskrit
- D. Tamil



Q85 General Awareness and Current Affairs

Who among the following is the head of Nuclear Command Authority, NITI Aayog, Appointments Committee of the Cabinet, Department of Atomic Energy, Department of Space and Ministry of Personnel, Public Grievances and Pensions?

- A. President
- B. Prime Minister
- C. Vice President
- D. Chief Minister

Q86 General Awareness and Current Affairs

Which of the following terms define the Real National Income?

- A. GDP at current amount
- B. GDP at average price
- C. GDP at factors price
- D. GDP at constant price

Q87 General Awareness and Current Affairs

In order to correct the situation of excess demand, which of the following monetary measures can be applied?

- (A) Reduce repo rate.
 - (B) Reduce SLR.
- A. Only A
 - B. Only B
 - C. Both A and B
 - D. Neither A nor B

Q88 General Awareness and Current Affairs

Who has been awarded the Padma Shri in the year 2022 in the field of Science and Engineering?

- A. N.V.Ramana
- B. Subbanna Ayyappan
- C. Dr. Belle Monappa Hegde
- D. Virender Gupta



Q89 General Awareness and Current Affairs

Which of the following movements is also known as the 'Salt Satyagraha'?

- A. Quit India Movement
- B. Non-Cooperation Movement
- C. Civil Disobedience Movement
- D. Indian Self Rule Movement



Q90 General Awareness and Current Affairs

Professor Narayan Pradhan has been selected for the 31st GD Birla Award as of March 2022 for the Scientific Research for his major contribution in the field of _____.

- A. astrophysics
- B. material sciences
- C. environmental biology
- D. mathematical modelling



Q91 General Awareness and Current Affairs

Which of the following is the first World Bank supported programme for minority welfare that is being implemented by the Ministry of Minority Welfare, Government of India?

- A. Padho Pardesh
- B. Nai Manzil
- C. Nai Udaan
- D. Naya Savera



Q92 General Awareness and Current Affairs

The Bharat Heavy Electricals Limited (BHEL) was incorporated in which year from following?

- A. 1958
- B. 1960
- C. 1962
- D. 1964



Q93 General Awareness and Current Affairs

Identify the one which is not consist in the 3-tier system of Panchayati Raj from following-

- A. Tehsil Level Panchayat
- B. District Level Panchayat
- C. Block Level Panchayat
- D. Village Level Panchayat

Q94 General Awareness and Current Affairs

Which of the following forests is located in the state of Gujarat?

- A. Vandalur forest
- B. Kukrail forest
- C. Gir forest
- D. Molai forest

Q95 General Awareness and Current Affairs

Which Indian player won the Swiss Open 2022?

- A. PV Sindhu
- B. Saina Nehwal
- C. Srikanth Kidambi
- D. Lakshya Sen

Q96 General Awareness and Current Affairs

The Fundamental Duties were added in Constitution of India by which of the following amendments?

- A. 42nd
- B. 43rd
- C. 44th
- D. 45th



Q97 General Awareness and Current Affairs HINDI - no English version saved

हिंदू धर्म में, _____ देव को "पौधों के स्वामी", रोगों के उपचारक और धन के दाता माना जाता है।

- A. यम
- B. वारुणी
- C. उषा
- D. सोम



Q98 General Awareness and Current Affairs

Which river originates at Mahabaleswar in Maharashtra, passes through Sangli and meets the sea in the Bay of Bengal at Hamasaladeevi in Andhra Pradesh?

- A. Godavari
- B. Narmada
- C. Krishna
- D. Tapti



Q99 General Awareness and Current Affairs

Which of the following festivals is associated with the state of Odisha?

- A. Pongtu
- B. Ambubachi
- C. Raja Parba
- D. Porag



Q100 General Awareness and Current Affairs

Which ministry organised the Second Online National Conclave on 'Sickle Cell Disease in India' in June 2021?

- A. Ministry of Health and Family Welfare
- B. Ministry of Women and Child Development
- C. Ministry of Tribal Affairs
- D. Ministry of AYUSH



Mathematics

25 Questions · Answer Key

Q1 Mathematics

If the area of a circle is $196\pi \text{ m}^2$ then the perimeter of the circle is _____

A. 44 m

B. 88 m



C. 76 m

D. 58 m

Q2 Mathematics

Cost price of a toy is ₹210. What should be its MRP so that after a discount of 5% shopkeeper gains 90%.

A. ₹480

B. ₹400

C. ₹420



D. ₹450

Q3 Mathematics

Which of the following quadratic equations has one of its roots as $2 + \sqrt{5}$?

A. $x^2 + 5x + 1 = 0$ B. $x^2 - 5x - 1 = 0$ C. $x^2 - 4x - 1 = 0$ D. $x^2 + 4x + 1 = 0$

Q4 Mathematics

If the age of Ratan is one-third the age of Jatin and the sum of their ages is 84 years, then find the age of Jatin.

A. 63 years



B. 36 years

C. 52 years

D. 25 years



Q5 Mathematics

The median of 9, 11, 15, 17, x, 19, 21 is x, where x is an integer. Which of the following can be the value of x?

A. 13

B. 14

C. 16



D. 18

Q6 Mathematics

Simplify: $x(2x - 5) + 6(x^2 - 4) + 18$

A. $8x^2 - 5x + 6$

B. $8x^2 - 5x - 6$



C. $8x^2 + 5x - 6$

D. $8x^2 + 5x + 6$

Q7 Mathematics

Simplify:

$$9991 \times 10009 =$$

A. 99,999,19

B. 99,999,99

C. 91,999,919

D. 99,999,919



Q8 Mathematics

A car travels 80 km at the speed of 20 km/h and the next 30 km at the speed of 30 km/h. What is its average speed?

A. 30 km/h

B. 20 km/h

C. 22 km/h



D. 40 km/h



Q9 Mathematics

Find the circumference of a circle that circumscribes a square of side 7 cm. (Use $\pi = \frac{22}{7}$.)

A. $22\sqrt{2}$ cm



B. 22 cm

C. 44 cm

D. $44\sqrt{2}$ cm

Q10 Mathematics

10 buckets of water fill a tank when the capacity of each bucket is 14 litres. How many buckets will be needed to fill the same tank, if the capacity of each bucket is 7 litres?

A. 15

B. 18

C. 20



D. 23

Q11 Mathematics

Which of the following relations would calculate the cost x of m notebooks, if the cost of n notebooks is ₹1,680

A. $\frac{m}{x} = \frac{1680}{n}$

B. $\frac{m}{x} = \frac{n}{1680}$



C. $\frac{x}{m} = \frac{n}{m}$

D. $x = \frac{1680}{m}$

Q12 Mathematics

Find the compound interest on ₹12,500 at 3% per annum for 3 years when interest is compounded annually (correct to the nearest rupees).

A. ₹1,159



B. ₹1,140

C. ₹1,170

D. ₹1,180



Q13 Mathematics

Find the positive difference between the roots of the equation $2x^2 - 7x + 5 = 0$.

A. $\frac{3}{2}$



B. $-\frac{3}{2}$

C. $\frac{5}{2}$

D. $-\frac{5}{2}$

Q14 Mathematics

The value of $\frac{0.2 \times 0.2 \times 0.2 - 0.02 \times 0.02 \times 0.02}{2 \times 2 \times 2} =$

A. 0.00999

B. 0.999

C. 0.000999



D. 0.0090

Q15 Mathematics

If $\cos^4 \theta - \sin^4 \theta = k$, then the value of $\frac{1+k}{1-k}$ is:

A. $\sin^2 \theta$

B. $\operatorname{cosec}^2 \theta$

C. $\tan^2 \theta$

D. $\cot^2 \theta$



Q16 Mathematics

Which of the given numbers is NOT divisible by 3?

A. 453

B. 687

C. 713



D. 927



Q17 Mathematics

Seven men can complete a work in 12 days. They start the work and after 5 days, 3 men leave. In how many days will the remaining work be completed by the remaining men?

A. 14

B. $13\frac{1}{4}$ C. $12\frac{1}{4}$ 

D. 12

Q18 Mathematics

Three successive discounts of 4%, 5% and 14% are equal to a single discount of _____ (rounded off to two decimal places).

A. 20.57%

B. 22.57%

C. 21.57% 

D. 23.57%

Q19 Mathematics

The value of

$$\frac{3}{7} + \frac{2}{7} + \frac{1}{14} + \frac{2}{7} - 3 =$$

A. $\frac{27}{14}$ B. $\frac{13}{14}$ C. $-\frac{13}{14}$ D. $-\frac{27}{14}$ 

Q20 Mathematics

A 1.5 m tall boy is standing at a distance of 3 m from a 4 m high light post. The light from top of post casts his shadow. What is the length of the boy's shadow?

A. 1.8 m



B. 1.62 m

C. 4.4 m

D. 0.91 m

Q21 Mathematics

If the sum of two numbers is 54 and the LCM and HCF of these numbers are 84 and 6, respectively, then the sum of the reciprocal of the numbers is:

A. $\frac{5}{28}$

B. $\frac{3}{28}$



C. $\frac{7}{28}$

D. $\frac{9}{28}$

Q22 Mathematics

In a class there are 40 students (only boys and girls). The number of girls is three-sevenths of the number of boys. Find the number of boys in the class.

A. 12

B. 32

C. 28



D. 24

Q23 Mathematics

Express $\sin 58^\circ + \cos 82^\circ$ in terms of Trigonometric ratios of angles between 0° and 45° .

A. $\sin 32^\circ + \sin 8^\circ$

B. $\sin 32^\circ + \cos 8^\circ$

C. $\cos 32^\circ + \sin 8^\circ$



D. $\cos 32^\circ + \cos 8^\circ$



Q24 Mathematics

Find the value of $\sqrt{9604}$.

A. 74

B. 72

C. 98



D. 89

Q25 Mathematics

In an election between two candidates, the winner received 1854 votes and the loser received 618 votes. What percentage of the total number of votes received by the two candidates went in favour of the winning candidate?

A. 60

B. 80

C. 70

D. 75

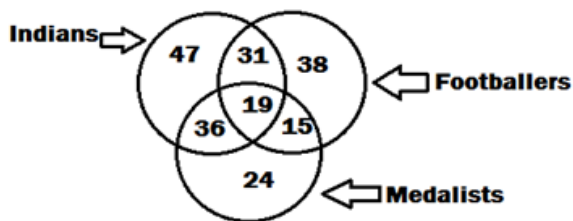


General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such medallists are there who are also Indians?

A. 19

B. 36

C. 50

D. 55



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Q27 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Floods caused widespread damage to crops in Odisha this year.

Arguments:

- I. There has been a bumper production of food grains in Odisha this year.
- II. The number of crop insurance claims has seen a significant increase in Odisha this year.

A. Argument I weakens, while argument II strengthens the statement



B. Argument II weakens, while argument I strengthens the statement

C. Both arguments I and II weaken the statement

D. Both arguments I and II strengthen the statement

Q28 General Intelligence and Reasoning

FM 25 is related to IJ 125 in a certain way. In the same way, NO 36 is related to QL 216. To which of the following is MP16 related following the same logic?

A. PM 32

B. PN 64

C. PM 64



D. ON 64



Q29 General Intelligence and Reasoning

In this question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $T = S \geq N = A \leq U > P < Q$

Conclusions:

I. $S > Q$

II. $A < T$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true

**Q30** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	2	<	4	7	^	%	>	3	!	?	5	8	\$	6
Code	A	F	T	J	D	G	E	Z	V	W	K	U	P	L

Conditions:

- (i) If the first element is a symbol and the last a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last an even number, the first and the last elements are to be coded as Ø.
- (iii) If both the second and third elements are symbols, the third element is to be coded as the code for the second element.

How will '3 < 5 ! 2' be coded?

A. ZFKVA

B. ØFKVA

C. ØFKWØ

D. ØFKVØ



Q31 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

$16 : 2 :: 36 : 3 :: 64 : ?$

A. 6

B. 3

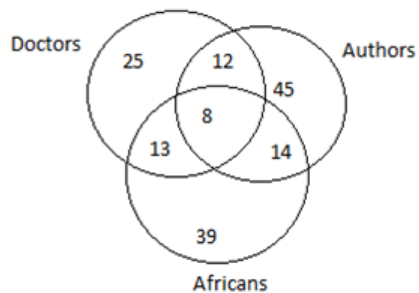
C. 5

D. 4



Q32 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many Africans are there who are also authors?

A. 22

B. 14

C. 8

D. 45



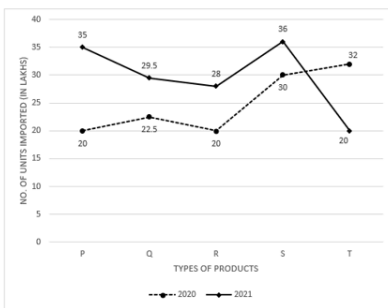
Q33 General Intelligence and Reasoning

How many such pairs of letters are there in the word '*DABSTER*' (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

- A. One
- B. Two
- C. Three
- D. More than three

**Q34** General Intelligence and Reasoning

The given line graph shows the total number of different cosmetic products P, Q, R, S and T (in lakhs) imported by company 'XYZ' in the years 2020 and 2021. Study the line graph and answer the question.



The average import of Q type of products in both the years 2020 and 2021 was equal to the average import of which type of product in the same years?

- A. P
- B. R
- C. S
- D. T

**Q35** General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$30.01\% \text{ of } 199.99 + 35.023\% \text{ of } 550.045 = ? - 540.078$$

- A. 890
- B. 790
- C. 640
- D. 580



Q36 General Intelligence and Reasoning

If 2 is added to each odd digit and 3 is subtracted from each even digit in the number 835647, what will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

A. 14

B. 6



C. 8

D. 10

Q37 General Intelligence and Reasoning

Five students - 1, 2, 3, 4 and 5 - are sitting around a circular table facing away from the centre. 3 is sitting second to the right of 4 and to the immediate left of 5. 3 and 4 are immediate neighbours of 1. Which of the following statements is true?

A. 2 is sitting second to the right of 1.

B. 1 and 2 are the immediate neighbours of 4.



C. 1 is sitting third to the left of 5.

D. 2 is sitting to the immediate left of 5.

Q38 General Intelligence and Reasoning

Arun starts from his office and drives 5 km towards the east. He then takes a right turn, drives 4 km, turns right and drives 5 km. He then takes a right turn and drives 3 km and stops at a shop. Which direction should he drive now in order to reach his office from that shop? (All turns are 90° turns only.)

A. North



B. South

C. North-east

D. North-west



Q39 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	8	=	/	&	3	7	@	\$	2	<	%	6	+	4
Code	F	R	D	S	Z	B	P	K	U	H	Y	X	T	G

Conditions:

- (i) If the first element is a symbol and the last a number, the first element is to be coded as the code for the last element.
- (ii) If the first element is a number that is completely divisible by 3, it is to be coded as Ø.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '6 @ & 4 =' be coded?

A. Ø P S G R



B. X P S G R

C. T K Z G R

D. Ø P S T D

Q40 General Intelligence and Reasoning

Nine people, 1 to 9, are sitting in a straight row, facing the south. 8 is sitting in the middle of the row and his immediate left and right neighbours are 5 and 1, respectively. 9 is sitting at one of the extreme ends and his immediate right neighbour is 2. Only five people are there between 2 and 3. 3 is sitting between 7 and 4. 1 and 7 are immediate neighbours. If 7 and 6 exchange their positions, then who among the following will be the immediate left neighbour of 7?

A. 5

B. 2



C. 3

D. 1

Q41 General Intelligence and Reasoning

Each of R, S, T, U, V, W and X has a duty as a cleaning agent on a different day of a week, starting from Monday to Sunday of the same week. X has duty on a day immediately before U. S and T have duties on one of the days before X. Only W has duty on the day between S and T. V has duty on Tuesday. Who has duty on Monday?

A. S

B. X

C. R



D. U



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Q42 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(14, 60, 16)

(25, 80, 15)

A. (21, 120, 15)

B. (15, 45, 30)

C. (20, 30, 40)

D. (19, 80, 21)



Q43 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

All lamps are lanterns.

All lanterns are torches.

All torches are candles.

Conclusions:

(I) Some candles are lamps

(II) All lanterns are lamps

(III) No lantern is a lamp

A. Only conclusion I follows



B. Only conclusion II follows

C. Only conclusion I and III follows

D. None of the conclusions follow



Q44 General Intelligence and Reasoning

H, I, J, K, L, M and N are seven boxes that are kept one over the other but not necessarily in the same order. K is kept on one of the positions above L. Only one box is kept between K and L. J is kept immediately above M. H is kept immediately below L. Only two boxes are kept between M and H. Only one box is kept between L and N. How many boxes are kept between N and K?

- A. One
- B. Two
- C. Three
- D. Four



Q45 General Intelligence and Reasoning

Which of the following interchanges of numbers would make the given equation correct?

$$2 \times 10 \div 8 + 6 - 4 = 9$$

- A. 2, 4
- B. 6, 8
- C. 9, 10
- D. 2, 8



Q46 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) and complete the given alpha-numeric series?

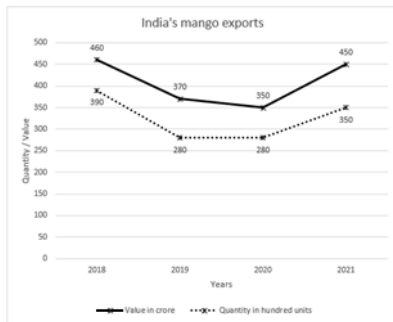
15M, 17P, 20S, 25V, ?

- A. 31Z
- B. 37Y
- C. 32Y
- D. 32Z



Q47 General Intelligence and Reasoning

The given line graph shows the data of Mango exports in India from year 2018 to 2021. Study the given line graph and answer the question.



In which year was the value per hundred units the minimum?

A. 2018



B. 2019

C. 2020

D. 2021

Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

40, 66, 100, 142, ?

A. 192



B. 190

C. 194

D. 198

Q49 General Intelligence and Reasoning

Refer to the following letter and symbol series and answer the question.

(Left) E # R & H & @ J & M N # B & V & & D # P @ W % & Q & A % & # E & (Right)

How many such letters are there in the series which are immediately preceded and immediately followed by the symbol '&'?

A. Two

B. Three



C. Four

D. Five



Q50 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $D < Y > E \geq A < O < C$

Conclusions:

I. $D < O$

II. $E > C$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Both conclusions I and II are true
- D. Neither conclusion I nor II is true



Q51 General Intelligence and Reasoning

Dev walks 23 m towards the west from his hostel gate. He takes a left turn and walks 14 m. Then he takes a right turn and walks 63 m. Then he takes a left turn and walks 32 m. He takes a left turn again and walks 86 m. Again, he takes a left turn and walks 16 m to reach a canteen. How far and in which direction is the canteen from Dev's hostel gate? (All turns are 90 degree turns only)

- A. 16 m, North
- B. 16 m, South
- C. 30 m, North
- D. 30 m, South



Q52 General Intelligence and Reasoning

All 30 students of a class are standing in a straight row facing the north. Ashok is 16th from the right end, while Aruna is 19th from the left end. How many students stand between Ashok and Aruna?

- A. One
- B. Two
- C. Three
- D. Four



Q53 General Intelligence and Reasoning

If 5 January 2016 was a Tuesday, then what day of the week was 8 November 2015?

A. Sunday



B. Saturday

C. Thursday

D. Friday

Q54 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) & X Y # F K & 3 T & * 8 W % ^ D U G \$ € o \$ 5 S @ J (Right)

How many such numbers are there which are immediately preceded by a symbol and immediately followed by a consonant?

A. 1

B. 2

C. 3



D. 4

Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

4, 22, 43, 69, 102, 144, ?

A. 197



B. 179

C. 199

D. 177

General Science

25 Questions • Answer Key

Q56 General Science

Which of the following is NOT necessary for autotrophic nutrition?

A. Light

B. Chlorophyll

C. Carbon dioxide

D. Oxygen



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Q57 General Science

From where do the roots of the plants take in oxygen?

- A. From the water present in the soil
- B. From the air spaces in between the soil particles ✓
- C. The oxygen taken by stomata reaches the roots
- D. Roots do not need oxygen

Q58 General Science

Which of the following has the maximum electrical resistivity?

Silver, Copper, Iron, Nichrome

- A. Copper
- B. Nichrome ✓
- C. Iron
- D. Silver

Q59 General Science

An object is placed at 40 cm in front of a converging mirror having focal length 20 cm. The magnification of the image is:

- A. -1 ✓
- B. +1
- C. -0.5
- D. +0.5

Q60 General Science

C_3H_6 belongs to the homologous series of:

- A. alkane
- B. alkene ✓
- C. alkyne
- D. cycloalkane



Q61 General Science

Consider the following statements about the force acting on a current-carrying straight conductor placed in a magnetic field:

- (a) The direction of the force does not depend on the direction of current in the conductor.
- (b) The direction of the force depends on the direction of the magnetic field in which the conductor is placed.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Neither (a) nor (b)
- D. Both (a) and (b)

Q62 General Science

An object is placed in front of a concave mirror at a point between its focus F and pole P. The image is formed at a point _____ and is _____.

- A. behind the mirror, diminished
- B. behind the mirror, enlarged
- C. between F and C, diminished
- D. between F and C, enlarged

Q63 General Science

Consider the below statements and identify the correct answer.

Statement I: According to Newland's assumption, only 56 elements existed in the nature.

Statement II: Newland found that every eighth element had properties similar to that of the first.

- A. Statement I is correct, Statement II is incorrect.
- B. Statement II is correct, Statement I is incorrect.
- C. Both statements are correct.
- D. Both statements are incorrect.

Q64 General Science

During puberty, a woman's first menstrual flow is known as _____.

- A. menopause
- B. menarche
- C. amenorrhea
- D. menorrhagia



Q65 General Science

Consider the following statements about magnetic field due to a current-carrying straight conductor:

- (a) The magnetic field at a distance r from the wire is in the form of a concentric circle.
- (b) The radius of the concentric circle increases as the distance from the conductor increases.

Which of the above statements is/are correct?

- A. Neither (a) nor (b)
- B. Both (a) and (b)
- C. Only (b)
- D. Only (a)



Q66 General Science

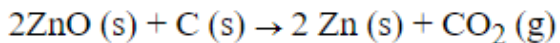
How many double bonds are there in a structure of benzene?

- A. 1
- B. 2
- C. 3
- D. 4



Q67 General Science

Which of the statements about the reaction below is/are correct?



- (i) Zinc is getting reduced
- (ii) Carbon is getting oxidised
- (iii) Zinc is getting oxidized.
- (iv) Carbon is getting reduced

A. only (i)

B. only (ii)

C. Both (i) and (ii)



D. All (i), (iii), (iv)

Q68 General Science

The primary excretory product of _____ is uric acid.

A. fish

B. birds



C. cows

D. humans

Q69 General Science

In which Indian state do 'Ahars', a type of water harvesting system, exist?

A. Bihar



B. Madhya Pradesh

C. Rajasthan

D. Kerala



Q70 General Science

The 'Urea Cycle' takes place in the human _____.

- A. liver
- B. kidney
- C. lungs
- D. pancreas



Q71 General Science

An object is placed on the principal axis of a convex lens, at a point between F_1 and $2F_1$. Its image formed is _____.

- A. real and of the same size
- B. real and enlarged
- C. virtual and of the same size
- D. virtual and enlarged



Q72 General Science

We, on an individual basis, can help to reduce the production of waste by following certain practices. Which of the following will however cause increase in waste?

- A. Using cloth or jute bags for shopping
- B. Donating used goods
- C. Using tin foil, plastic wraps, paper towels and plastic zip bags
- D. Reusing empty containers and bottles



Q73 General Science

Two resistors, A ($10\ \Omega$) and B ($15\ \Omega$), are connected in parallel. The combination is connected to a 3 V battery. The current through the battery is:

- A. 0.12 A
- B. 0.25 A
- C. 0.3 A
- D. 0.50 A



Q74 General Science

Monohybrid cross is the combining of two plants with _____ different versions of a trait.

- A. two
- B. four
- C. six
- D. eight



Q75 General Science

There are four elements P, Q, R and S and their atomic numbers are 2, 6, 13 and 18, respectively. Which of the following pairs has elements having similar valency?

- A. P and Q
- B. R and S
- C. P and S
- D. Q and S



Q76 General Science

An object is placed on the principal axis of a lens of power 4.0 D, at a distance of 30 cm. The image formed is _____.

- A. real and erect
- B. virtual and erect
- C. real and inverted
- D. virtual and inverted



Q77 General Science

When solutions of lead (II) nitrate and potassium iodide are mixed together, which of the following observations will be true?

- A. No reaction will occur.
- B. A white precipitate of lead iodide will be formed.
- C. A yellow precipitate of lead iodide will be formed.
- D. A white precipitate of potassium nitrate will be formed.



Q78 General Science

Consider the below statements and identify the correct answer.

Statement-I: Plaster of Paris has a very remarkable property of setting into hard mass on wetting with water.

Statement-II: Plaster of Paris is used in chemistry laboratories for sealing air gaps in apparatus where air tight arrangement is required.

- A. Both the statements are true. ✓
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

Q79 General Science

Three identical bulbs are connected in parallel to a battery of 6 V. If the current in the circuit is 0.6 A, the power dissipated by the battery is:

- A. 5 W
- B. 10 W
- C. 3.6 W ✓
- D. 0.1 W

Q80 General Science

Which of the following is/are NOT use(s) of washing soda?

- (i) Manufacture of glass, soap and paper
- (ii) In soda-acid fire extinguisher
- (iii) For removing permanent hardness of water

- A. Only i
- B. Only ii ✓
- C. Only iii
- D. i and iii



Q81 General Awareness and Current Affairs

Which of the following is an overhead expense in a production cost?

- A. Raw materials
- B. Labour
- C. Consumable manufacturing supplies
- D. Insurance



Q82 General Awareness and Current Affairs

In May 2022, the Supreme Court has restrained the state and central governments from invoking which charges, under Section 124A of the Indian Penal Code, against anybody?

- A. Homicide
- B. Sedition
- C. Bankruptcy
- D. Inchoate



Q83 General Awareness and Current Affairs

India's first Artificial Intelligence and Robotics Technological Park was launched in _____ in March 2022.

- A. Chandigarh
- B. Bhopal
- C. Chennai
- D. Bengaluru



Q84 General Awareness and Current Affairs

How many pillars are the core beliefs and practices of Islam?

- A. 3
- B. 5
- C. 7
- D. 9



Q85 General Awareness and Current Affairs

Who has been appointed as a full-time member of the Economic Advisory Council to the Prime Minister of India in February 2022?

A. Shashank Saksena

B. Ravi Mittal

C. Anuradha Guru

D. Sanjeev Sanyal



Q86 General Awareness and Current Affairs

In which of the following cities is the Headquarters of the Ministry of Panchayati Raj located?

A. New Delhi



B. Pune

C. Chennai

D. Jaipur



Q87 General Awareness and Current Affairs

In which year was The Indian Toll Act passed?

A. 1864

B. 1851



C. 1853

D. 1861

Q88 General Awareness and Current Affairs

In India, which vegetation has dominating species i.e., teak, sal and shisham?

A. Tropical Deciduous Forests



B. Tropical Evergreen Forests

C. Tropical Thorn Forests and Scrubs

D. Mangrove Forests

Q89 General Awareness and Current Affairs

Which of the following language institutes is located in Maharashtra?

A. Rashtriya Sanskrit Vidyapeetha

B. Maulana Azad National Urdu University

C. English and Foreign Languages University

D. Mahatma Gandhi Antarrashtriya Hindi VishwaVidyalaya



Q90 General Awareness and Current Affairs

The second five-year plan gave high priority to industrial development aimed at setting up a number of heavy industries such as steel plants, capital goods industries, etc., for which direct government participation and state involvement was needed and hence the _____ was launched.

- A. Industrial Policy Resolution 1948
- B. Industrial Policy Resolution 1956
- C. Industrial Policy Statement 1977
- D. Industrial Policy Statement 1980

Q91 General Awareness and Current Affairs

Every year on 2nd October, the Prime Minister of India pays homage to Mahatma Gandhi at _____.

- A. Amar Jawan Jyoti
- B. Raj Ghat
- C. India Gate
- D. Vijay Ghat

Q92 General Awareness and Current Affairs

The section on Fundamental Duties in the Indian Constitution has been adopted from _____.

- A. USA
- B. Germany
- C. England
- D. USSR

Q93 General Awareness and Current Affairs

In the Rajya Sabha, how many members are nominated by the President of India?

- A. 12
- B. 15
- C. 5
- D. 2



Q94 General Awareness and Current Affairs

In October 2021, which country signed a five-year partnership agreement with India to implement a 'Green Strategic Partnership' for strengthening scientific and technology collaboration?

A. Denmark



B. America

C. Russia

D. Israel

Q95 General Awareness and Current Affairs

What is the usual shape for an average fixed cost curve?

A. Horizontal line

B. U-shaped

C. Inverted V-shaped

D. Rectangular hyperbola



Q96 General Awareness and Current Affairs

As per the new format, IPL 2022 was played among how many teams in total?

A. 7

B. 9

C. 10



D. 12

Q97 General Awareness and Current Affairs

_____ is the climate at the centre of large landmasses, typified by a large annual range in temperature, with precipitation most likely in the summer.

A. Extreme Climate

B. Maritime Climate

C. Temperate Climate

D. Continental climate



Q98 General Awareness and Current Affairs

Which football player was the highest goal scorer in the 3rd edition of the SAFF U-18 Women's Football Championship held at Jamshedpur in March 2022?

- A. Ritu Devi
- B. Lynda Kom
- C. Purnima Kumari
- D. Babina Devi



Q99 General Awareness and Current Affairs

The Nubra and the Shyok are the tributaries of River

- A. Narmada
- B. Kaveri
- C. Indus
- D. Sutlej



Q100 General Awareness and Current Affairs

Which of the following bills is NOT passed by both Houses, Parliament of India, during Winter Session: 29 November 2021 to 22 December 2021?

- A. The Prohibition of Child Marriage (Amendment) Bill, 2021
- B. The Farm Laws Repeal Bill, 2021
- C. The Narcotic Drugs and Psychotropic Substances (Amendment) Bill, 2021
- D. The Surrogacy (Regulation) Bill, 2021



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A trader owes a merchant ₹8,000 due in one year. The trader wants to settle the account after 2 months. If the rate of interest is 9% per annum, then how much should he pay (rounded off value)?

A. ₹7,244

B. ₹7,424

C. ₹7,442



D. ₹4,774

Q2 Mathematics

A train crosses a platform 90 metres long in 60 seconds at a speed of 54 km/h. Find the time the train will take to cross an electric pole.

A. 60 seconds

B. 48 seconds

C. 54 seconds



D. 58 seconds

Q3 Mathematics

Simplify: $2\left(\frac{3}{2}x^2 - 24x + 12\right) - 3(x^2 + 4x - 13)$.

A. $60x + 63$ B. $-60x + 63$ C. $-60x - 63$ D. $60x - 63$

Q4 Mathematics

Two numbers are in the ratio 3 : 2. Their LCM and HCF are 24 and 4, respectively. The greater of the two numbers is:

A. 8

B. 10

C. 12



D. 14



Q5 Mathematics

If the mean and the mode of a particular data set are 36 and 63, respectively, then, using an empirical relation, find the value of the median of the same data set.

A. 39

B. 40

C. 45



D. 55

Q6 Mathematics

What is the nature of the roots of $\sqrt{3}x^2 + 6x - \sqrt{3} = 0$?

A. The roots are real and equal.

B. The roots are real and distinct.



C. The roots are real and more than 2.

D. There are no real roots.

Q7 Mathematics

The ratio of the number of boys to that of the girls in a school is 7 : 9. If the number of girls in the school is 189, then the number of boys in that school is:

A. 147



B. 168

C. 126

D. 105

Q8 Mathematics

The roots of the quadratic equation $2x^2 - x - 3 = 0$ are:

A. $1, \frac{3}{2}$ B. $1, -\frac{3}{2}$ C. $-1, \frac{3}{2}$ D. $-1, -\frac{3}{2}$ 

Q9 Mathematics

The sum of two natural numbers, x and y , is 320 and the HCF of x and y is 20. If $x > y$, how many such possible pairs of x and y are there?

A. 4



B. 6

C. 2

D. 8

Q10 Mathematics

If the volume of a cube is 729 cm^3 , then the edge of the cube is:

A. 3 cm

B. 9 cm



C. 12 cm

D. 24 cm

Q11 Mathematics

Find the mode of the observations 23, 27, 38, 42, 27, 58, 69, 71, 45.

A. 27



B. 42

C. 45

D. 71

Q12 Mathematics

If a regular polygon has 65 diagonals, then the sum of its interior angles is:

A. 1440°

B. 1620°

C. 1800°

D. 1980°



Q13 Mathematics

A car can cover a distance of 25 km per litre of petrol. The driver of the car filled the tank with $5\frac{1}{2}$ litres of petrol. After travelling how much distance (in km) will the car stop?

A. 125.5

B. 135.5

C. 137.5



D. 140.5

Q14 Mathematics

Aditya bought a flat for ₹5,50,000. He spent ₹25,000 on its painting and repair. If he sold it for ₹5,37,625, then his loss percentage is:

A. 6.5%



B. 7.5%

C. 5.5%

D. 4.5%

Q15 Mathematics

If the total surface area of a closed cube is 1014 cm^2 , then the length of each edge of this cube is:

A. 13 cm



B. 12 cm

C. 14 cm

D. 16 cm

Q16 Mathematics

The value of $143 - 144 \div 16 \times 3 - 1$ is:

A. 139

B. 115



C. 133

D. 123



Q17 Mathematics

If $12 : x :: x : 27$, and $25 : y :: y : 36$, when x and y are both positive numbers, find $x : y$.

A. 5 : 6

B. 3 : 5



C. 4 : 7

D. 7 : 9

Q18 Mathematics

Raj invested ₹14,000 at 10% p.a. for 1 year at compound interest, compounded half-yearly. The amount received by him is:

A. ₹14,354

B. ₹13,542

C. ₹14,765

D. ₹15,435

**Q19** Mathematics

Two trains P and Q, having lengths of 300 m and 340 m respectively, are running towards each other. If P and Q are running at speeds of 35 m/s and 45 m/s, respectively, then how long will they take to cross each other?

A. 7 sec

B. 8 sec



C. 8.5 sec

D. 9 sec

Q20 Mathematics

If $a + b = 25$ and $a - b = 13$, find the value of $(a + b)^2$.

A. 625



B. 525

C. 225

D. 496



Q21 Mathematics

If $\sin\theta > \cos\theta$, then the value of $\frac{\sqrt{1-2\sin\theta\cos\theta} + \sqrt{1+2\sin\theta\cos\theta}}{2\tan\theta}$ is:

A. $\cos\theta$



B. $\cot\theta$

C. $\tan\theta$

D. $\sin\theta$

Q22 Mathematics

A son's present age is two-fifth of the age of his mother. After 5 years, his age will be half the age of his mother. How old is his mother at present?

A. 25 years



B. 32 years

C. 36 years

D. 40 years

Q23 Mathematics

A is two years older than B, who is twice as old as C. If the total of their ages is 32, then what is the age of B?

A. 7 years

B. 8 years

C. 12 years



D. 14 years

Q24 Mathematics

If one angle of a triangle is equal to the sum of the other two angles, then the triangle is:

A. a right-angle triangle



B. an isosceles triangle

C. an equilateral triangle

D. an obtuse angle triangle



Q25 Mathematics

$$7.44... + 3.77... - 2.55... =$$

A. $\frac{74}{9}$

B. $\frac{78}{9}$ ✓

C. $\frac{83}{9}$

D. $\frac{124}{9}$

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

18, 19, 28, 53, 102, ?

A. 183 ✓

B. 138

C. 1389

D. 198

Q27 General Intelligence and Reasoning

In the given question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $S < \# = \& \leq @ > * = !$

Conclusions: I. $* > \&$

II. $\# < !$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true ✓



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Q28 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

28, 32, 39, 52, 74, ?

A. 110

B. 108



C. 100

D. 112

Q29 General Intelligence and Reasoning

Each consonant in the word 'COMPARE' is changed to the letter following it in the English alphabetical order, and each vowel is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. Only D

B. Only N

C. Only Q

D. D and N



Q30 General Intelligence and Reasoning

Veronica started from a point and walked 25 m towards the west, she then turned right and walked for 5 m. From there she turned right and walked for 15 m, turned right again, and walked for 5 m. Which side should she turn now and how much distance should she walk for in order to reach the starting point?

(All turns are 90 degree turns only)

A. Left, 15 m

B. Right, 10 m

C. Left, 10 m



D. Right, 15 m



Q31 General Intelligence and Reasoning

Study the given arrangement carefully and answer the question that follows.

(Left) £ & 6 @ 4 ¢ 2 4 % 1 3 ^ 3 ¥ @ 8 8 % 7 (Right)

How many such symbols are there in the above arrangement each of which is immediately followed by a number and immediately preceded by a symbol?

A. 1

B. 2

C. 3

D. 4

Q32 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(7, 150, 23)

(14, 100, 6)

A. (15, 140, 13)

B. (9, 80, 11)

C. (8, 90, 11)

D. (4, 108, 16)

Q33 General Intelligence and Reasoning

Q, R, S, T, U, V and W are seven boxes, kept one over the other but not necessarily in the same order. Only one box is kept between Q and R. W is kept immediately above Q. Only one box is kept between R and U. T is kept immediately below R. How many boxes are kept between T and W?

A. 1

B. 2

C. 3

D. 4



Q34 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	7	4	&	@	?	8	<	#	2	%	!	5	=	6
Code	Q	S	R	T	U	P	W	Y	A	V	C	X	D	H

Conditions:

- (i) If the first element is a symbol and the last a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last an even number, the first and the last elements are to be coded as Ø.
- (iii) If both the first and third elements are numbers, the third element is to be coded as the code for the first element.

How will '2 @ 7 # = 5' be coded?

A. ATAYDX



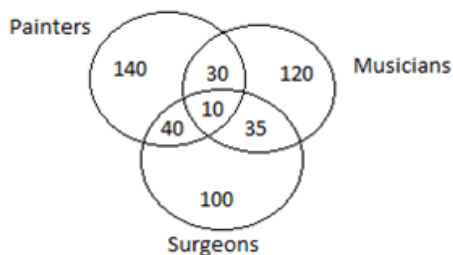
B. ATQYDX

C. QTQYDC

D. QTAYDC

Q35 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons living in a village.



How many surgeons are living in the village?

A. 185



B. 100

C. 150

D. 35



Q36 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

POT : UPQ

EST : UTF

- A. PTU : VUV
- B. MEN : NFO
- C. CAT : UBD
- D. TOW : UPU



Q37 General Intelligence and Reasoning

This question is based on the following 3-letter words.

(left) MAT CRY NIB DON (right)

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel ?

- A. One
- B. Two
- C. Three
- D. Four



Q38 General Intelligence and Reasoning

In a certain code language, 'ASSURED' is written as 'TTBUEFS' and 'BENEFIT' is written as 'OFCEUJG'. How will 'CABINET' be written in that language?

- A. CBDJUFO
- B. DBCIOFU
- C. CBDIUFO
- D. CBDIUFU



Q39 General Intelligence and Reasoning

How will quarter to eight be indicated in the 24-hour format?

- A. 19:45 hours
- B. 20:15 hours
- C. 19:15 hours
- D. 20:45 hours



Q40 General Intelligence and Reasoning

Seven people with the initials of their names G, H, I, J, K, L and M were sipping their tea, sitting around a circular table, facing the centre. They were equidistant to one another. K was sitting to the immediate right of I. Only H was sitting between M and J. L was an immediate neighbour of M. G was sitting third to the right and fourth to the left of J. Who were the immediate neighbours of G?

- A. L and I
- B. K and M
- C. M and I
- D. K and L

**Q41** General Intelligence and Reasoning

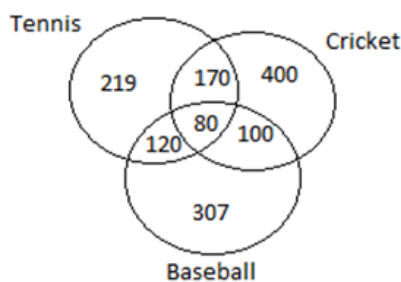
What approximate value should come in place of the question mark (?) in the following equation?

$$444.033 \div 15.998 \div 37.02 \times 11.992 = ?$$

- A. 9
- B. 81
- C. 125
- D. 243

**Q42** General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons who like different sports.



How many people like both cricket and baseball?

- A. 80
- B. 100
- C. 180
- D. 210



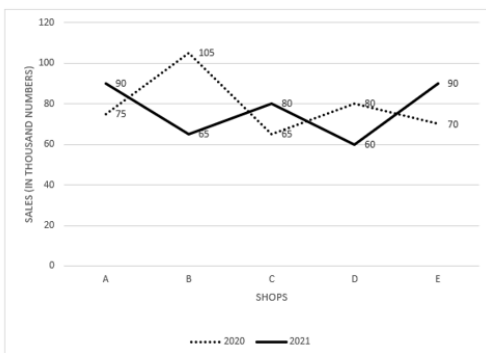
Q43 General Intelligence and Reasoning

Six persons, P, Q, R, S, T and U, were born in different months of the same year, viz. January, February, March, April, May and June. U was born in the immediate next month of Q's birth month. R was born in May. P was not born in January. S was not born in April. Only one person was born between the months of P and R's birth months. In which month was T born?

- A. February
- B. March
- C. April
- D. June

**Q44** General Intelligence and Reasoning

The given line graph shows the sales of a product X (in thousand numbers) from five different shops A, B, C, D and E in the years 2020 and 2021. Study the line graph and answer the question.



What is the average sale from all the shops (in thousand numbers) for the year 2020?

- A. 82
- B. 85
- C. 79
- D. 80

**Q45** General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

B _ A _ B _ _ B _ _ BA _ B _ MB _

- A. MABBABAAB
- B. ABAMAABBM
- C. AMBBMBAMM
- D. BMABAMBAA



Q46 General Intelligence and Reasoning

Five boxes G, T, Y, R and U are placed one over the other but not necessarily in the same order. Exactly two boxes are placed between T and Y, but T is neither at the bottom nor at the top and not at any position above Y. What is the position of T from the bottom?

A. Second



B. Third

C. Fourth

D. First

Q47 General Intelligence and Reasoning

The given table shows the details of the number of boys and girls from four different departments of a recognised university who got campus placements over the years. Study the table and answer the question.

Dept Year	Department A		Department B		Department C		Department D	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2017	150	200	200	150	180	200	110	120
2018	100	80	100	100	150	140	100	120
2019	150	130	120	140	100	80	200	150
2020	100	120	160	120	90	100	180	160

What is the difference between the number of boys and girls from all the departments who got campus placements in the year 2018?

A. 10



B. 15

C. 20

D. 25

Q48 General Intelligence and Reasoning

S, T, U, V, W, X, Y and Z were eight ministers, sitting around a circular table, facing the centre. They were equidistant to one another. Only V was sitting between S and X. Only T was sitting between Z and W. Y was sitting fourth to the left of W, while S was sitting fourth to the left of T. Z was sitting second to the left of Y. Which minister was sitting fourth to the left of X?

A. Only V

B. Only Z

C. Only U



D. Either U or V



Q49 General Intelligence and Reasoning

A statement is given followed by two possible underlying assumptions I and II. Read all the information carefully and decide which of the given assumptions can be assumed by the given statement.

Statement:

Following Country G's decision, which was taken a decade ago to control pollution, Country N has also decided to keep a cap on the number of cars in the country. So, now if someone in Country N wants to buy a car, they will have to wait until someone in the country sells their car or a car is registered as completely non-functional and is scrapped.

Assumptions:

- I. The other transport options in Country N are enough to cater to the 'non-car owning' population of the country.
- II. The decision was most likely successful in Country G in controlling pollution.

- A. Only I can be assumed
- B. Only II can be assumed
- C. Both I and II can be assumed
- D. Neither I nor II can be assumed

Q50 General Intelligence and Reasoning

Rekha, from point A, walks 41 m towards the west. She takes a right turn and walks 84 m. She takes a right turn again and walks 92 m. Again, she takes a right turn and walks 84 m. She takes a right turn again and walks 19 m to reach point B. How far and in which direction is point B from point A? (All turns are 90 degree turns only)

- A. 32 m, East
- B. 32 m, West
- C. 30 m, East
- D. 30 m, West

Q51 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$(\sqrt{142} + 52 \div 26 \times 5 - \sqrt{80}) \times 2 = ?$$

- A. 20
- B. 26
- C. 30
- D. 32



Q52 General Intelligence and Reasoning

In the given question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $U = L > Y \leq C = I > G$

Conclusions: I. $U \leq C$

II. $C > G$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Both conclusions I and II are true
- D. Neither conclusion I nor II is true

Q53 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(3, 5, 21)

(4, 2, 14)

- A. (5, 2, 19)
- B. (6, 3, 12)
- C. (8, 4, 28)
- D. (7, 1, 23)



Q54 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

Few mice are rats

Most rats are vultures

All vultures are hawks

Conclusions:

(I) Few mice are vultures

(II) Some hawks are mice

(III) Some rats are hawks

A. Only conclusion I follows

B. Only conclusion III follows



C. Only conclusion I and III follow

D. All conclusions I, II and III follow

Q55 General Intelligence and Reasoning

If 2 is added to each odd digit and 2 is subtracted from each even digit in the number given below, what will be the difference in the digits that are third from the left and third from the right in the new number thus formed?

(Left) 32578641 (Right)

A. 2

B. 3



C. 4

D. 5

General Science

25 Questions • Answer Key

Q56 General Science

Identify the correct statement from the ones given below based on the way Mendel conducted his experiments.

A. Only cross-fertilisation was performed.

B. Only self-fertilisation was performed.

C. Cross-fertilisation of plants was performed initially, followed by self-fertilisation.



D. Self-fertilisation of plants was performed initially, followed by cross-fertilisation.



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Q57 General Science

You have prepared a temporary slide of Rhoeo leaf in water. What change will you observe when you put a strong solution of sugar on the slide?

- A. No change will be seen
- B. Cells of the leaf will take in water and swell
- C. Cells will lose water and there will be shrinkage of contents of the cell away from the cell wall ✓
- D. Some cells will take in water; others will lose water

Q58 General Science

The magnitude of the magnetic field due to a current-carrying circular coil varies with the number of turns n as _____.

- A. $\frac{1}{n}$
- B. $\frac{1}{n^2}$
- C. n ✓
- D. n^2

Q59 General Science

Consider the below statements and identify the correct answer.

Statement I: Metals are electropositive in nature.

Statement II: Metals tend to lose electrons while forming bonds.

- A. Both statements are correct. Statement II is correct explanation of Statement I. ✓
- B. Both Statements are correct. Statement I is correct explanation of Statement II.
- C. Only Statement I is correct.
- D. Only Statement II is correct.



Q60 General Science

Which of the following sterilisation methods is permanent?

- A. Use of condom
- B. Use of copper-T
- C. Use of birth control pills
- D. Surgical methods



Q61 General Science

In which state/UT of India can we find the Indira Gandhi Canal?

- A. West Bengal
- B. New Delhi
- C. Rajasthan
- D. Kerala



Q62 General Science

Consider the magnitudes and directions of the induced potential difference in the following situations:

- (a) A current-carrying straight wire moving with a speed of 1.5 m/s towards a stationary coil.
- (b) The same current-carrying straight wire moving away with a speed of 1.5 m/s from the same stationary coil.

The induced potential differences are of _____ magnitude(s) and have _____ sign(s) in the above two cases.

- A. different, opposite
- B. different, the same
- C. the same, the same
- D. the same, opposite



Q63 General Science

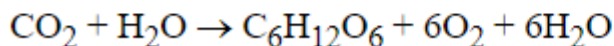
Which digestive enzyme is present in saliva?

- A. Amylase
- B. Peptidase
- C. Enterokinase
- D. Lipase



Q64 General Science

For the following reaction, balance the chemical equation with state symbols.



- A. $\text{CO}_2(\text{g}) + 6\text{H}_2\text{O}(\text{l}) \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 + 6\text{H}_2\text{O}$
- B. $\text{CO}_2(\text{g}) + 12\text{H}_2\text{O}(\text{l}) \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2 + 6\text{H}_2\text{O}$
- C. $6\text{CO}_2(\text{aq}) + 12\text{H}_2\text{O}(\text{l}) \rightarrow \text{C}_6\text{H}_{12}\text{O}_6(\text{aq}) + 6\text{O}_2(\text{aq}) + 6\text{H}_2\text{O}(\text{l})$
- D. $6\text{CO}_2(\text{g}) + 12\text{H}_2\text{O}(\text{l}) \rightarrow \text{C}_6\text{H}_{12}\text{O}_6(\text{aq}) + 6\text{O}_2(\text{g}) + 6\text{H}_2\text{O}(\text{l})$ ✓

Q65 General Science

Select the option that correctly indicates which of the following statements are true.

When a strip of zinc metal is placed in copper sulphate solution:

- (i) zinc displaces copper from copper sulphate
- (ii) the blue colour of copper sulphate solution does not fade
- (iii) a blue deposit of copper metal is formed on the zinc strip
- (iv) it is an example of combination reaction

- A. i ✓
- B. ii
- C. iii
- D. iv

Q66 General Science

Why do the root's water-absorbing epidermal cells frequently have long hair-like parts?

- A. For locomotion
- B. To reduce the amount of surface area available for photosynthesis
- C. To enhance the amount of surface area available for absorption ✓
- D. To enhance the amount of surface area available for transpiration



Q67 General Science

A particular locality is focusing on three R's — Recycle, Reuse and Reduce — to decrease the production of non-biodegradable waste. What will be the correct sequence to follow them?

- A. Reuse, Recycle, Reduce
- B. Reduce, Reuse, Recycle
- C. Recycle, Reduce, Reuse
- D. Recycle, Reuse, Reduce



Q68 General Science

Consider the following statements:

- (a) The particles in clouds are larger than the wavelength of different colours in white light coming from the sun.
- (b) All colours of white light are scattered by approximately the same amount.

Which of the above statements help(s) us to understand the white colour of clouds during sunshine?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b)
- D. Neither (a) nor (b)



Q69 General Science

Which of the following is a property of combustion reaction?

- A. An element burns in the presence of oxygen.
- B. In the presence of sunlight, reaction occurs.
- C. The reaction happens with absorption of heat.
- D. The reaction happens with absorption of light.



Q70 General Science

A bulb draws a current of 3 A when connected to a battery of 12 V. The power of the bulb is:

- A. 36 W
- B. 18 W
- C. 12 W
- D. 4 W



Q71 General Science

Decomposition reaction is when:

- A. one reactant breaks down to give simpler products ✓
- B. one element displaces another to give product
- C. two or more reactants give one product
- D. one reactant breaks down to simple products and energy released

Q72 General Science

Baking powder is a mixture of:

- A. baking soda and mild edible acid ✓
- B. sodium carbonate and tartaric acid
- C. baking soda and washing soda
- D. baking soda and bleaching powder

Q73 General Science

A battery is connected to a conductor, and a current I passes through it. If the resistance of the conductor is made four times, the current _____.

- A. becomes $(\frac{I}{4})$ ✓
- B. becomes $(\frac{I}{2})$
- C. becomes $4I$
- D. remains I

Q74 General Science

An object is placed in front of a concave mirror of focal length 15 cm and its image is formed on the same side as the object, at a distance of 45 cm. The distance of the object from the mirror is:

- A. 11.25 cm
- B. 22.5 cm ✓
- C. 33.75 cm
- D. 45 cm

Q75 General Science

You get cramps after participating in a 400 m race. Which option best explains the reason for the same?

- A. Lack of oxygen and pyruvate converted to lactic acid
- B. Lack of oxygen and pyruvate is converted to ethanol
- C. Enough oxygen and pyruvate converted to lactic acid
- D. Lack of oxygen and pyruvate is converted to glucose

Q76 General Science

Which of the following is NOT an appropriate reason for the need of classification of elements?

- A. To understand the periodicity in properties of elements.
- B. To understand the specific position of an element in the periodic table.
- C. To give the elements positions according to their colour.
- D. To correlate the properties of different elements.

Q77 General Science

A conductor is connected to a battery of 2V. Let V_1 be the potential difference across the conductor. When a battery of 4 V is connected, the potential difference becomes V_2 . The ratio(V_1/V_2) is:

- A. $\frac{1}{4}$
- B. $\frac{1}{2}$
- C. 2
- D. 4

Q78 General Science

Substance X, which is used as an antacid, reacts with dilute hydrochloric acid to produce a gas Y, which is used in one type of fire-extinguisher. The substance X and gas Y, respectively, are:

- A. NaHCO_3 , CO_2
- B. NaOH , CO_2
- C. NaCl , CO_2
- D. NaHCO_3 , CO



Q79 General Science

An object is placed in front of a convex mirror of focal length 10 cm, at a distance of 15 cm. Its image is formed at a distance of _____ and is _____.

- A. 6 cm, real
- B. 6 cm, virtual
- C. 30 cm, real
- D. 30 cm, virtual

Q80 General Science

The colour of scattered light depends on the size of the scattering particles. Very fine particles scatter mainly the _____ light.

- A. green
- B. blue
- C. red
- D. yellow

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which language among the following is a Sino-Tibetan language spoken by people of north- east India?

- A. Santhali
- B. Maithili
- C. Bodo
- D. Dogri

Q82 General Awareness and Current Affairs

In which state/UT was the first Khelo India National Ranking Women Archery held in April 2022?

- A. Haryana
- B. Jharkhand
- C. Himachal Pradesh
- D. Delhi



Q83 General Awareness and Current Affairs

Fundamental Rights are described from Article 12 to _____ in the Indian Constitution.

A. Article 35



B. Article 38

C. Article 40

D. Article 42

Q84 General Awareness and Current Affairs

Identify the world's second longest glacier located outside the polar region in Nubra Valley?

A. Baltaro

B. Batura

C. Siachen



D. Hispar

Q85 General Awareness and Current Affairs

In Hinduism, which of the following Gods is considered to be the creator?

A. Mahesh

B. Vishnu

C. Brahma



D. Ganesh

Q86 General Awareness and Current Affairs

The _____ of Constitution of India is related to Panchayati Raj Institutions.

A. Part-V

B. Part-IV

C. Part-IX



D. Part-III



Q87 General Awareness and Current Affairs

What is constant along an isoquant?

- A. Level of output
- B. Level of labour
- C. Level of utility
- D. Level of capital



Q88 General Awareness and Current Affairs

Which party was recognised as a national political party by the Election Commission in 2016, whose official election symbol is Jora Ghas Phool (Grass with two flowers)?

- A. Bahujan Samaj Party (BSP)
- B. Communist Party of India (CPI)
- C. Nationalist Congress Party (NCP)
- D. All India Trinamool Congress (AITC)



Q89 General Awareness and Current Affairs

Pradhan Mantri Awaas Yojana–Gramin (PMAY-G), launched on 20 November 2016, envisages ‘Housing for All’ by the year _____.

- A. 2022
- B. 2023
- C. 2024
- D. 2025



Q90 General Awareness and Current Affairs

In February 2022, CBI detected India's biggest bank fraud of ₹22,842 crore with 28 banks. Who was booked by CBI for this fraud?

- A. Goa Shipyard Limited
- B. Hindustan Shipyard Limited
- C. Sea Blue Shipyard Limited
- D. ABG Shipyard



Q91 General Awareness and Current Affairs

In February 2021, who launched the ICMR/DHR Policy along with Dr. Bharti Pravin Pawar on Biomedical Innovation and Entrepreneurship to bring modern health technologies to the people through research and innovations related to diagnosis, treatment methods and vaccines for prevention?

- A. Dr. Pradeep Kumar Vyas
- B. Dr. Mansukh Mandaviya
- C. Dr. Harsh Vardhan
- D. Dr. Maninder Kaur Dwivedi



Q92 General Awareness and Current Affairs

Which incident prompted Mahatma Gandhi to end his non-cooperation agitation in February 1922?

- A. Jallianwala Bagh massacre
- B. Chauri-Chaura incident
- C. Rowlatt Act endorsement
- D. Khilafat Movement



Q93 General Awareness and Current Affairs

The Nabakalebara festival is celebrated in which of the following states?

- A. Haryana
- B. Tamil Nadu
- C. Odisha
- D. Karnataka



Q94 General Awareness and Current Affairs

Which tributary of Ganga is known as the 'sorrow of Bihar'?

- A. Kosi
- B. Damodar
- C. Gaumukh
- D. Alaknanda



Q95 General Awareness and Current Affairs

Which of the following wrestlers won gold in the Asian wrestling championship-2022?

- A. Ravi K Dahiya
- B. Anshu Malik
- C. Deepak Punia
- D. Radhika



Q96 General Awareness and Current Affairs

Which of the following is/are the characteristic(s) of Monopoly market?

- (i) There is a single producer of a particular commodity.
- (ii) No other commodity works as a substitute for this commodity.
- (iii) There are no restrictions to prevent any other firm from entering the market and to start selling the same commodity.

- A. Only i
- B. Only i and ii
- C. Only ii and iii
- D. Only i and iii



Q97 General Awareness and Current Affairs

Which of the following expenses is a part of 'fixed cost' in production of surgical garments?

- A. Electricity
- B. Waste disposal
- C. Workers' salary
- D. Water



Q98 General Awareness and Current Affairs

Which river system enters Indian territory in Jammu and Kashmir by forming a picturesque gorge?

- A. Indus River System
- B. Brahmaputra River System
- C. Narmada River System
- D. Godavari River System



Q99 General Awareness and Current Affairs

Which of the following State/UT governments has formulated a policy for the welfare of street children in light of the COVID-19 pandemic situation in July 2021?

- A. Delhi
- B. Haryana
- C. Puducherry
- D. Uttar Pradesh



Q100 General Awareness and Current Affairs

What is the name of India's first Green Hydrogen Fuel Cell Electric Vehicle (FCEV), launched by Union Minister Nitin Gadkari in March 2022?

- A. Toyota Urban
- B. Toyota Yaris
- C. Toyota Mirai
- D. Toyota Greed



Mathematics

25 Questions · Answer Key

Q1 Mathematics

The point of intersection of the medians of a triangle is called:

- A. Circumcentre
- B. Centroid
- C. Orthocentre
- D. incentre



Q2 Mathematics

Bharat borrowed a sum of ₹10,000 at a certain rate of simple interest for 2 years. If he paid an interest of ₹2,000 at the end of the period, then find the rate of interest per annum.

- A. 25%
- B. 15%
- C. 10%
- D. 20%



Q3 Mathematics

Lakshman and Bharath start a business by investing ₹48,000 and ₹72,000, respectively. What is Bharath's share out of an annual profit of ₹6,530?

- A. ₹2,612
- B. ₹3,918
- C. ₹2,450
- D. ₹3,080



Q4 Mathematics

Simplify: $125 \div 25 \times 6 + [3 + (8 - 2)] \div 3$.

- A. 30
- B. 39
- C. 45
- D. 33



Q5 Mathematics

Simplify $\frac{2.46 \times 2.46 - 1.46 \times 1.46}{2.46 - 1.46}$, giving your answer as a fraction.

A. $\frac{392}{100}$



B. $\frac{392}{10000}$

C. $\frac{392}{1000}$

D. $\frac{392}{10}$

Q6 Mathematics

A 725 m long train passes through a 235 m long tunnel in 48 sec. Find the speed of the train.

A. 72 km/h



B. 82 km/h

C. 54 km/h

D. 66 km/h

Q7 Mathematics

If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 2: 3, then the greater of the two angles is:

A. 54°

B. 108°



C. 120°

D. 136°

Q8 Mathematics

If the surface area of a sphere is $2124\frac{4}{7} \text{ cm}^2$, then what is the radius of that sphere? [Use $\pi = \frac{22}{7}$]

A. 14 cm

B. 13 cm



C. 12 cm

D. 11 cm



Q9 Mathematics

The average age of a family of father, mother and 2 children is 26 years. If the sum of the ages of the father and the children is 62 years, find the age of the mother.

- A. 26 years
- B. 30 years
- C. 42 years
- D. 45 years

**Q10 Mathematics**

Find the LCM of 84, 105 and 140.

- A. 420
- B. 240
- C. 360
- D. 120

**Q11 Mathematics**

A dishonest shopkeeper pretends to sell his goods at cost price, but uses a false weight on which 984 gm is written but which actually weighs much less. Using this false weight the shopkeeper actually makes a gain of 23%. Find the actual measure of the weight used.

- A. 800 gm
- B. 900 gm
- C. 850 gm
- D. 935 gm

**Q12 Mathematics**

Which of the following can be expressed in the form of a standard quadratic equation?

- A. $(2x + 3)^2 + 4x - 5 = (2x + 1)(2x - 3)$
- B. $\sqrt{2x^2 + 3x - 4} - 2x + 5 = 0$
- C. $(x + 1)(x + 2) = x^2 - 16$
- D. $(2x - 1)^3 = x^2 - 3x + 2$



Q13 Mathematics

The value of $\frac{\sin 16^\circ}{\cos 74^\circ} + \frac{\tan 14^\circ}{\cot 76^\circ} =$ is:

A. 0

B. 1

C. 2



D. 3

Q14 Mathematics

Two train engines of same length are running in the same direction with speeds of 18 km/h and 36 km/h. If the faster engine crosses the slower one in 8 sec, what is the length of each train engine?

A. 10 m

B. 20 m



C. 25 m

D. 30 m

Q15 Mathematics

Which of the following is reducible to a quadratic equation?

A.) $(m + 1) - \frac{1}{m + 1} = 65$

B.) $x^3 + 3x = 2x^3 - 4x^2$

C.) $(a + b)^2 = \frac{3}{b}$

D.) $x + (3x - 2) = \frac{1}{x^2} - 6$

A. A



B. B

C. C

D. D



Q16 Mathematics

The value of

$$(18 \div 9) \times (-7 + 9) - 7 \times 2 =$$

A. -10



B. -12

C. -6

D. -13

Q17 Mathematics

The present age of a father is $1\frac{1}{2}$ times the sum of the present ages of his two sons. Six years hence, the ratio of his age to the sum of the ages of his sons will be 6 : 5. The present age of the father is:

A. 50 years

B. 45 years

C. 42 years



D. 36 years

Q18 Mathematics

Ramu used to spend 72% of his income. His income is increased by 12% and he increases his expenditure by 5%. If

Ramu earlier saved ₹y and after the increases he now saves ₹x, then what is the value of $(\frac{x-y}{y} \times 100)\%$?

A. 22%

B. 25%

C. 27%

D. 30%



Q19 Mathematics

The table here gives the yield of wheat per hectare of 100 farmers of a village. What is the cumulative frequency of the class preceding the median class?

Production yield (Qui/Hec)	Number of farmers
30-40	5
40-50	18
50-60	15
60-70	22
70-80	27
80-90	13

A. 43

B. 38



C. 35

D. 29

Q20 Mathematics

The shopkeeper offers 3 successive discounts on a washing machine that costs ₹58,000, so that the price gets reduced to ₹42,000. If 5%, 10% and $x\%$ are the respective discounts, find the value of x .

A. 12

B. 15.3



C. 9

D. 10

Q21 Mathematics

If X is the greatest number that can divide 3808, 4798 and 5128 leaving the same remainder 13, then the sum of digits in X is:

A. 12



B. 14

C. 16

D. 18



Q22 Mathematics

There are two classrooms A and B having a certain number of students. If 5 students are shifted from A to B, then B has twice the number of students as A. If 1 student is sent from B to A, then both classrooms will have the same number of students. How many students are there in A?

A. 19

B. 26

C. 17



D. 22

Q23 Mathematics

Find the perimeter of a rhombus whose diagonals are of lengths 5 cm and 12 cm.

A. 20 cm

B. 26 cm



C. 25 cm

D. 24 cm

Q24 Mathematics

If $a + b = 27$ and $ab = 140$, then what is the value of $a^3 + b^3$?

A. 8343



B. 8433

C. 11340

D. 19683

Q25 Mathematics

The numerator of a fraction is one less than the denominator. If 6 is added to the numerator, the fraction will be equal to $\frac{5}{4}$. Find the fraction.

A. $-\frac{21}{20}$ B. $-\frac{20}{21}$ C. $\frac{20}{21}$ D. $\frac{19}{20}$ 

Q26 General Intelligence and Reasoning

If 1 is added to each odd digit and 1 is subtracted from each even digit in the number 58132745, what will be the sum of the digits which are second from the left and third from the right?

A. 5

B. 15



C. 8

D. 10

Q27 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(12, 112, 9)

(6, 28, 4)

A. (11, 99, 9)

B. (13, 55, 4)

C. (18, 94, 5)



D. (12, 149, 12)

Q28 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. K sits to the immediate left of G. L sits to the immediate right of P. P is fourth to the right of G. L is fourth to the left of H. If no other person is sitting in the row, what is the total number of persons seated?

A. 10

B. 11



C. 12

D. 13



Q29 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

P Q S D A B U E H I R I A A Y E J S B R X M F G U A B U E H I R

How many such vowels are there in the series each of which is immediately preceded by a consonant and also immediately followed by a consonant?

A. 2

B. 3

C. 4



D. 5

Q30 General Intelligence and Reasoning

Eight clowns I, J, K, L, M, N, O and P were sitting around a square table, facing the centre. Some of them were sitting at the corners, while some were sitting at the exact centre of the sides. K was sitting to the immediate left of O. J was sitting to the immediate right of M. P was sitting second to the right of L. J was sitting fourth to the left of P. N was sitting fourth to the left of K. O was sitting to the immediate left of M. M is sitting at one of the corners. Who was sitting fourth to the left of I?

A. O

B. L

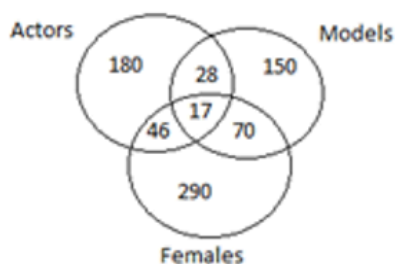
C. M



D. P

Q31 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons working in a film industry.



How many female actors are also models?

A. 28

B. 46

C. 70

D. 17



Q32 General Intelligence and Reasoning

The given table shows the production of food grains (in tonnes) in a certain state of India for the period 2016-2020. Study the table and answer the question.

Food grains Year	Wheat	Maize	Rice	Pulses	Beans
2016	410	680	500	390	280
2017	500	700	550	400	250
2018	550	500	580	380	300
2019	510	750	560	500	260
2020	600	800	600	510	300

In the year 2018, the total production of rice and beans is approximately what percentage of the total production of rice and beans in the year 2020?

A. 97.8%



B. 85.5%

C. 89.3%

D. 90.5%

Q33 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

6, 8, 15, 37, 104, ?

A. 306



B. 308

C. 310

D. 312



Q34 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

- I. All B's are G's.
- II. Some G's are S's.
- III. Some S's are A's.

Conclusions:

- I. All B's are S's.
- II. Some A's are B's.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow



Q35 General Intelligence and Reasoning

If the time in the mirror image of a 12-hour clock is 5:40, what is the actual time?

- A. 6:20
- B. 6:10
- C. 2:50
- D. 2:10



Q36 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

MON : PLQ

KIT : NFW

- A. LPG : OMK
- B. PEN : SBQ
- C. PET : SIW
- D. TAP : WYS



Q37 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷' and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$100 + 136 \times 17 - 12 \div 6 = ?$$

A. 4

B. 8

C. 10

D. 14

Q38 General Intelligence and Reasoning

Six students - 1, 2, 3, 4, 5 and 6 - are sitting around a circular table facing the centre. 4 is sitting to the immediate right of 5 and immediate left of 6. 5 is sitting second to the right of 3. 6 and 3 are the immediate neighbours of 1. Who among the following is sitting to the immediate left of 2?

A. 3

B. 6

C. 5

D. 4

Q39 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	6	#	4	9	@	%	>	2	!	?	5	8	\$	3
Code	C	H	T	J	D	G	M	X	V	W	K	U	N	L

Conditions:

- (i) If the first element is a symbol and the last, a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last, an even number, the first and last elements are to be coded as £.
- (iii) If both second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '\$ # 9 4 @ 3' be coded?

A. NHJTDL

B. LHJTDN

C. £HJTD£

D. LHD TGN



Q40 General Intelligence and Reasoning

In a certain code language, 'PUNCH' is written as 'OWMEG' and 'SHAWL' is written as 'RJZYK'. How will 'KARMA' be written in that language?

A. JCQOZ



B. KZQPY

C. JZQOZ

D. KZQPZ

Q41 General Intelligence and Reasoning

If each of the digits in the number given below is arranged in the ascending order from left to right, the position of how many digits will remain unchanged as compared to that in the original number?

(Left) 6352897 (Right)

A. None

B. One

C. Two



D. Three

Q42 General Intelligence and Reasoning

Starting from point A, Jagdish walks 98 m towards the west. He takes a left turn and walks 54 m. He takes a left turn again and walks 112 m. Again, he takes a left turn and walks 54 m to reach point B. How far and in which direction is point A from point B? (All turns are 90 degree turns only)

A. 14 m, East

B. 14 m, West



C. 16 m, East

D. 16 m, West



Q43 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 248 382 415 127 335 (Right)

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

NOTE - All operations to be done from left to right.

What will be the resultant if the first digit of the second smallest number is multiplied with the second digit of the largest number?

A. 2



B. 4

C. 6

D. 8

Q44 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. D sits to the immediate left of F. Only six people sit between S and D. K sits third to the right of F. S sits at the extreme left end of the row. If no other person is sitting in the row, what is the total number of persons seated?

A. 10

B. 11

C. 12



D. 13

Q45 General Intelligence and Reasoning

A statement is given, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $L = U > V > E < Z < Q$

A. $L < V$

B. $U > E$



C. $E = L$

D. $Q > V$



Q46 General Intelligence and Reasoning

Seven boxes J, K, L, M, N, O and P are kept one over the other but not necessarily in the same order. Only five boxes are kept between K and J. L is kept immediately above P. M is kept immediately below N. O is kept at one of the positions above J. N is kept immediately below K. How many boxes are kept between N and J?

A. 1

B. 2

C. 3

D. 4



Q47 General Intelligence and Reasoning

Refer to the following number series and answer the question.

5 6 2 6 5 8 5 3 5 0 2 6 3 8 2 5 6 9 3 7

How many such odd numbers are there each of which is immediately preceded by an even number and also immediately followed by an even number?

A. 1

B. 2

C. 3

D. 4



Q48 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $F = U \geq P = M \leq K < W < T$

A. $M > F$

B. $T < K$

C. $P \geq K$

D. $F \geq P$



Q49 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Some tablets are mobile phones

All mobile phones are telephones

Some laptops are tablets

Conclusions:

(I) Some laptops are mobile phones

(II) Some telephones are laptops

(III) All tablets are telephones

A. Only conclusion I follows

B. Only conclusion II follows

C. Only conclusion I and III follows

D. None of the conclusions follow

**Q50** General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) and complete the given alpha-numeric series?

25LN, 26OQ, 29RT, ? 41XZ

A. 31UW

B. 30UV

C. 34UW



D. 34VW

Q51 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

25 : 49 :: 42 : 36 :: 74 : ?

A. 122

B. 120

C. 118

D. 121



Q52 General Intelligence and Reasoning

To reach point Q from point S, a person has to walk 83 m towards the west. He must then take a right turn and walk 240 m. He must take another right turn and walk 147 m. He must take another right turn and walk 240 m to reach the destination. How far and in which direction is point Q from point S? (All turns are 90 degree turns only)

- A. 59 m, East
- B. 59 m, West
- C. 64 m, East
- D. 64 m, West



Q53 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

87, 66, 53, 46, 43, ?

- A. 40
- B. 41
- C. 42
- D. 44



Q54 General Intelligence and Reasoning

A statement is given followed by two possible underlying assumptions I and II. Read all the information carefully and decide which of the given assumptions can be assumed by the given statement.

Statement:

Recent marketing trends suggest that words like 'premium', 'exquisite', 'priority' are considered prestigious by consumers of the middle income group and hence increase the chances of sale of any product advertised with these words.

Assumptions:

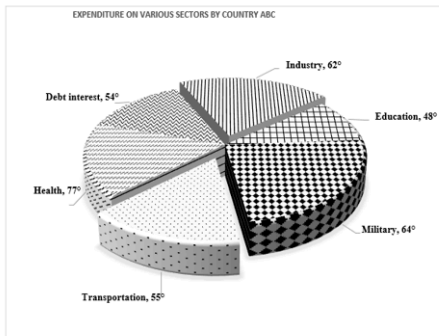
- I. The products advertised with the said 'prestigious' words definitely cost higher than those which are not advertised with such words.
- II. Such prestigious words have no impact on sales among the lower income group.

- A. Only I can be assumed
- B. Only II can be assumed
- C. Both I and II can be assumed
- D. Neither I nor II can be assumed



Q55 General Intelligence and Reasoning

The given circle graph shows the annual spending of country 'ABC' on various sectors during a particular year (in the form of central angle). Study the circle graph and answer the question.



If the amount spent on industry and transportation during a year was \$10 million, then what was the total approximate amount spent on all the various sectors by the country in that year?

- A. \$20.5 million
- B. \$50 million
- C. \$45.5 million
- D. \$30.8 million



General Science

25 Questions • Answer Key

Q56 General Science

Consider the V-I graphs for wires of material A and material B as described below:

Material A: It is a straight line passing through origin and is inclined at 20° to the current I axis.

Material B: It is a straight line passing through origin and is inclined at 60° to the current I axis.

Which of the following options is correct?

- A. Both A and B follow Ohm's law.
- B. Neither A nor B follow Ohm's law.
- C. A follows Ohm's law but B does not.
- D. B follows Ohm's law but A does not.



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Q57 General Science

Propanone has _____ carbons and _____ functional group.

- A. 4, ketone
- B. 3, ketone
- C. 4, aldehyde
- D. 3, aldehyde

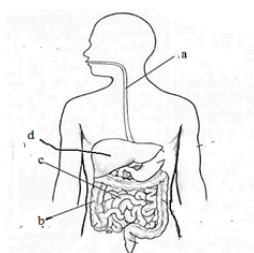
Q58 General Science

Which of the following is a precipitation reaction?

- A. $\text{CuSO}_4 (\text{aq}) + \text{BaCl}_2 (\text{aq}) \rightarrow \text{BaSO}_4 (\text{s}) + \text{CuCl}_2 (\text{aq})$
- B. $\text{Fe}(\text{s}) + \text{CuSO}_4 (\text{aq}) \rightarrow \text{FeSO}_4 (\text{aq}) + \text{Cu} (\text{s})$
- C. $2\text{Al}_2\text{O}_3 (\text{l}) \rightarrow 4\text{Al} (\text{l}) + 3\text{O}_2 (\text{g})$
- D. $\text{CuO} + \text{H}_2 \rightarrow \text{H}_2\text{O} + \text{Cu}$

Q59 General Science

The diagram of the human alimentary canal is given below. Select the option that shows the correct matching of Column I with Column II.



Column I	Column II
a	i) Villi absorb water from food
b	ii) Length depends on food the organism eats
c	iii) Helps in emulsification of fats
d	iv) No digestion

- A. a-i, b-ii, c-iii, d-iv
- B. a-ii, b-iii, c-iv, d-i
- C. a-iii, b-ii, c-i, d-iv
- D. a-iv, b-i, c-ii, d-iii



Q60 General Science

If carbon will form C^{4-} , then the number of electrons and protons in the carbon ion will be _____ and _____, respectively.

- A. 4; 2
- B. 10; 6
- C. 2; 4
- D. 6; 10



Q61 General Science

A litmus paper was used to check the pH of a solution. The solution turns blue litmus red, its pH is likely to be:

- A. 7
- B. 9
- C. 8
- D. 5



Q62 General Science

The radius of curvature of a concave mirror is 12 cm. Following New Cartesian Sign Convention, the principal focus is located at $x =$ _____.

- A. 6 cm
- B. 12 cm
- C. -6 cm
- D. -12 cm



Q63 General Science

Which option is correct regarding the movement of water and mineral ions in the root cells of a plant from the soil?

- A. Ions and water are absorbed together
- B. Water moves in first by diffusion, followed by active transport of ions
- C. Ions move in first by active transport, followed by water along the concentration gradient
- D. Ions move in first by passive transport, followed by water by active transport



Q64 General Science

A chemical that contributes to the depletion of the ozone layer is:

- A. chlorofluorocarbon ✓
- B. carbon tetrachloride
- C. methane
- D. phosphorus pentoxide

Q65 General Science

Which of the following statements is NOT a myth?

- A. If a girl looks at boys while menstruating, she becomes pregnant.
- B. The mother is ultimately accountable for her child's sexual orientation.
- C. During menstruation, a girl should not be permitted to work in the kitchen.
- D. Foods like chips and canned snacks are low in nutrition and should be avoided during adolescence/reproductive phase ✓

Q66 General Science

The refractive indices of mediums 1, 2 and 3 are 1.46, 1.65 and 1.31, respectively. If the speed of light in the mediums are v_1 , v_2 and v_3 , respectively, which of the following relations between them is correct?

- A. $v_1 = v_2 = v_3$
- B. $v_1 > v_2 > v_3$
- C. $v_2 > v_3 > v_1$
- D. $v_3 > v_1 > v_2$ ✓



Q67 General Science

Some functions of lymph are given below. Select the option with the correct functions.

- a) Carries digested and absorbed fat from intestine
- b) Carries CO_2 to lungs
- c) Carries RBCs to the lymph nodes
- d) Drains excess fluid from extracellular space back into blood

A. a and b

B. b and c

C. c and d

D. a and d



Q68 General Science

The valency of group 17 elements will be:

A. 1

B. 2

C. 5

D. 8



Q69 General Science

If any person is affected by a bee-sting attack, which chemical would be helpful for him to get some relief from pain?

A. Curd

B. Common salt

C. Baking soda

D. Vinegar



Q70 General Science

In an electric generator, _____ energy is used to rotate a conductor in a _____ field to produce electricity.

- A. electrical, electric
- B. electrical, magnetic
- C. mechanical, magnetic
- D. mechanical, electric



Q71 General Science

Which of the following elements has valency 3?

- A. Mg
- B. S
- C. Al
- D. C



Q72 General Science

A 1100 W electric toaster operates at 220 V. The resistance of its coil is:

- A. 11 Ω
- B. 22 Ω
- C. 44 Ω
- D. 88 Ω



Q73 General Science

The focus of a concave mirror is at a distance of 16 cm from its pole. Its centre of curvature will be at a distance of _____ from the pole.

- A. 8 cm
- B. 16 cm
- C. 24 cm
- D. 32 cm



Q74 General Science

Some of the advantages of transpiration to plants are mentioned below. Select the option that is a disadvantage.

- A. Provides water to leaf for photosynthesis
- B. Helps in transporting mineral ions
- C. causes cooling of plants by evaporation
- D. can cause wilting of plants



Q75 General Science

Consider the following statements about an electric motor:

- (a) An electric motor uses split rings.
- (b) The direction of the force on the motor's coil can be found using Fleming's right-hand rule.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b)
- D. Neither (a) nor (b)



Q76 General Science

A nichrome wire AB is made of three parts, AC, CD and DB of resistances in the ratio of 1 : 2 : 3. The wire is connected to a battery. If V_1 , V_2 and V_3 are the potential drops across AC, CD and DB, respectively, then which of the following is correct?

- A. $V_1 : V_2 : V_3 = 1 : 2 : 3$
- B. $V_1 : V_2 : V_3 = 2 : 3 : 1$
- C. $V_1 : V_2 : V_3 = 3 : 2 : 1$
- D. $V_1 : V_2 : V_3 = 1 : 1 : 1$



Q77 General Science

Which of the following is/are advantage(s) of building dams?

- i) Stores water for irrigation
- ii) No equitable distribution of water
- iii) Stores water for generating electricity
- iv) Canals from dams help in transferring water to great distances
- v) Benefits only to a few people

A. Only ii

B. i, iii and iv



C. Only v

D. ii and v

Q78 General Science

The refractive indices of ice and glass are 1.31 and 1.52, respectively. A ray of light passes from ice to glass. The refractive index of glass with respect to ice is _____ and the ray bends _____ the normal in glass.

A. 0.86, towards

B. 0.86, away from

C. 1.16, towards



D. 1.16, away from

Q79 General Science

Which of the following is NOT a part of the female reproductive system?

A. Ovaries

B. Uterus

C. Urethra



D. Fallopian tubes



Q80 General Science

Consider the below statements and identify the correct answer.

Statement-I: Sodium hydroxide is prepared by chlor-alkali process.

Statement-II: Three products chlorine gas, hydrogen gas and sodium hydroxide are produced in this process.

- A. Both the statements are true. ✓
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following languages has NOT been mentioned in the 8th Schedule of the Indian Constitution?

- A. Maithili
- B. Odia
- C. Dogri
- D. Awadhi ✓

Q82 General Awareness and Current Affairs

Who is the Chairman of Rajya Sabha? (As of August 12, 2022)?

- A. Shri Rajnath Singh
- B. Shri Om Birla
- C. Shri Harivansh
- D. Shri Jagdeep Dhankhar ✓

Q83 General Awareness and Current Affairs

Which was the first state of India to adopt the Panchayati Raj system in the year 1959?

- A. Karnataka
- B. Rajasthan ✓
- C. Odisha
- D. Bihar



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Q84 General Awareness and Current Affairs

The Khelo India University Games 2021 was organised in _____.

- A. Patna
- B. Bengaluru
- C. Jaipur
- D. Hyderabad



Q85 General Awareness and Current Affairs

The prayers on _____ are supposed to be in the community mosque, and are known as the Jumma Namaz.

- A. Tuesday
- B. Wednesday
- C. Thursday
- D. Friday



Q86 General Awareness and Current Affairs

In May 2021, who was appointed as the Head Coach of Indian Women's National Cricket Team?

- A. Woorkeri Raman
- B. Ramesh Powar
- C. Rahul Dravid
- D. Gary Kirsten



Q87 General Awareness and Current Affairs

Which of the following was declared a Fundamental Right in 2017 by the Supreme Court of India?

- A. Right against Exploitation
- B. Right to Freedom of Religion
- C. Right to Privacy
- D. Right to Constitutional Remedies



Q88 General Awareness and Current Affairs

When is the primary deficit zero in the Government of India budget?

- A. When the revenue deficit is zero
- B. When the net interest payments is equal to the revenue deficit
- C. When the fiscal deficit is equal to the interest payment ✓
- D. When the fiscal deficit is equal to the revenue deficit

Q89 General Awareness and Current Affairs

Which of the following journals was published for the purpose of social-religious reforms among the Parsis in 1851?

- A. Bombay Herald
- B. Somaprakash
- C. Bombay Post
- D. Rast Goftar ✓

Q90 General Awareness and Current Affairs

India Plastics Pact, a joint initiative between which trade organisation and World-Wide Fund for Nature-India (WWF India), was launched in September 2021?

- A. Indian Association of Amusement Parks and Industries
- B. Cellular Operators Association of India
- C. Confederation of Indian Industry ✓
- D. Engineering Exports Promotion Council

Q91 General Awareness and Current Affairs

_____ is the first 'Made in India' Petascale Supercomputer installed at IIT Roorkee under the National Supercomputing Mission (NSM) in 2022.

- A. PARAM Ganga ✓
- B. PARAM Siddhi-AI
- C. PARAM Pravega
- D. PARAM seva



Q92 General Awareness and Current Affairs

The maximum concentration of iron and steel industry is found in which region in India from following?

- A. Malwa Plateau
- B. Chhotanagpur plateau
- C. Bundelkhand Plateau
- D. Baghelkhand Plateau



Q93 General Awareness and Current Affairs

What is the age group of the people benefitted under the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) (As of July 2022)?

- A. 18 to 50 years
- B. 15 to 60 years
- C. 25 to 60 years
- D. 14 to 50 years



Q94 General Awareness and Current Affairs

As per the Union Budget of India 2022-23, how many kilometres wide corridor will be formed along the river Ganga for promotion of chemical free natural farming?

- A. 2.5 km
- B. 5 km
- C. 7.5 km
- D. 10 km



Q95 General Awareness and Current Affairs

What kind of anti-viral face mask was being developed under the 'Nano mission project' to fight against the Covid-19 pandemic in February 2022?

- A. Non-biodegradable anti-viral face mask
- B. Copper-based nanoparticle coated anti-viral face mask
- C. Self-disinfecting, non-biodegradable face mask
- D. Biodegradable but non-washable anti-viral face mask



Q96 General Awareness and Current Affairs

Through which of the following places does the Standard Meridian of India pass?

- A. Jaunpur
- B. Mirzapur
- C. Kannauj
- D. Agra



Q97 General Awareness and Current Affairs

Which is the most commonly used measure for the size of the economy?

- A. Net domestic product (NDP)
- B. Gross domestic product (GDP)
- C. Gross Net product (GNP)
- D. Nation Net product (NNP)



Q98 General Awareness and Current Affairs

In Which state of India experiences winter rainfall due to retreating monsoon?

- A. Gujarat
- B. Madhya Pradesh
- C. West Bengal
- D. Tamil Nadu



Q99 General Awareness and Current Affairs

In which one of the following regions will you find 'Bari Doab'?

- A. Between Beas and Sutlej
- B. Between Beas and Ravi
- C. Between Ravi and Chenab
- D. Between Chenab and Jhelum



Which of the following festivals is associated with the state of Assam?

A. Bihu



B. Pongal

C. Onam

D. Baisakhi



Mathematics

25 Questions · Answer Key

Q1 Mathematics HINDI - no English version saved

यदि $144 : b :: b : 36$ और $b > 0$ है, तो b का मान ज्ञात कीजिए।

A. 72



B. 12

C. 36

D. 27

Q2 Mathematics HINDI - no English version saved

सरल कीजिए: $\sqrt{\frac{1 + \cos A}{1 - \cos A}}$

A. $\sec A + \tan A$ B. $\sec A - \tan A$ C. $\operatorname{cosec} A + \cot A$ D. $\operatorname{cosec} A - \cot A$

Q3 Mathematics

Find the volume of a cylinder whose radius of base is 5 cm and height is 7 cm.

A. $517\pi \text{ cm}^3$ B. $715\pi \text{ cm}^3$ C. $175\pi \text{ cm}^3$ D. $157\pi \text{ cm}^3$ 

Q4 Mathematics HINDI - no English version saved

एक पुस्तक टाइप की जानी है। अकेले काम किए जाने पर, A इसे 15 दिन में टाइप करता है, B इसे 12 दिन में टाइप करता है, C इसे 20 दिन में टाइप करता है, और D इसे 8 दिन में टाइप करता है। यदि A और D एक साथ टीम SUN के रूप में कार्य करते हैं, B और C टीम MOON के रूप में कार्य करते हैं, तथा A और C टीम RED के रूप में कार्य करते हैं। कौन सी टीम सबसे कम समय में पुस्तक टाइपिंग का कार्य पूर्ण करेगी?

- A. टीम SUN
- B. टीम MOON
- C. टीम RED
- D. सभी टीमों को बराबर समय की आवश्यकता है

Q5 Mathematics HINDI - no English version saved

दो संख्याओं का योग 27 है। एक संख्या का पांच गुना, दूसरी संख्या के 4 गुने के बराबर है। इन दोनों संख्याओं में से छोटी संख्या ज्ञात कीजिए।

- A. 11
- B. 12
- C. 13
- D. 15

Q6 Mathematics HINDI - no English version saved

₹20,000 की राशि $7\frac{1}{2}\%$ वार्षिक चक्रवृद्धि ब्याज की दर पर 1 वर्ष 4 माह की अवधि के लिए निवेश की जाती है, जिस पर ब्याज की गणना वार्षिक चक्रवृद्धि आधार पर की जाती है। प्राप्त होने वाला चक्रवृद्धि ब्याज ज्ञात कीजिए।

- A. ₹2,037.50
- B. ₹2,171.25
- C. ₹2,185.75
- D. ₹2,210.40



Q7 Mathematics HINDI - no English version saved

एक दुकानदार 1 kg के स्थान पर 950 gm वजन के बाट का उपयोग करता है, और वस्तुओं को अंकित मूल्य पर बेचता है, जो क्रय मूल्य से 15% अधिक है। उसका प्रतिशत लाभ ज्ञात कीजिए।

A. $20\frac{5}{19}\%$

B. $23\frac{7}{19}\%$

C. $22\frac{3}{19}\%$

D. $21\frac{1}{19}\%$ ✓

Q8 Mathematics HINDI - no English version saved

एक कक्षा के दो सेक्शन A और B हैं, जिनमें विद्यार्थियों की संख्या क्रमशः 40 और 50 है। यदि सेक्शन A के विद्यार्थियों का औसत वजन 36 kg है, और सेक्शन B के विद्यार्थियों का औसत वजन 45 kg है, तो पूरी कक्षा का औसत वजन ज्ञात कीजिए।

A. 39 kg

B. 41 kg ✓

C. 43 kg

D. 42 kg

Q9 Mathematics HINDI - no English version saved

यदि 15 और -16 एक द्विघात समीकरण के मूल हैं, तो वह समीकरण _____ है।

A. $x^2 - 2x + 240 = 0$

B. $x^2 + x + 240 = 0$

C. $x^2 - x - 240 = 0$

D. $x^2 + x - 240 = 0$ ✓

Q10 Mathematics HINDI - no English version saved

7834 + 213 ÷ 3 - 51 का मान ज्ञात कीजिए।

A. 7834

B. 7854 ✓

C. 7884

D. 7885



Q11 Mathematics HINDI - no English version saved

यदि $x + \frac{1}{x} = 42$ है, तो $x^3 + \frac{1}{x^3}$ का मान ज्ञात कीजिए।

A. 74,926

B. 73,962



C. 72,629

D. 74,130

Q12 Mathematics HINDI - no English version saved

यदि $49 : x :: x : 81$ और $64 : y :: y : 169$ है, जहां x और y दोनों प्राकृत संख्याएं हैं, तो $2x + 3y$ का मान ज्ञात कीजिए।

A. 348

B. 438



C. 312

D. 126

Q13 Mathematics HINDI - no English version saved

एक कक्षा के 35 विद्यार्थियों की औसत आयु 15 वर्ष है। जब शिक्षक की आयु को भी शामिल कर लिया जाता है, तो औसत आयु एक वर्ष बढ़ जाती है। शिक्षक की आयु ज्ञात कीजिए।

A. 35 वर्ष

B. 41 वर्ष

C. 45 वर्ष

D. 51 वर्ष



Q14 Mathematics HINDI - no English version saved

$(3, -2), (2, -3)$ और $(p, -4)$ शीर्षों वाले एक त्रिभुज का क्षेत्रफल 8 वर्ग इकाई है। p का मान ज्ञात कीजिए।

A. -15

B. -16

C. 15

D. 17



Q15 Mathematics HINDI - no English version saved

एक व्यक्ति अपने बगीचे में 21,025 आम के पेड़ इस प्रकार लगाता है, कि पंक्तियों की संख्या, प्रत्येक पंक्ति में पेड़ों की संख्या के बराबर है। पंक्तियों की संख्या ज्ञात कीजिए।

A. 125

B. 135

C. 145



D. 130

Q16 Mathematics HINDI - no English version saved

निम्न में से कौन सा वह द्विघात समीकरण है, जिसके मूल $2 + \sqrt{3}$ और $4 - 2\sqrt{3}$ हैं?

A. $2x^2 - (6 - \sqrt{3})x + 2 = 0$

B. $3x^2 - (6 - \sqrt{3})x + 4 = 0$

C. $x^2 - (12 - \sqrt{3})x + 2 = 0$

D. $x^2 - (6 - \sqrt{3})x + 2 = 0$



Q17 Mathematics HINDI - no English version saved

एक संख्या को दो भागों में इस प्रकार विभाजित किया जाता है कि संख्या का एक भाग दूसरे भाग से 10 अधिक है, और दोनों भागों का अनुपात 4 : 3 होता है। प्रारंभिक संख्या ज्ञात कीजिए।

A. 30

B. 40

C. 70



D. 80



किसी संख्या को एक भाजक से विभाजित करने पर 16 शेष बचता है। जब मूल संख्या के दोगुने को उसी भाजक से विभाजित किया जाता है, तो 3 शेष बचता है। उस भाजक का मान ज्ञात कीजिए।

A. 29



B. 23

C. 53

D. 51

दो संख्याओं के लघुत्तम समापवर्त्य (LCM) और महत्तम समापवर्तक (HCF) क्रमशः 1920 और 4 हैं। यदि एक संख्या 60 है, तो दूसरी संख्या _____ है।

A. 128



B. 140

C. 130

D. 117

यदि एक व्यक्ति एक निश्चित दूरी को 5 km/h की चाल से तय करने में 36 मिनट का समय लेता है, तो उसके द्वारा तय की गई दूरी ज्ञात करें।

A. 2.5 km

B. 2 km

C. 3 km



D. 3.5 km

$\frac{0.5 \times 10.6 - 0.2 \times 1.4}{0.4}$ का मान ज्ञात कीजिए।

A. 12.25

B. 12.55



C. 1.255

D. 125.5



Q22 Mathematics

A pair of parallel lines is intersected by a transversal such that $\angle 1$ and $\angle 2$ form a pair of alternate interior angles. If $m\angle 1 = 35^\circ$, what is the measure of $\angle 2$?

A. 145° B. 55° C. 35° ✓D. 65° **Q23 Mathematics** HINDI - no English version saved

राधा और रमा की आयु का अंतर 6 वर्ष है, और उनकी आयु का योग 26 है। राधा की आयु ज्ञात कीजिए, यदि वह रमा से बड़ी है।

A. 6 वर्ष

B. 16 वर्ष ✓

C. 26 वर्ष

D. 32 वर्ष

Q24 Mathematics HINDI - no English version saved

10%, 15% और 20% की क्रमिक छूटों के तुल्य एकल छूट ज्ञात कीजिए।

A. 40%

B. 45%

C. 38.8% ✓

D. 36.6%

Q25 Mathematics

If the ratio of two interior angles on the same side of a transversal line intersecting the two parallel lines is 3 : 7, then what is the positive difference between the measures of these two interior angles?

A. 54° B. 64° C. 72° ✓D. 80° 

Q26 General Intelligence and Reasoning HINDI - no English version saved

उस विकल्प का चयन करें, जिसका पांचवें अक्षर-समूह से वही संबंध है, जो दूसरे अक्षर-समूह का पहले अक्षर-समूह से है, और चौथे अक्षर-समूह का तीसरे अक्षर-समूह से है।

FAKE : GZLD :: CALL : DZMK :: PICK : ?

A. QHBJ

B. QHBL

C. QHDJ



D. QHDL

Q27 General Intelligence and Reasoning HINDI - no English version saved

A, B, C, D, E और F नामक छह मित्रों की लंबाइयां अलग-अलग हैं। D की लंबाई, केवल दो अन्य मित्रों से अधिक है। C की लंबाई, B से कम है। F की लंबाई, E से अधिक है। D की लंबाई, A से कम है। E की लंबाई, A से अधिक है। सभी मित्रों में से सबसे लंबा कौन है?

A. E

B. F



C. D

D. B

Q28 General Intelligence and Reasoning HINDI - no English version saved

इस प्रश्न में, एक कथन और उसके बाद दो निष्कर्ष दिए गए हैं। निम्नलिखित कथन के आधार पर, दिए गए दो निष्कर्षों में से कौन से सत्य हैं?

कथन:

$$O > L \geq E = P > S < A$$

निष्कर्ष:

I. $P < A$

II. $O < E$

A. केवल निष्कर्ष I सत्य है।

B. केवल निष्कर्ष II सत्य है।

C. निष्कर्ष I और II दोनों सत्य हैं।

D. न तो निष्कर्ष I और न ही II सत्य है।



Q29 General Intelligence and Reasoning HINDI - no English version saved

निम्नलिखित में से उस पद का चयन कीजिए, जो दी गई श्रृंखला में प्रश्न चिह्न (?) के स्थान पर आकर तार्किक रूप से श्रृंखला को पूर्ण करेगा?

TGB 6, VED 18, XCF 30, ZAH 42, BYJ 54, ?

A. YLB 60

B. DWL 66



C. DAL 60

D. YBL 66

Q30 General Intelligence and Reasoning HINDI - no English version saved

किसी परिवार के आठ सदस्य - T, U, V, W, X, Y, Z और A, एक वर्गाकार मेज के चारों ओर केंद्र की ओर मुख करके बैठे थे। उनमें से कुछ इसके कोनों पर बैठे थे, जबकि कुछ भुजाओं के ठीक मध्य में बैठे थे। W और X के बीच में केवल एक व्यक्ति बैठा था। V, U के बाईं ओर चौथे स्थान पर बैठा था। Z और X के बीच में केवल A बैठा था। Y किसी भी कोने पर नहीं बैठा था। X किसी एक कोने पर बैठा था। V, Z के बाईं ओर ठीक बगल में बैठा था। परिवार का इनमें से कौन-सा सदस्य मेज के किसी एक कोने पर बैठा था?

A. U

B. T



C. A

D. V



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Q31 General Intelligence and Reasoning HINDI - no English version saved

एक कथन और उसके बाद दो संभावित अंतर्निहित धारणाएं I और II दी गई हैं। सभी जानकारीयों का ध्यानपूर्वक अध्ययन कीजिए, और बताइए कि दिए गए कथन द्वारा कौन सी धारणाओं का अनुमान लगाया जा सकता है?

कथन:

चूंकि, मूवी R जिसके प्रचार पर केवल ₹1.3 करोड़ खर्च किए गए हैं, उसकी तुलना में मूवी X के प्रचार पर ₹3.6 करोड़ खर्च किए गए हैं, इसलिए मूवी X निश्चित रूप से बॉक्स ऑफिस पर अधिक कमाई करेगी।

धारणाएं:

I. वह फिल्म, जिसके प्रचार पर ₹1 करोड़ से कम खर्च किया जाता है, वह बॉक्स ऑफिस पर अच्छा प्रदर्शन नहीं कर सकती है।

II. मूवी X, मूवी R से अधिक पुरस्कार जीत सकती है।

A. केवल I का अनुमान लगाया जा सकता है।

B. केवल II का अनुमान लगाया जा सकता है।

C. I और II दोनों का अनुमान लगाया जा सकता है।

D. न तो I और न ही II का अनुमान लगाया जा सकता है।



Q32 General Intelligence and Reasoning HINDI - no English version saved

शब्द 'COMPANY' के प्रत्येक व्यंजन को अंग्रेजी वर्णमाला क्रम में उसके अगले अक्षर से बदल दिया जाता है, और प्रत्येक स्वर को अंग्रेजी वर्णमाला क्रम में उसके पूर्ववर्ती अक्षर से बदल दिया जाता है। यदि इस प्रकार बने शब्द के सभी अक्षरों को वर्णानुक्रम में व्यवस्थित किया जाता है, तो दाएं सिरे से चौथे स्थान पर कौन सा अक्षर होगा?

A. N

B. Q

C. Z

D. O



Q33 General Intelligence and Reasoning HINDI - no English version saved

छह व्यक्तियों - A, B, C, D, E और F के जन्मदिन एक ही वर्ष के विभिन्न महीनों, अर्थात् फरवरी, अप्रैल, जून, अगस्त, सितंबर और दिसंबर में हैं, लेकिन उनका इसी क्रम में होना अनिवार्य नहीं है।

B और A के बीच क्रमवार केवल एक व्यक्ति का जन्मदिन है। C और E के बीच क्रमवार केवल दो व्यक्तियों के जन्मदिन हैं। F का जन्मदिन सितंबर से ठीक पहले आने वाले महीने में है। D का जन्मदिन दिसंबर में है। इनमें से किसका जन्मदिन फरवरी में है?

A. C

B. E

C. B



D. F

Q34 General Intelligence and Reasoning HINDI - no English version saved

उस समुच्चय का चयन कीजिए, जिसमें मौजूद संख्याओं के बीच वही संबंध है, जो निम्नलिखित समुच्चयों की संख्याओं के बीच है।

(नोट: संक्रियाएं संख्याओं को उनके संघटक अंकों में विभक्त किए बिना, संपूर्ण संख्याओं पर की जानी चाहिए। उदाहरणार्थ - 13 पर की जाने वाली संक्रियाएं, जैसे - जोड़ना / घटाना / गुणा करना इत्यादि 13 पर ही की जानी चाहिए। 13 को 1 और 3 में विभक्त करना, और फिर 1 और 3 पर गणितीय संक्रियाएं करने की अनुमति नहीं है।)

(14, 25, 19)

(12, 16, 16)

A. (17, 25, 21)

B. (18, 16, 14)



C. (19, 20, 24)

D. (24, 30, 30)

Q35 General Intelligence and Reasoning HINDI - no English version saved

निम्नलिखित में से कौन सा विकल्प उस निकटतम लगभग मान को दर्शाता है, जो निम्नलिखित समीकरण में प्रश्न चिह्न (?) के स्थान पर आएगा?

$$17.89 - 0.0123 + 2.21 \times 3.63 = ?$$

A. 15

B. 26



C. 36

D. 42



Q36 General Intelligence and Reasoning HINDI - no English version saved

उस संख्या का चयन कीजिए, जो निम्नलिखित श्रेणी में प्रश्न चिह्न (?) के स्थान पर आएगी।

7, 9, 15, 49, 191, ?

A. 916

B. 961



C. 966

D. 911

Q37 General Intelligence and Reasoning HINDI - no English version saved

उस संख्या का चयन कीजिए, जो निम्नलिखित श्रेणी में प्रश्न चिह्न (?) के स्थान पर आएगी?

7, 7, 10, 50, 57, ?

A. 114

B. 225

C. 345

D. 513



Q38 General Intelligence and Reasoning HINDI - no English version saved

आठ लड़कियां Q, R, S, T, U, V, W और X एक वर्गाकार मेज के चारों ओर केंद्र की ओर मुख करके बैठी थीं। उनमें से कुछ इसके कोनों पर बैठी थी, जबकि कुछ भुजाओं के ठीक मध्य में बैठी थी। R और S के बीच में केवल V बैठी थी। Q और T एक दूसरे के ठीक बगल में बैठी थीं। T और S के बीच में केवल X बैठी थी। U, Q के दाईं ओर ठीक बगल में बैठी थी। S, U के बाईं ओर चौथे स्थान पर बैठी थी। S किसी एक कोने पर बैठी थी। X के बाईं ओर चौथे स्थान पर कौन बैठी थी?

A. R

B. V

C. Q

D. W



Q39 General Intelligence and Reasoning HINDI - no English version saved

एक निश्चित कूट भाषा में, 'CREAM' को 'FUVEQ' और 'STOVE' को 'VWLZI' लिखा जाता है। उसी कूट भाषा में 'PITCH' को किस प्रकार लिखा जाएगा?

- A. SLXGL
- B. TMGFK
- C. SLGGL
- D. TGMKF

Q40 General Intelligence and Reasoning HINDI - no English version saved

उस विकल्प का चयन कीजिए, जो पांचवीं संख्या से उसी प्रकार संबंधित है, जिस प्रकार दूसरी संख्या पहली संख्या से और चौथी संख्या तीसरी संख्या से संबंधित है।

(नोट: संक्रियाएं संख्याओं को उनके संघटक अंकों में विभक्त किए बिना, संपूर्ण संख्याओं पर की जानी चाहिए।
उदाहरणार्थ - 13 पर की जाने वाली संक्रियाएं, जैसे - जोड़ना / घटाना / गुणा करना इत्यादि 13 पर ही की जानी चाहिए। 13 को 1 और 3 में विभक्त करने, और फिर 1 और 3 पर गणितीय संक्रियाएं करने की अनुमति नहीं है।)

3 : 30 :: 4 : 68 :: 5 : ?

- A. 140
- B. 125
- C. 130
- D. 150

Q41 General Intelligence and Reasoning

Study the given letter series and answer the question that follows.

LEAPKXOZMTYWUDQFH

Which set of 3 letters will fall exactly in the middle of the series if the letters are arranged in alphabetical order?

- A. LMO
- B. MOP
- C. OPQ
- D. PQT



Q42 General Intelligence and Reasoning HINDI - no English version saved

यदि 1 अप्रैल 2017 को शनिवार था, तो 12 मई 2017 को सप्ताह का कौन सा दिन था?

- A. सोमवार
- B. रविवार
- C. शुक्रवार
- D. शनिवार

Q43 General Intelligence and Reasoning HINDI - no English version saved

यदि A, B, C, D और E क्रमशः +, -, ×, ÷ और = को निरूपित करते हैं, तो निम्नलिखित कथनों में से कौन सा सही है?

- A. 7A3C6D2E30A14
- B. 7A3C6D2B30E14
- C. 7A3C6D2C30B14
- D. 7A3C6D2E30B14

Q44 General Intelligence and Reasoning HINDI - no English version saved

कुछ विद्यार्थी एक पंक्ति में खड़े हैं। सोनिया और सुजाता के बीच केवल राधिका खड़ी है। दिव्या, सोनिया के ठीक आगे खड़ी है। सुजाता के पीछे ठीक दो लड़कियां खड़ी हैं, और दिव्या के ठीक आगे केवल एक लड़की खड़ी है। पंक्ति में कितने विद्यार्थी खड़े हैं?

- A. 5
- B. 6
- C. 7
- D. 8

Q45 General Intelligence and Reasoning HINDI - no English version saved

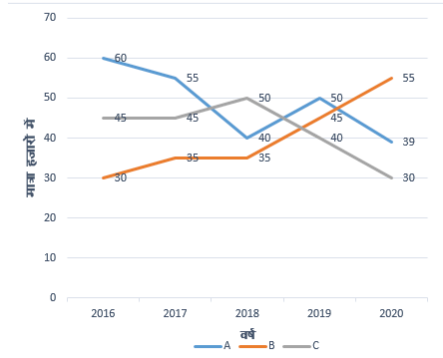
नरेंद्र, बिंदु L से चलना शुरू करके, उत्तर की ओर 100 m चलता है। वहां से, वह दाएं मुड़ता है, और 900 m चलता है। वह पुनः दाएं मुड़ता है, और 750 m चलता है। फिर, वह दाएं मुड़ता है, और 900 m चलकर बिंदु M पर पहुंचता है। बिंदु M, बिंदु L से कितनी दूर और किस दिशा में है? (सभी मोड़ केवल 90° डिग्री वाले मोड़ हैं।)

- A. 700 m, दक्षिण
- B. 700 m, उत्तर
- C. 650 m, दक्षिण
- D. 650 m, उत्तर



Q46 General Intelligence and Reasoning HINDI - no English version saved

निम्नांकित लाइन ग्राफ कुछ वर्षों के दौरान तीन अलग-अलग कंपनियों, अर्थात् A, B, C द्वारा किए गए लैपटॉप के उत्पादन को दर्शाता है। लाइन ग्राफ का अध्ययन कीजिए, और पूछे गए प्रश्न का उत्तर दीजिए।



किस वर्ष के दौरान कंपनी A के उत्पादन के सापेक्ष, कंपनी C के उत्पादन का प्रतिशत न्यूनतम था?

- A. 2012
- B. 2014
- C. 2016
- D. 2017



Q47 General Intelligence and Reasoning HINDI - no English version saved

नीतू अपनी कक्षा से बाहर निकलती है, और पूर्व की ओर 25 m चलती है। वहां से, वह दाएं मुड़ती है, और 20 m चलती है। वह पुनः दाएं मुड़ती है, और 62 m चलती है। फिर, वह दाएं मुड़ती है, और 91 m चलती है। इसके बाद, वह पुनः दाएं मुड़ती है, और 62 m चलती है। फिर, वह दाएं मुड़ती है, और 35 m चलती है। वहां से पुनः दाएं मुड़ती है, और 25 m चलती है। अंततः, वह पुनः दाएं मुड़ती है, और 15 m चलकर बिंदु X पर पहुंचती है। बिंदु X, नीतू की कक्षा से कितनी दूर और किस दिशा में है? (सभी मोड़ केवल 90° डिग्री वाले मोड़ हैं।)

- A. 55 m, दक्षिण
- B. 55 m, उत्तर
- C. 51 m, दक्षिण
- D. 51 m, उत्तर



Q48 General Intelligence and Reasoning HINDI - no English version saved

K, L, M, N, O और P एक ही इमारत की छह अलग-अलग मंजिलों पर रहते हैं। इमारत की सबसे निचली मंजिल का क्रमांक 1 है, उसके ऊपर वाली मंजिल का क्रमांक 2 है, और इसी तरह सबसे ऊपरी मंजिल का क्रमांक 6 है।

L मंजिल क्रमांक 5 पर नहीं रहता है। O और P सम क्रमांक वाली मंजिलों पर रहते हैं, लेकिन मंजिल क्रमांक 6 पर नहीं रहते हैं। N, मंजिल क्रमांक 3 पर रहता है। K, L के ठीक नीचे वाली मंजिल पर रहता है। O, M के ठीक ऊपर वाली मंजिल पर रहता है, लेकिन मंजिल क्रमांक 4 पर नहीं रहता है। मंजिल क्रमांक 5 पर कौन रहता है?

A. N

B. P

C. K



D. O

Q49 General Intelligence and Reasoning HINDI - no English version saved

दी गई तालिका विभिन्न विषयों में AS-लेवल कक्षा के 5 छात्रों द्वारा प्राप्त अंकों को दर्शाती है। तालिका का अध्ययन कीजिए, और पूछे गए प्रश्न का उत्तर दीजिए।

विषय	रसायन विज्ञान	भौतिकी	गणित	जीव विज्ञान	लेखांकन	कंप्यूटर विज्ञान
छात्र	100 में से	100 में से	100 में से	100 में से	100 में से	100 में से
जितेंद्र	70	80	85	80	60	50
सुखीबिको	60	75	80	75	72	80
मोहन	85	90	80	90	80	85
अहमद	55	60	50	60	50	55
पुनीत	80	60	70	75	80	60

पुनीत द्वारा सभी विषयों में प्राप्त कुल अंकों का माध्य प्रतिशत कितना है?

A. 65%

B. 70.8%



C. 78.5%

D. 73.8%

Q50 General Intelligence and Reasoning HINDI - no English version saved

PACKED शब्द में प्रत्येक स्वर को अंग्रेजी वर्णमाला क्रम में उसके अगले अक्षर से बदल दिया जाता है, और प्रत्येक व्यंजन को अंग्रेजी वर्णमाला क्रम में उसके पूर्ववर्ती अक्षर से बदल दिया जाता है। इस प्रकार बने अक्षर समूह में इनमें से कौन सा अक्षर दो बार आएगा?

A. C

B. B



C. F

D. J



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Q51 General Intelligence and Reasoning

If each of the digits in the number 684912753 is arranged in ascending order from left to right, the position of how many digits will remain unchanged as compared to that in the original number?

A. 1



B. 2

C. 3

D. 4

Q52 General Intelligence and Reasoning

In a code language, 'we prefer green' is written as 'yo ha ni', 'green peas grow' is written as 'ki mi yo', and 'we grow herbs' is written as 'zu ha mi'. What is the code for the word 'prefer' in that language?

A. ni



B. yo

C. mi

D. ha

Q53 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All fingers are thumbs.

Some thumbs are trees.

Some angles are trees.

Conclusions:

I. Some angles are thumbs.

II. Some trees are fingers.

A. Only conclusion I follows

B. Only conclusion II follows

C. Either conclusion I or II follows

D. Neither conclusion I nor II follows



Q54 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

All hats are caps

All caps are gloves

Some hats are goggles

Conclusions:

(I) Some goggles are caps

(II) Some gloves are goggles

(III) No goggle is a glove

A. Only conclusions I and II follow



B. Only conclusions II and III follow

C. Only conclusion I and III follows

D. None of the conclusions follow

Q55 General Intelligence and Reasoning HINDI - no English version saved

दिए गए आरेख का ध्यानपूर्वक अध्ययन कीजिए, और पूछे गए प्रश्न का उत्तर दीजिए। विभिन्न भागों में दी गई संख्याएं व्यक्तियों की संख्या को दर्शाती हैं।



ऐसे कितने अंतरिक्ष वैज्ञानिक हैं जो महीने में 50K के बराबर या उससे अधिक कमाते हैं?

A. 46



B. 12

C. 34

D. 27



Q56 General Science

The number of valence electrons in a group _____ when we are moving down.

- A. increases
- B. decreases
- C. remains constant ✓
- D. first increases, then decreases

Q57 General Science HINDI - no English version saved

एथेनॉल के एथेनोइक अम्ल में परिवर्तन को किसके द्वारा उत्प्रेरित किया जाता है?

- A. क्षारीय KMnO_4 और अम्लीकृत $\text{K}_2\text{Cr}_2\text{O}_7$ ✓
- B. अम्लीकृत K_2CrO_4 और क्षारीय KMnO_4
- C. क्षारीय K_2MnO_4 और अम्लीकृत $\text{K}_2\text{Cr}_2\text{O}_7$
- D. अम्लीकृत K_2CrO_4 और क्षारीय K_2MnO_4

Q58 General Science HINDI - no English version saved

संधारणीय विकास का मुख्य महत्व क्या है?

- A. भावी पीढ़ी की आवश्यकताओं के लिए प्राकृतिक संसाधनों का संरक्षण करना ✓
- B. तीव्र विकास के लिए उपलब्ध संसाधनों का अंधाधुंध दोहन करना
- C. उपलब्ध प्राकृतिक संसाधनों की लागत को बढ़ाना
- D. संसाधन असीमित हैं, और हम अपनी आवश्यकताओं के लिए अतिलोभित तरीके से उनका उपयोग कर सकते हैं

Q59 General Science

In which of the following groups do all the hydrocarbons NOT belong to the same homologous series?

- A. C_2H_4 , C_3H_6 , C_4H_8
- B. CH_4 , C_2H_6 , C_3H_6 ✓
- C. C_3H_6 , C_5H_{10} , C_7H_{14}
- D. C_2H_2 , C_3H_4 , C_4H_6



Q60 General Science

An object is placed in front of a concave mirror at a distance thrice its focal length ($3f$). The image is formed at:

- A. C
- B. a point between F and C
- C. a point beyond C
- D. a point behind the mirror

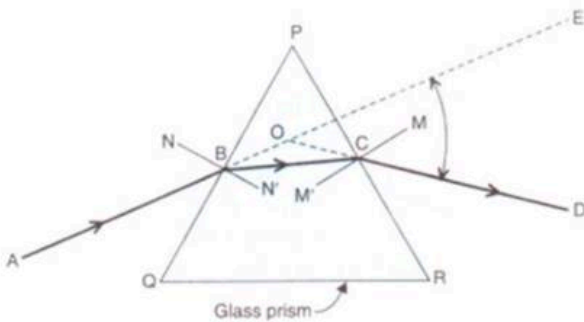
Q61 General Science HINDI - no English version saved

इनमें से किस समूह में सभी जैव निम्नीकरणीय (biodegradable) पदार्थ शामिल हैं?

- A. घास, लकड़ी, संतरे के छिलके
- B. घास, प्लास्टिक, फूल
- C. फूल, लकड़ी, बैटरी
- D. सब्जियों के छिलके, लकड़ी, रबड़

Q62 General Science

The figure below shows the path of a ray of light through a triangular glass prism. The angle of incidence and angle of deviation in the respective order are given by:



- A. $\angle ABN$ and $\angle EOD$
- B. $\angle ABN$ and $\angle OBC$
- C. $\angle ABC$ and $\angle EOD$
- D. $\angle NBC$ and $\angle MCD$



Q63 General Science HINDI - no English version saved

L लंबाई और R प्रतिरोध वाले एक तार को इस प्रकार पुनर्निर्मित किया जाता है कि इसकी लंबाई में 25% की वृद्धि होती है, और इसके आयतन में कोई परिवर्तन नहीं होता है। नए तार का प्रतिरोध _____ होगा।

A. $\left(\frac{4}{5}\right) R$

B. $\left(\frac{16}{25}\right) R$

C. $\left(\frac{5}{4}\right) R$

D. $\left(\frac{25}{16}\right) R$ ✓

Q64 General Science

Two coils, A and B, such that A is connected to a battery through a key and B is connected to a galvanometer, are arranged parallel and close to each other. During which of the following duration will the phenomenon of electromagnetic induction be observed?

(a) During the time the key is closed.

(b) Two minutes after the key is closed.

A. Only (a) ✓

B. Only (b)

C. Both (a) and (b)

D. Neither (a) nor (b)

Q65 General Science

When an acid is allowed to react with a base to form salt and water, this chemical reaction is named as:

A. acid-base reaction

B. neutralisation reaction ✓

C. redox reaction

D. combination reaction



Q66 General Science

Washing soda is _____ in nature.

- A. acidic
- B. basic
- C. edible
- D. sour



Q67 General Science

The focal length of a concave mirror is 24 cm. Following New Cartesian Sign Convention, its centre of curvature is located at:

- A. -24 cm
- B. 24 cm
- C. -48 cm
- D. 48 cm



Q68 General Science

In animals such as snails, individuals can change their sex. What does this signify?

- A. Sex is determined by genes.
- B. Sex is determined by temperature.
- C. Sex is not genetically determined.
- D. Sex may be determined by any of the environmental factor.



Q69 General Science

Olfactory receptors aid in _____ perception.

- A. taste
- B. smell
- C. touch
- D. sound



Q70 General Science

A current of 0.2 A is maintained in a resistor of $10\ \Omega$. The heat produced in the resistor in 1 second is:

A. 0.2 J

B. 0.4 J

C. 25 J

D. 50 J

Q71 General Science

Consider the following statements about magnetic field due to a bar magnet:

(a) The field lines inside a bar magnet are directed from its south pole to the north pole.

(b) The magnetic field lines exist only outside the bar magnet.

Which of the above statements is/are correct?

A. Both (a) and (b)

B. Neither (a) nor (b)

C. Only (a)

D. Only (b)

Q72 General Science HINDI - no English version saved

पाचन के दौरान, भोजन सरल पदार्थों में विघटित होता है। उदाहरण के लिए, चावल, आलू और ब्रेड में _____ होते हैं। ये विघटित होकर _____ का निर्माण करते हैं।

A. ग्लूकोज, कार्बोहाइड्रेट

B. कार्बोहाइड्रेट, ग्लूकोज

C. कार्बोहाइड्रेट्स, एमिनो अम्ल

D. प्रोटीन, ग्लूकोज



पौधों में श्वसन के संबंध में गलत कथन का चयन कीजिए।

- A. विसरण द्वारा ऑक्सीजन और CO_2 का विनिमय होता है
- B. कार्बन डाइऑक्साइड दिन के समय के दौरान वायुमंडल में मिश्रित हो जाती है ✓
- C. बड़े अंतरकोशिकीय स्थानों के कारण कोशिकाएं वायु के संपर्क में होती हैं
- D. पौधे रंध्रों द्वारा गैसों का विनिमय करते हैं

Which of the following was the main drawback of the Doberiner's triads?

- A. He found some periodicity in the properties of triads.
- B. The elements of a triad have some similarities in their properties.
- C. He was unable to make more than three triads of the elements. ✓
- D. He arranged three element according to their increasing atomic mass.

How is the chromosome number maintained from one generation to another in sexually reproducing organisms?

- A. Doubling of chromosomes during zygote formation
- B. Halving of chromosomes during gamete formation ✓
- C. Doubling of chromosomes during gamete formation
- D. Halving of chromosomes during zygote formation

दो प्रतिरोध, A ($20\ \Omega$) और B ($40\ \Omega$) समानांतर क्रम में संयोजित हैं। इसके बाद संयोजन को 6 V की बैटरी से संयोजित किया गया है। A और B में प्रवाहित होने वाली धाराएं क्रमशः _____ हैं।

- A. 0.1 A और 0.1 A
- B. 0.3 A और 0.3 A
- C. 0.3 A और 0.15 A ✓
- D. 0.15 A और 0.3 A



Q77 General Science

Which of the following are uses of bleaching powder?

- (i) For disinfecting drinking water supply.
- (ii) For the manufacture of chloroform.
- (iii) For making wool unshrinkable.

A. i, ii and iii



B. i and ii

C. i and iii

D. ii and iii

Q78 General Science

The power of a lens is -5 D . Its focal length is:

A. 50 cm

B. -50 cm

C. 20 cm

D. -20 cm



Q79 General Science

Identify the FALSE statement.

A. Photosynthesis produces oxygen as a by-product.

B. Transpiration is the mechanism by which a plant eliminates surplus water.

C. Numerous waste products from plants are stored in centrioles.



D. Gum is an excretory product of plants.



Q80 General Science

In most of the vertebrate groups, there is double circulation of blood. However, one of the groups is an exception. Identify the group from the options below.

- A. Amphibians
- B. Aves
- C. Reptiles
- D. Pisces



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following is FALSE regarding the unitary features of the Indian Constitution?

- A. Strong centre
- B. All India services
- C. No equality of representation
- D. No flexibility of constitution



Q82 General Awareness and Current Affairs HINDI - no English version saved

भारत की तीसरी पंचवर्षीय योजना इनमें से किस वर्ष शुरू हुई थी?

- A. 1961
- B. 1962
- C. 1963
- D. 1964



Q83 General Awareness and Current Affairs HINDI - no English version saved

फरवरी 2022 में शुरू की गई इनमें से किस केंद्रीय क्षेत्र की योजना का उद्देश्य ट्रांसजेंडर समुदाय और भिक्षावृत्ति के कार्य में संलग्न लोगों के लिए कल्याणकारी उपायों का प्रावधान करना है?

- A. स्माइल (SMILE)
- B. ई-श्रम (e-Shram)
- C. PM उम्मीद (PM Umeed)
- D. उजाला (Ujala)



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Q84 General Awareness and Current Affairs

In November 2021, which of the following programmes or schemes launched India's first virtual science lab for children, connecting students with scientists across the country?

- A. CSIR Jigyasa ✓
- B. National Education Alliance for Technology
- C. Kushal Bharat
- D. Youth Undertaking Visit for Acquiring Knowledge (YUVAK)

Q85 General Awareness and Current Affairs HINDI - no English version saved

उस संस्था का नाम बताइए, जिसने पश्चिम बंगाल में सुंदरबन में महिलाओं के लिए 'वेस्ट टू वेल्थ क्रिएशन (Waste to Wealth Creation)' कार्यक्रम शुरू किया है?

- A. महिला एवं बाल विकास मंत्रालय
- B. सूक्ष्म, लघु एवं मध्यम उद्योग (MSME)
- C. भारतीय लघु उद्योग विकास बैंक (SIDBI) ✓
- D. स्वास्थ्य एवं परिवार कल्याण मंत्रालय

Q86 General Awareness and Current Affairs

Hardy shrubs and trees that thrive in salt water and have specialised adaptations so that they can survive the volatile energies of intertidal zones along marine coasts are characteristics of _____ forests.

- A. Dry Deciduous
- B. Tropical Evergreen
- C. Mangrove ✓
- D. Dry and Thorny



Q87 General Awareness and Current Affairs HINDI - no English version saved

सुमित अंतिल को किस क्षेत्र में पद्म श्री 2022 पुरस्कार प्रदान किया गया है?

- A. उद्योग
- B. साहित्य
- C. विज्ञान
- D. खेल



Q88 General Awareness and Current Affairs HINDI - no English version saved

धुआंधार जलप्रपात, इनमें से किस नदी द्वारा निर्मित होता है?

- A. नर्मदा
- B. तापी
- C. महानदी
- D. कावेरी



Q89 General Awareness and Current Affairs HINDI - no English version saved

टोक्यो ओलंपिक 2020 में भारत ने कितने रजत पदक जीते थे?

- A. दो
- B. चार
- C. एक
- D. सात



Q90 General Awareness and Current Affairs

Which of the following is true for Aggregate Demand (AD)?

- A. $AD = C + I - G$
- B. $AD = C + S + I + G$
- C. $AD = S + I - G$
- D. $AD = C + I + G$



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Q91 General Awareness and Current Affairs HINDI - no English version saved

इनमें से किस नदी का उद्गम स्थल महाराष्ट्र में महाबलेश्वर के पास स्थित है?

A. नर्मदा

B. कृष्णा

C. ताप्ती

D. कोसी

Q92 General Awareness and Current Affairs

Preventive detention is part of which Article in the Indian Constitution?

A. 22

B. 25

C. 26

D. 28

Q93 General Awareness and Current Affairs HINDI - no English version saved

2020 में, भारत के गणतंत्र दिवस समारोह के मुख्य अतिथि निम्नलिखित में से कौन थे?

A. जायर बोल्सोनारो

B. व्लादिमीर पुतिन

C. एंजेला मार्केल

D. बोरिस जॉनसन

Q94 General Awareness and Current Affairs HINDI - no English version saved

2004 में केंद्र सरकार द्वारा किस द्रविड़ भाषा को शास्त्रीय भाषा का दर्जा प्रदान किया गया था?

A. कन्नड़

B. तेलुगू

C. मलयालम

D. तमिल



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Q95 General Awareness and Current Affairs HINDI - no English version saved

जुलाई 2022 तक प्राप्त जानकारी के अनुसार, अल्पसंख्यकों के कौशल विकास हेतु संचालित, सीखो और कमाओ (लर्न एंड अर्न) योजना के अंतर्गत, प्रशिक्षुओं को किस आयु वर्ग का होना चाहिए?

- A. 18-25 वर्ष
- B. 21-35 वर्ष
- C. 14-45 वर्ष
- D. 16-50 वर्ष



Q96 General Awareness and Current Affairs HINDI - no English version saved

भारत के पहले मेडिकल कॉलेज की स्थापना _____ के काल में की गई थी।

- A. लॉर्ड कर्जन
- B. लॉर्ड विलियम बेंटिंक
- C. लॉर्ड कॉर्नवालिस
- D. लॉर्ड मेयो



Q97 General Awareness and Current Affairs

In March 2022, National Informatics Centre (NIC) organised Tech Conclave 2022 specially focused on emerging technologies applied in e-Governance. What is the theme of that event?

- A. Next-Gen Technologies for Digital Government
- B. Technologies for Next-Gen Governance
- C. Technologies for Upskilling government
- D. Next-Gen Skill Technologies for Digitisation of Government



Q98 General Awareness and Current Affairs

Which of the following is equal to primary deficit?

- A. Fiscal deficit plus interest payment
- B. Fiscal deficit minus interest payment
- C. Revenue deficit plus interest payment
- D. Revenue deficit minus interest payment



निम्न में से कौन सी हिंदू धर्म की प्रमुख दार्शनिक विचारधारा है?

A. वैशेषिक



B. मोक्ष

C. संन्यास

D. अर्थ

निम्न में से भारतीय संविधान के उस संशोधन की पहचान कीजिए, जो पंचायती राज संस्थाओं से संबंधित है?

A. 74वां संशोधन

B. 73वां संशोधन



C. 72वां संशोधन

D. 71वां संशोधन



Mathematics

25 Questions · Answer Key

Q1 Mathematics

Find the volume of a sphere whose diameter is 42 m.

A. $38,808 \text{ m}^3$ B. $23,437 \text{ m}^3$ C. $13,416 \text{ m}^3$ D. $42,137 \text{ m}^3$

Q2 Mathematics

Aditya and Bhaskar undertake to do a piece of work for ₹15,000. Aditya alone can do it in 15 days while Bhaskar alone can do it in 18 days. With the help of Chandra, they finish it in 6 days. What is Chandra's share?

A. ₹4,000



B. ₹5,000

C. ₹6,000

D. ₹7,000

Q3 Mathematics

Two trains start from P and Q, respectively, at the same time and run towards each other at a speed of 40 km/h and 30 km/h, respectively. By the time they meet, the first train has covered 80 km more than the other train. Find the distance between P and Q.

A. 560 km



B. 630 km

C. 660 km

D. 240 km

Q4 Mathematics

If 7, 12, 21 and x are in proportion, the value of x is:

A. 27

B. 35

C. 24

D. 36



Q5 Mathematics

If X represents the smallest prime number multiplied by 4 and added to the least common multiple of 5 and 10; Y represents the smallest odd prime number multiplied by 5 and added to the 2nd smallest odd prime, then which of the following is true?

- A. X is greater than Y.
- B. $X + Y = 10$.
- C. X and Y are equal.
- D. The difference of Y and X is 2.

**Q6 Mathematics**

The owner loses 20% when he sells a plot for ₹19,50,000. At what price must he sell the plot in order to gain a profit of 20%?

- A. ₹21,00,000
- B. ₹22,50,000
- C. ₹25,95,000
- D. ₹29,25,000

**Q7 Mathematics**

If the HCF and LCM of two numbers are 7 and 245, respectively, then their product is:

- A. 1715
- B. 1517
- C. 1175
- D. 1751

**Q8 Mathematics**

The average of ten numbers is 8. If each number is divided by 2, then find the average of the new set of numbers.

- A. 8
- B. 6
- C. 4
- D. 10



Q9 Mathematics

If the volume of a cylinder is $256\pi \text{ cm}^3$ and the radius of its base is 8 cm, then find the height of the cylinder.

A. 3 cm

B. 4 cm



C. 5 cm

D. 6 cm

Q10 Mathematics

A trader owes a merchant ₹10,500 due in one year. The trader wants to settle the account after four months. If the rate of interest is 6% per annum, then how much should he pay (rounded off value)?

A. ₹ 11,096

B. ₹ 10,069

C. ₹ 11,069

D. ₹ 10,096



Q11 Mathematics

The value of $\tan \theta + \frac{1}{\tan \theta}$ is:

A. $\cos \theta \sec \theta$

B. $\operatorname{cosec} \theta \sec \theta$



C. $\operatorname{cosec} \theta \sin \theta$

D. $\operatorname{cosec} \theta \cot \theta$

Q12 Mathematics

The value of $\sqrt{1.0201} =$

A. 10.1

B. 1.01



C. 1.02

D. 101



Q13 Mathematics

One-third of a certain distance was covered by a car at a speed of 30 km/h and the remaining distance was covered by the car at 20 km/h. How much distance was covered by the car in 4 hours?

A. 30 km

B. 60 km

C. 90 km



D. 95 km

Q14 Mathematics

Simplify: $x^3 - 3x^2 + 9x - 12 - x^3 - 7x^2 - 8x - 16$.

A. $10x^2 - x - 28$ B. $-10x^2 + x + 28$ C. $10x^2 + x - 28$ D. $-10x^2 + x - 28$ **Q15** Mathematics

Find the sum of the roots of $\sqrt{2}x^2 - 2\sqrt{5}x + \sqrt{3} = 0$.

A. $-2\sqrt{5}$ B. $\sqrt{10}$ C. $5\sqrt{2}$ D. $-\sqrt{10}$ **Q16** Mathematics

Which of the following is NOT a property of similar triangles?

A. Ratio of areas of two similar triangles = Ratio of squares of corresponding altitudes

B. Ratio of areas of two similar triangles = Ratio of squares of corresponding medians

C. Ratio of areas of two similar triangles = Ratio of squares of corresponding segments obtained by corresponding angle bisectors.

D. Ratio of areas of two similar triangles = Ratio of corresponding segments obtained by corresponding angle bisectors.



Q17 Mathematics

For which positive value of b does the equation $x^2 + bx + 9 = 0$ have equal roots?

A. 2

B. 3

C. 4

D. 6



Q18 Mathematics

Geetha, Latha and Madhuri's ages are in the ratio 5 : 6 : 3. If their average age is 42 years, then find Latha's age.

A. 35 years

B. 27 years

C. 45 years

D. 54 years



Q19 Mathematics

In a parallelogram PQRS, the bisectors of consecutive angles of P and Q intersect at T. What is the measure of $\angle PTQ$?

A. 50°

B. 80°

C. 70°

D. 90°



Q20 Mathematics

$\frac{a^{10} \times b^{-7} \times c^{-4}}{a^{-5} \times b^2 \times c^5}$ in simplified form is:

A. $a^{15} \times b^{-9} \times c^{-9}$

B. $a^{15} \times b^9 \times c^9$

C. $a^5 \times b^9 \times c^{-9}$

D. $a^5 \times b^{-9} \times c^{-9}$



Q21 Mathematics

The value of 121.12×0.121 is:

- A. 146.5552
- B. 1.465552
- C. 14.65552
- D. 1465.552

**Q22** Mathematics

A vessel is one-fourth full of water. After adding 10 cups of water to it, the vessel gets three-fourth full. Find the capacity of the vessel in cups.

- A. 20
- B. 22
- C. 25
- D. 27

**Q23** Mathematics

The marked price of an article is ₹1,200. The shopkeeper offered two successive discounts of 10% and 5% respectively to a customer. At what price did the customer purchase the article?

- A. ₹1,062
- B. ₹1,206
- C. ₹1,026
- D. ₹1,602

**Q24** Mathematics

Find Compound Interest on ₹11,000 in 2 years at 4% p.a., interest compounded yearly.

- A. ₹906.50
- B. ₹786.60
- C. ₹897.60
- D. ₹875.80



Q25 Mathematics

For what value of k do the pair of linear equations $2x + 3y - 1 = 0$ and $4x + ky + 2 = 0$ have no solution?

A. 6



B. 5

C. 4

D. 3

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

The given table shows the number of candidates who appeared for the interview and the number of candidates who got selected for the post of Assistant Professor in XYZ university, from different states over the years. Study the table and answer the question.

Year State	2020		2021		2022	
	Interviewed	Selected	Interviewed	Selected	Interviewed	Selected
A	1200	800	1500	700	1800	1000
B	1500	600	1600	800	2000	1120
C	2000	680	2200	900	1800	1100
D	1600	700	1500	950	1800	1200
E	1500	490	1100	400	1300	800

In the year 2020, the total number of candidates who got selected from different states is approximately what percentage of the total number of candidates who appeared for the interview from different states in the same year?

A. 45.5%

B. 55%

C. 50%

D. 41.9%

**Q27 General Intelligence and Reasoning**

C, J, H, Q and W contested in an election and each of them got different number of votes. H got more votes than J but less than W. W got less votes than only one person. C got the least number of votes. Who among the following got the highest number of votes?

A. Q



B. H

C. J

D. W



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Q28 General Intelligence and Reasoning

B, C, D, E, F and G are six team members who joined a team on different days of the same month, viz. 2nd, 4th, 5th, 8th, 10th and 11th of January.

C joined on one of the days before F, E and G. B joined immediately before F. D joined immediately before C. E joined on one of the days after B and before G. Who joined the team on 10th of January?

A. F

B. G

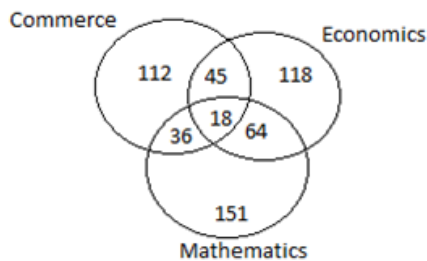
C. B

D. E



Q29 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of students enrolled in different programmes in a university.



How many students are enrolled in both commerce and economics but NOT mathematics?

A. 18

B. 63

C. 45

D. 56



Q30 General Intelligence and Reasoning

Seven teachers A, B, C, D, E, F and G are sitting in a straight row, facing north. Only one person sits to the left of G. Only E sits between C and F. A sits to the immediate right of D. F and D are immediate neighbours. Who sits at the extreme left end of the row?

A. A

B. B

C. C

D. D



Q31 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

Few envelopes are papers

All papers are pulps

All pulps are leaves

Conclusions:

(I) Some leaves are papers

(II) Some pulps are papers

(III) All papers are leaves

A. Only conclusion I follows

B. Only conclusion II follows

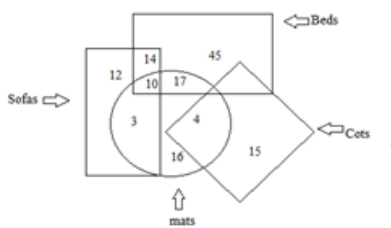
c. Only conclusion I and III follows

D. All conclusions I, II and III follow



Q32 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of units.



How many such sofas are there that are either beds or mats but not both?

A. 22

B. 12

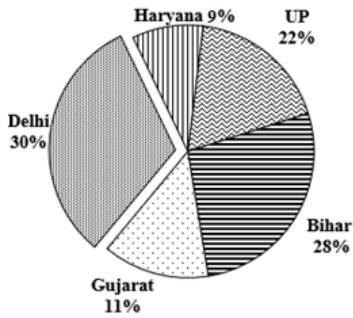
C. 17

D. 10



Q33 General Intelligence and Reasoning

The given pie-chart shows the percentage distribution of the number of people from different provinces migrating to USA upon getting their Green Card. Study the pie-chart and answer the question.



What is the central angle of the sector corresponding to the number of people migrating from Delhi?

A. 32.4° B. 100.8° C. 40° D. 108° ✓**Q34** General Intelligence and Reasoning

In this question, a group of letters is coded using numbers as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letter/ Symbol	I	M	H	R	D	C	E	V
Code	4	8	0	1	3	5	7	9

Conditions:

- (i) If the first element is a vowel and the last, a consonant, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is a consonant and the last, an vowel, the first and last elements are to be coded as 2.
- (iii) If the middle letter is a vowel, then it is to be coded as 6.

Question: DRIVE

A. 21492

B. 31679

C. 21692 ✓

D. 31967



Q35 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'CONFIRM' is arranged in alphabetical order?

A. None

B. One



C. Two

D. Three

Q36 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word COMPUTE is arranged in alphabetical order?

A. None

B. One

C. Two

D. Three



Q37 General Intelligence and Reasoning

Which of the following interchanges of signs would make the given equation correct?

$$4 - 10 \div 8 + 3 \times 2 = 6$$

A. $\times, +$

B. $\div, \times$

C. $\div, -$

D. $\times, -$



Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

65, 90, 107, 116, 121, ?

A. 122



B. 123

C. 124

D. 125



Q39 General Intelligence and Reasoning

Starting from point X, Aditya walked 30 m towards the south. He then took a left turn and walked 20 m. Then, he took a right turn and walked 10 m. He then took another right turn and walked 40 m. Finally, he took one last right turn and walked another 40 m to reach point Y. How far and in which direction is point X from point Y ? (All turns are 90 degree turns only)

A. 20 m, East



B. 20 m, West

C. 40 m, East

D. 40 m, West

Q40 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Only P sits to the left of Q. Only three people sit between T and R. Only three people sit between Q and R. S sits to the immediate right of R. P sits at one of the extreme ends of the row. If no other person is sitting in the row, what is the total number of persons seated?

A. 7

B. 8

C. 9

D. 10

**Q41** General Intelligence and Reasoning

Jaya, from point A, walks 349 m towards the south. She takes a left turn and walks 129 m. She takes a left turn again and walks 349 m. She then takes a right turn and walks 94 m to reach point B. How far and in which direction is point A from point B? (All turns are 90 degree turns only)

A. 110 m, East

B. 203 m, East

C. 129 m, West

D. 223 m, West

**Q42** General Intelligence and Reasoning

In a certain code language, 'SUPERIOR' is written as 'SNHSDQTT' and 'STUNNING' is written as 'HOHOOTUT'. How will 'STRATEGY' be written in that language?

A. TUSZUDHZ

B. ZHDUASUT

C. ZHDUZSUT



D. ZHCUZSUT



Q43 General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $M \geq D \leq N < J < F = E$

A. $M > N$

B. $F < M$

C. $N < E$



D. $E = D$

Q44 General Intelligence and Reasoning

How will quarter past 4 be indicated in the 24-hour format?

A. 14:45 hours

B. 14:15 hours

C. 16:15 hours



D. 16:45 hours

Q45 General Intelligence and Reasoning

A statement is given followed by two possible underlying assumptions I and II. Read all the information carefully and decide which of the given assumptions can be assumed by the given statement.

Statement:

“If we promote our play in all the local newspapers before the end of this week, we will sell more tickets for our play this weekend.” — play director in City D.

Assumptions:

I. The newspaper companies in City D take less than a week to finalise advertisements and publish them.

II. Not many people in City D prefer watching plays.

A. Only I can be assumed



B. Only II can be assumed

C. Both I and II can be assumed

D. Neither I nor II can be assumed



Q46 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

LUN : PXP

WXP : AAR

- A. JUG : NYJ
- B. TIN : XLQ
- C. NOT : RQV
- D. NIB : RLD



Q47 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(21, 225, 9)

(4, 25, 6)

- A. (11, 18, 7)
- B. (13, 81, 6)
- C. (14, 64, 2)
- D. (15, 54, 3)



Q48 General Intelligence and Reasoning

Six friends, G, H, I, J, K, and L have marriage anniversaries in different months of the same year viz. January, March, July, August, September and December but not necessarily in the same order.

H has an anniversary immediately after K. Only I has an anniversary before G. J has an anniversary in September. Who among them has an anniversary in December?

- A. L
- B. H
- C. G
- D. K



Q49 General Intelligence and Reasoning

Refer to the following number series and answer the question.

5 3 6 8 2 6 3 2 8 0 3 8 5 6 7 2 5 0 9 6

How many such odd numbers are there each of which is immediately preceded by an odd number and immediately followed by an even number?

- A. None
- B. One
- C. Two
- D. Three



Q50 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete ?

T8, N16, H32, B64, V128, ?

- A. Q256
- B. P256
- C. P228
- D. P512



Q51 General Intelligence and Reasoning

Which of the following interchanges of numbers would make the given equation correct?

$$7 \times 10 \div 6 + 3 - 2 = 10$$

- A. 3, 7
- B. 2, 6
- C. 6, 10
- D. 3, 6



Q52 General Intelligence and Reasoning

Each of the digits in the number 26397145 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

- A. None
- B. 1
- C. 2
- D. 3



Q53 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

11, 20, 23, 44, 47, 92, 95, ?

A. 189

B. 198

C. 188



D. 199

Q54 General Intelligence and Reasoning

Eight classmates J, K, L, M, N, O, P and Q were sitting around a circular table, facing the centre. They were equidistant to one another. N was sitting fourth to the left of L. P was sitting fourth to the left of J. O was sitting to the immediate right of N. K was sitting second to the left of P. Only J was sitting between L and M. Which classmate was sitting fourth to the left of M?

A. Only Q



B. Only K

C. Only O

D. Either K or O

Q55 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

13 : 234 :: 9 : 126 :: 7 : ?

A. 126

B. 98

C. 84



D. 106



Q56 General Science

The focal length of a convex mirror is 15 cm. Following New Cartesian Sign Convention, its centre of curvature is located at:

- A. 15 cm
- B. -15 cm
- C. 30 cm
- D. -30 cm



Q57 General Science

In a science book, two solenoids, P and Q, of the same average radius and the same length are shown. The number of field lines drawn inside Q is twice of that drawn inside P. If the number of turns in the two solenoids is the same, the current in solenoid P is _____ times the current in solenoid Q.

- A. $\frac{1}{4}$
- B. $\frac{1}{2}$
- C. 2
- D. 4



Q58 General Science

The power of a convex lens of focal length 40 cm is _____.

- A. 0.25 D
- B. -0.25 D
- C. 2.5 D
- D. -2.5 D



Q59 General Science

Aerobic respiration requires the presence of _____.

- A. carbon dioxide
- B. oxygen
- C. hydrogen
- D. nitrogen



Q60 General Science

Three wires, A, B and C, of the same length and the same thickness have resistances of $1\ \Omega$, $0.5\ \Omega$ and $0.25\ \Omega$, respectively. Their resistivities are _____.

- A. in the ratio of 4 : 2 : 1
- B. in the ratio of 1 : 2 : 4
- C. in the ratio of 2 : 4 : 1
- D. equal



Q61 General Science

How many electrons are present in an L-Shell of a carbon atom?

- A. 2
- B. 4
- C. 6
- D. 8



Q62 General Science

For a healthy society, what should be the distribution of males and females in a given population?

- A. Equal number of males and females
- B. More females than males
- C. More males than females
- D. More aged than young



Q63 General Science

Newlands compared his Octave with _____.

- A. historical events
- B. musical notes
- C. computer language codes
- D. Hindi rhymes



Q64 General Science

Consider the below statements and identify the correct answer.

Statement-I: The p in pH stands for 'potenz' in German, meaning power.

Statement-II: On the pH scale we can measure pH generally from 0 to 16.

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false. ✓
- D. Statement-I is false, and Statement-II is true.

Q65 General Science

Urine is composed of _____ water.

- A. 68%
- B. 79%
- C. 83%
- D. 95% ✓

Q66 General Science

Consider the statements below and identify the correct answer.

Statement-I: Isotopes of all elements posed a challenge to Medeleev's periodic law.

Statement-II: No fixed position can be given to hydrogen in the periodic table.

- A. Statement I is correct, Statement II is incorrect.
- B. Statement II is correct, Statement I is incorrect.
- C. Both statements are correct. ✓
- D. Both statements are incorrect.



Q67 General Science

Plaster of Paris is NOT used:

- A. for supporting fractured bones
- B. for making toys
- C. for cooking food
- D. as building material



Q68 General Science

Which mineral is required for the formation of the hormone thyroxine?

- A. Iron
- B. Iodine
- C. Calcium
- D. Potassium



Q69 General Science

When the terminal phosphate linkage in ATP is broken using water, what is the amount of energy released?

- A. 30.5 kJ/mol
- B. 32 kJ/mol
- C. 32.5 kJ/mol
- D. 33 kJ/mol



Q70 General Science

Oxygen has _____ electrons in its outermost _____ shell.

- A. 8, M
- B. 6, L
- C. 8, K
- D. 6, M



Q71 General Science

An object is placed on the principal axis of a lens of power -10 D , at a distance of 15 cm . The image formed is _____.

A. virtual and erect



B. real and erect

C. virtual and inverted

D. real and inverted

Q72 General Science

An object is placed in front of a concave mirror at a distance twice its focal length ($2f$). The image is formed at a distance of:

A. f

B. $1.5f$

C. $2f$



D. $4f$

Q73 General Science

Consider the following statements about an electric generator:

(a) After every half rotation, the current in the respective arms of the coil reverses its direction.

(b) The direction of the induced current in the coil can be found using Fleming's right-hand rule.

Which of the above statements is/are correct?

A. Neither (a) nor (b)

B. Both (a) and (b)



C. Only (a)

D. Only (b)

Q74 General Science

A device of 30 W is connected to a 12 V battery. The current in the device is:

A. 2.5 A



B. 1.25 A

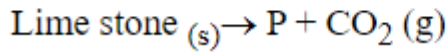
C. 0.4 A

D. 0.2 A



Q75 General Science

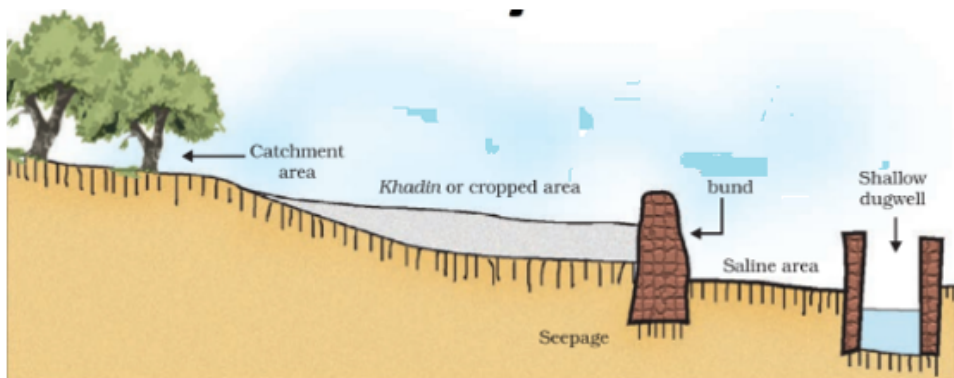
Identify the product (P) in the following reaction:



- A. $\text{CaO}(s)$ ✓
- B. $\text{CaCO}_3(s)$
- C. $\text{Ca(OH)}_2(l)$
- D. $\text{CaO}(s) + \text{O}_2(g)$

Q76 General Science

Identify the water harvesting structure shown below.



- A. Kattas
- B. Bandharas
- C. Khadin System ✓
- D. Tank

Q77 General Science

Which blood group is referred to as the 'Universal Donor'?

- A. A
- B. B
- C. AB
- D. O ✓

Q78 General Science

Which of the following is a displacement reaction?

- (i) $\text{ZnCO}_3 (\text{s}) \rightarrow \text{ZnO} (\text{s}) + \text{CO}_2 (\text{g})$
- (ii) $\text{Fe} (\text{s}) + \text{CuSO}_4(\text{aq}) \rightarrow \text{FeSO}_4(\text{aq}) + \text{Cu}(\text{s})$
- (iii) $2\text{H}_2 (\text{g}) + \text{O}_2 (\text{g}) \rightarrow 2\text{H}_2\text{O}(\text{l})$
- (iv) $\text{CaCO}_3 (\text{s}) \rightarrow \text{CaO}(\text{s}) + \text{CO}_2 (\text{g})$

A. (i)

B. (ii) ☒

C. (iii)

D. (iv)

Q79 General Science

Exposure to excessive amounts of UV rays results in _____.

A. lung cancer

B. skin cancer ☒

C. blood cancer

D. liver cancer

Q80 General Science

Consider two wires, A and B, of same thickness but lengths L and $4L$, respectively. If the resistances of A and B are 0.5Ω and 2.0Ω , respectively, the ratio of the resistivity of A to the resistivity of B is:

A. $\frac{1}{4}$

B. $\frac{1}{2}$

C. 1 ☒

D. 4



Q81 General Awareness and Current Affairs

As long as marginal utility of a commodity is _____, an individual will always prefer more of that commodity.

- A. negative
- B. positive
- C. constant
- D. fluctuating

**Q82** General Awareness and Current Affairs

Workers from which of the following sectors produce goods which are NOT tertiary?

- A. Sugar mill
- B. Banking
- C. Transportation
- D. Communication

**Q83** General Awareness and Current Affairs

The famous 'Khetri' mines is located in which state of India?

- A. Rajasthan
- B. Chhattisgarh
- C. Jharkhand
- D. Madhya Pradesh

**Q84** General Awareness and Current Affairs

Which India women cricket player was named the ICC Women's Cricketer of the Year for her incredible run of form across all formats in 2021?

- A. Mithali Raj
- B. S Meghana
- C. Smriti Mandhana
- D. Pooja Vastrakar



Q85 General Awareness and Current Affairs

Which was the theme state in the 35th Suraj Kund Crafts fair held in March-April 2022?

A. Jammu and Kashmir



B. Rajasthan

C. Gujarat

D. Haryana

Q86 General Awareness and Current Affairs

Who among the following won the Asian Billiards title for the 8th time at the 19th Asian 100 UP Billiards Championship 2022?

A. Dhruv Sitwala

B. Aditya Mehta

C. Pankaj Advani



D. Geet Sethi

Q87 General Awareness and Current Affairs

In the Union Budget 2022-23, a scheme named PM-DevINE launched to fund infrastructure and social development projects in _____ India.

A. North

B. North-West

C. West

D. North-East



Q88 General Awareness and Current Affairs

How many development and welfare subjects have been moved from the state to the Panchayati raj institution through the Constitutional amendments in the Indian constitution?

A. 21

B. 28

C. 29



D. 27



Q89 General Awareness and Current Affairs

Identify the goods whose demand falls due to the fall in their price.

- A. Normal goods
- B. Inferior goods
- C. Giffen goods
- D. Substitute goods



Q90 General Awareness and Current Affairs

Which app has been released first time by the Ministry of Education to learn spoken sentences in 22 languages?

- A. SARATHI
- B. Bhasha Sangam
- C. ENGLISH PRO
- D. IEPFA



Q91 General Awareness and Current Affairs

Which of the following languages is spoken by the people in the Union territories of Dadra and Nagar Haveli and Daman and Diu?

- A. Gujarati
- B. Malayalam
- C. Bengali
- D. Tamil



Q92 General Awareness and Current Affairs

Which battle was the decisive victory of the British East India Company over the Nawab of Bengal on 23 June 1757?

- A. Battle of Buxar
- B. Battle of Imphal
- C. Battle of Saragarhi
- D. Battle of Plassey



Q93 General Awareness and Current Affairs

How many stages of life did early Hindu philosophy determine?

- A. two
- B. three
- C. four
- D. five



Q94 General Awareness and Current Affairs

A forest area that belongs to private individuals and communities is classified as _____.

- A. reserved forest
- B. protected forest
- C. unclassed forest
- D. permanent forest



Q95 General Awareness and Current Affairs

Which of the following trade policies did India adopt in its first seven (five-year) plans?

- A. Export promotion
- B. Import substitution
- C. Restricted imports
- D. International cooperation and multilateral mechanism



Q96 General Awareness and Current Affairs

Who plays the role of an intermediary between the state government and the municipal corporation?

- A. Municipal Councillors
- B. Mahapaur
- C. Aldermen
- D. Municipal Commissioner



Q97 General Awareness and Current Affairs

Which of the following technologies was used for the first time in February 2022 by astronomers from NCRA-TIFR to map the distribution of atomic hydrogen gas in the galaxy?

- A. Giant Meter wave Radio Telescope (GMRT) ✓
- B. Multislit Solar Explorer (MUSE)
- C. INSPIRESAT-1
- D. Helioswarm

Q98 General Awareness and Current Affairs

What is the total number of Fundamental Duties present in Part IV A of the Indian Constitution?

- A. 11 ✓
- B. 12
- C. 13
- D. 14

Q99 General Awareness and Current Affairs

Which of the following rivers is called the 'Dakshin Ganga'?

- A. Periyar
- B. Tapi
- C. Narmada
- D. Godavari ✓

Q100 General Awareness and Current Affairs

The National Anti-Doping Bill, 2021, passed by Lok Sabha in July 2022 seeks to create a statutory framework for which of the following agencies?

- A. Anti-Doping Agency of India (ADAI)
- B. National Anti-Doping Agency (NADA) ✓
- C. Indian Anti-Doping Agency (IADA)
- D. Anti-Doping National Agency (ADNA)



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Rani stitches a gown in 3 hours while Padma stitches an identical gown in 2 hours. Each of them works for 6 hours per day. If they have a bulk order of 52 such gowns to stitch, in how many days will they complete the task if they work on alternate days, starting with Rani?

A. 10 days

B. 11 days

C. 20 days

D. 21 days



Q2 Mathematics

Which of the following quadratic equations satisfies that the roots are 3 and -2?

A. $x^2 - x + 6 = 0$ B. $x^2 + x - 6 = 0$ C. $x^2 + x + 6 = 0$ D. $x^2 - x - 6 = 0$ 

Q3 Mathematics

If John travels a distance of 90 km at a speed of 30 km/h and returns at a speed of 60 km/h, his average speed is:

A. 30 km/h

B. 40 km/h

C. 45 km/h

D. 60 km/h



Q4 Mathematics

Find the LCM of 24, 42 and 56.

A. 618

B. 186

C. 168

D. 816



Q5 Mathematics

Simplify $\frac{5^3 \times 27 \times 10^3}{5^6 \times 3^2 \times 4}$

A. 8

B. $\frac{3}{2}$

C. $\frac{1}{2}$

D. 6

**Q6 Mathematics**

The sum of the ages of Sarala and Kishore is 26 years. If 3 years ago, Kishore was $\frac{3}{2}$ times as old as the Sarala, then the present age of the Sarala is:

A. 9 years

B. 10 years

C. 11 years

D. 12 years

**Q7 Mathematics**

The roots of $(x - 5)^2 = 5x + 11$ are ____

A. 3 and 12

B. 5 and 7

C. 1 and 14

D. 2 and -13

**Q8 Mathematics**

Simplify: $3(9x^3 - 6x^2 + 30) - 9(3x^3 - 2x + 30)$.

A. $18(x^2 + x + 10)$

B. $18(x^2 + x - 18)$

C. $18(x^2 + x - 10)$

D. $-18(x^2 - x + 10)$



Q9 Mathematics

If the diameter and the height of a cylinder are 12 cm and 10.5 cm, respectively, then using $\pi = \frac{22}{7}$, find the volume of the cylinder.

A. 1281 cm^3

B. 1313 cm^3

C. 1288 cm^3

D. 1188 cm^3 ✓

Q10 Mathematics

Seven times a number reduced by 14 is equal to the sum of 5 times the number and 6. Find the number.

A. 20

B. 10 ✓

C. 15

D. 5

Q11 Mathematics

Find the value of x , if $6^{x+4} = 6^7$.

A. 2

B. 3 ✓

C. 4

D. 5

Q12 Mathematics

Arun borrowed a sum of ₹9,000 from Jayanthi at 10% rate of compound interest per annum, compounded annually. Find the total amount paid by Arun after 2 years to clear all dues.

A. ₹10,890 ✓

B. ₹10,980

C. ₹10,089

D. ₹10,098



Q13 Mathematics

8 men and 6 women can complete a piece of work in 5 days while 6 men and 8 women can also complete the same work in 5 days. In how many days will 7 men and 7 women complete the same work?

A. 2 days

B. 3 days

C. 6 days

D. 5 days ☒**Q14** Mathematics

The value of

$$\left(-\frac{5}{3}\right) \times \left(\frac{9}{25}\right) + \left(\frac{1}{5} - 2\right) =$$

A. $-\frac{12}{5}$ ☒B. $\frac{9}{5}$ C. $-\frac{4}{5}$

D. 0

Q15 Mathematics

Two numbers are in the ratio 5 : 8. If the first number increases by 40% and second number decreases by 15%, the new ratio becomes _____

A. 12 : 17

B. 37 : 39

C. 23 : 26

D. 35 : 34 ☒

Q16 Mathematics

Find the capacity of a spherical container of thickness 2 cm and external radius 9 cm. (Rounded off to 2 decimal places.)

(Use $\pi = \frac{22}{7}$.)

- A. 1590.48 cm³
- B. 1050.67 cm³
- C. 1241.14 cm³
- D. 1437.33 cm³

**Q17** Mathematics

If the manufacturer gains 12%, the wholesale dealer gains 15% and the retailer gains 20%, then find the cost of production of a table, the retail price of which is ₹15,456.

- A. ₹10,000
- B. ₹12,000
- C. ₹15,000
- D. ₹20,000

**Q18** Mathematics

There are two sets of data A and B. The mean of both sets is same. The median of data B is twice the median of data A. The relation between the modes of sets A and B is

- A. Mode B – Mode A = 3 median A
- B. Mode B + Mode A = 3 median A
- C. Mode B – Mode A = $(\frac{3}{2})$ median A
- D. Mode B – Mode A = $(\frac{3}{4})$ median A

**Q19** Mathematics

Which of the following is RHS of the equation

$$\frac{\sin^2 A}{1 - \cos A} =$$

- A. $\cos A + 1$
- B. $\tan A$
- C. $\operatorname{cosec} A$
- D. $\sec A + \tan A$



Q20 Mathematics

In triangle ABC, if the angles are in the ratio 4 : 3 : 5, find the angles.

- A. $20^\circ, 50^\circ, 70^\circ$
- B. $20^\circ, 15^\circ, 25^\circ$
- C. $40^\circ, 30^\circ, 50^\circ$
- D. $60^\circ, 45^\circ, 75^\circ$ ✓

Q21 Mathematics

X placed an order for 20 shirts marked for ₹750 each. The shopkeeper offered 20% discount on purchase of 20 shirts. He allowed a further discount of ₹500, as the payment was made in cash. Find the final selling price of each shirt, if the selling price of each shirt is the same?

- A. ₹650
- B. ₹625
- C. ₹575 ✓
- D. ₹550

Q22 Mathematics

If $18\% \text{ of } 200 = x$, then $x = ?$

- A. 36 ✓
- B. 63
- C. 72
- D. 27

Q23 Mathematics

The sum of a two-digit number and the number obtained by reversing the digits is 99. If the digits of the number differ by 5, then the two-digit number can be:

- A. 27 ✓
- B. 18
- C. 83
- D. 16



Q24 Mathematics

The product of the LCM and HCF of two numbers is 48. If the two numbers differ by 13, then find the numbers.

A. 3 and 16



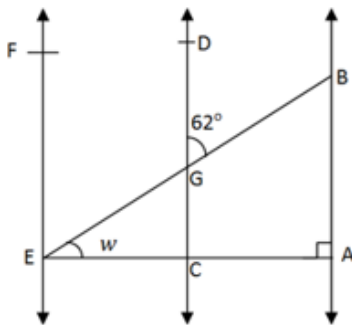
B. 4 and 17

C. 11 and 24

D. 12 and 25

Q25 Mathematics

In the adjoining figure $AB \parallel CD$ and $CD \parallel EF$. Also, $EA \perp AB$. If $\angle BGD = 62^\circ$, then the value of w is:



A. 118°

B. 28°



C. 62°

D. 108°

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

The following question is based on the given seven, 3-digit numbers.

(Left) 621, 443, 227, 316, 625, 118, 231 (Right)

(For example, 456: 6 = digit in unit's place, 5 = digit in ten's place, 4 = digit in hundred's place)

NOTE - All operations to be done from left to right.

If 5 is added to the digit in ten's place of each number and 1 is subtracted from the digit in unit's place of each number, which digit will be repeated the greatest number of times in the transformed number series thus formed?

A. 4

B. 6



C. 7

D. 2

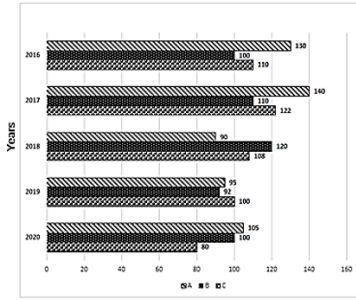


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Q27 General Intelligence and Reasoning

The given bar graph shows the data of the number of students who were called for an interview by a company 'XYZ' from three different institutes A, B and C over the years. Study the bar graph and answer the question.



What is the ratio of the average number of students called for an interview from institute C in the period 2018 to 2020 to the average number of students called for an interview from institute B in the same period?

A. 14 : 15

B. 13 : 12

C. 12 : 13



D. 1 : 3

Q28 General Intelligence and Reasoning

If 28 March 2017 was a Tuesday, then what day of the week was 12 February 2017?

A. Sunday



B. Thursday

C. Saturday

D. Friday

Q29 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

I _ L O _ R U V X _ B _ G

A. JRAD

B. JPAD



C. JPXD

D. JPAG

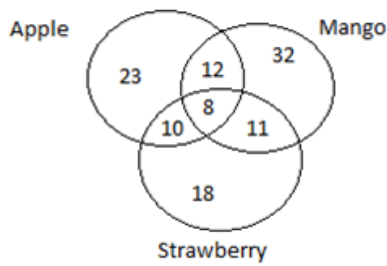


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Q30 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of different types of juices containing different fruit flavours which are manufactured by a juice company.



How many types of juices does the company make that contain both Apple and Strawberry flavours?

- A. 41
- B. 8
- C. 10
- D. 18



Q31 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

49 : 13 :: 56 : 11 :: 39 : ?

- A. 14
- B. 12
- C. 15
- D. 16



Q32 General Intelligence and Reasoning

Which of the following interchanges of numbers would make the given equation correct?

$$25 \div 5 \times 2 + 25 - 11 = 24$$

- A. 24, 25
- B. 5, 25
- C. 11, 24
- D. 2, 5



Q33 General Intelligence and Reasoning

If 'A' means ($\times$), 'B' means ($+$), 'C' means ($-$), and 'D' means ($\div$), then what will be the value of the following expression?

$$(102 \text{ D } 17) \text{ B } (5 \text{ A } 3)$$

A. 17

B. 20

C. 21



D. 25

Q34 General Intelligence and Reasoning

Which of the following interchanges of signs would make the given equation correct?

$$3 - 6 \div 9 + 6 \times 2 = 6$$

A. $+$ and $\times$

B. $\div$ and $+$

C. $-$ and $\times$



D. $\div$ and $\times$

Q35 General Intelligence and Reasoning

Six houses, K, L, M, N, O and P, are located in the same colony. P is 400 m to the west of K. M is 200 m to the east of L. O is 300 m to the north of K. N is 150 m to the south of L. L is 250 m to the south of K. What is the straight distance between O and N?

A. 600 m

B. 700 m



C. 350 m

D. 400 m



Q36 General Intelligence and Reasoning

Study the given letter series and answer the question that follows.

L E A P K X O Z A E Y W U D O A D S L Y R K E V U L

How many consonants are immediately preceded and immediately followed by a vowel, and which consonant is repeated the most number of times in the series?

- A. 3, D respectively
- B. 2, K respectively
- C. 3, L respectively
- D. 2, Y respectively



Q37 General Intelligence and Reasoning

GMT 3 is related to IPY 30 in a certain way. In the same way, EXP 5 is related to GAU 130. To which of the following is TXN 4 related following the same logic?

- A. VAU 68
- B. VAT 70
- C. VAS 68
- D. VAT 68



Q38 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Use of re-usable cloth bags for shopping will help in reducing pollution caused by indiscriminate use of plastic bags.

Arguments:

- I. The government has banned the use of single-use plastic from 1 July 2022.
- II. Cloth bags are eco-friendly since they are re-usable and can be made from scrap fabric that would otherwise go to landfills.

- A. Argument I weakens, while argument II strengthens the statement
- B. Argument II weakens, while argument I strengthens the statement
- C. Both arguments I and II weaken the statement
- D. Both arguments I and II strengthen the statement



Q39 General Intelligence and Reasoning

A, B, C, D, E, F and G were seven kings, sitting around a circular table, facing the centre. They were equidistant to one another. Only E was sitting between F and C. A was third to the left of G. Only D was sitting between A and B. G was sitting to the immediate left of C. Which king was sitting to the immediate left of G?

A. A

B. B



C. D

D. F

Q40 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) W # 2 ∞ D @ 4 Y 3 D Ω R 7 & S F @ 6 ^ < X 2 2 (Right)

How many such symbols are there each of which is immediately preceded by a letter and immediately followed by a number?

A. 1

B. 2

C. 3



D. 4

Q41 General Intelligence and Reasoning

Eight classmates D, E, F, G, H, I, J and K are sitting in a straight row, facing north. J is at the extreme right end of the row. D and I are immediate neighbours. There are only two classmates sitting between H and D. Only E sits between I and G. K sits to the immediate left of D. Who sits at the second position from the left end of the row?

A. D

B. K

C. F



D. H



Q42 General Intelligence and Reasoning

In this question, a group of letters is coded using numbers as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letter	B	L	M	H	Y	O	C	E	N
Code		6	8	0	1	3	5	7	9
	4								

Conditions:

- (i) If the first element is a vowel and the last, a consonant, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is a consonant and the last, a vowel, the first and last elements are to be coded as 2.
- (iii) If both the second and the fourth elements are vowels, the fourth element is to be coded as the code for the third element and vice-versa.

Question: LEMON

A. 97836

B. 67839

C. 23872

D. 63879

**Q43** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3, 4, 10, 33, 136, ?

A. 684

B. 685

C. 688

D. 700



Q44 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $C = U < F \leq H > G = I > R$

Conclusions:

I. $H > R$

II. $H > C$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Neither conclusion I nor II is true
- D. Both conclusions I and II are true



Q45 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

12, 14, 20, 34, 60, ?

- A. 100
- B. 104
- C. 102
- D. 108



Q46 General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$B > Y \leq Z = A < X > O$$

Conclusions:

1. $B > X$
2. $Y < O$
3. $Y < X$
4. $A > O$

A. 1

B. 2

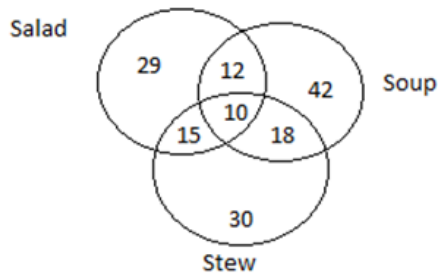
C. 3



D. 4

Q47 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons in a company with preference for different foods for lunch.



How many people prefer salads but NOT stew?

A. 41



B. 29

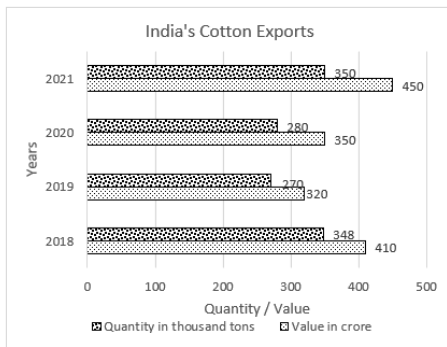
C. 51

D. 39



Q48 General Intelligence and Reasoning

The given bar graph shows the data of cotton exports in India from years 2018 to 2021. Study the given bar graph and answer the question.



In which year was the value per thousand tons the minimum?

A. 2018



B. 2019

C. 2020

D. 2021

Q49 General Intelligence and Reasoning

P, Q, R, S, T and U are six siblings who passed their class tenth exam in different years viz. 2001, 2003, 2005, 2007, 2010 and 2012 but not necessarily in the same order.

P passed in one of the years before S and after R. Only Q passed before R. T passed in the year immediately after S. U passed in one of the years before P. Who passed their class tenth exam in the year 2007?

A. P



B. S

C. U

D. T

Q50 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. P sits to the immediate left of Q. P sits second to the right of L. Z sits at one of the extreme ends of the row. Only one person sits to the right of S. K sits to the immediate right of D. L sits second to the right of D. Only two people sit between D and Z. Only one person sits between Q and S. If no other person is sitting in the row, what is the total number of persons seated?

A. 12



B. 13

C. 14

D. 15



Q51 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

5 : 13 :: 9 : 69 :: 13 : ?

A. 175

B. 157



C. 147

D. 174

Q52 General Intelligence and Reasoning

To reach house B from house A, a person has to walk 30 m towards the south. Then he must take a left turn and walk 15 m. Then he must take a left turn again and walk 20 m. Again, he must take a left turn and walk 25 m. Then he must take a right turn and walk 10 m. Then he must take a left turn and walk 17 m to finally reach house B. How far and in which direction is house A from house B? (All turns are 90 degree turns only)

A. 17 m, East

B. 17 m, West

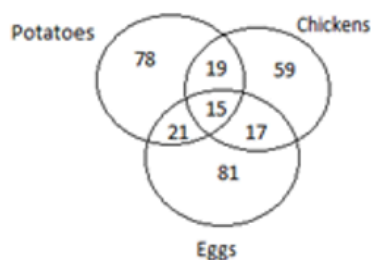
C. 27 m, East



D. 27 m, West

Q53 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons who eat a particular food for dinner every day.



How many people eat potatoes and eggs for dinner but NOT chickens?

A. 15

B. 36

C. 21



D. 81



Q54 General Intelligence and Reasoning

In this question, a group of letters is coded using numbers as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letter/ Symbol	Y	T	V	R	I	G	E	A
Code	4	6	8	0	3	5	7	9

Conditions:

- (i) If the first element is a vowel and the last, a consonant, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is a consonant and the last, a vowel, the first and last elements are to be coded as 2.
- (iii) If both the third and the fifth elements are vowels, the fifth element is to be coded as the code for the third element and vice-versa.

Question: GRAVITY

A. 5038964



B. 5603984

C. 5098364

D. 5309846

Q55 General Intelligence and Reasoning

Each of P, Q, R, S, T, U and V has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. S's exam is immediately before R. Only three people have exams between U and Q. Q's exam is immediately before S. Only two people have exams between S and V. P's exam is on Tuesday. R's exam is on Sunday. Who among the following has exam on Monday?

A. V

B. T

C. U



D. Q



Q56 General Science

Identify the basic requirements that led scientists towards the classification of elements.

- (i) Identification of some pattern in different properties of elements
- (ii) Rearrangement of elements on the basis of their synthesis
- (iii) To get overall idea of the colour of different elements

A. only (i)



B. (i) and (iii)

C. (ii) and (iii)

D. (i), (ii) and (iii)

Q57 General Science

Coal and petroleum have their own advantages and disadvantages. Three of the statements regarding coal and petroleum are similar. Choose the one that is dissimilar.

A. When burnt produce oxides of N and S that are poisonous and cause acid rain

B. When burnt in insufficient O_2 produce carbon monoxide, which is a poisonous gas

C. Used to generate electricity in thermal plants and are cost effective



D. When burnt produce CO_2 , which causes global warming

Q58 General Science

According to mirror formula, the focal length of a spherical mirror is equal to:

A. $\frac{u+v}{uv}$

B. $\frac{uv}{u+v}$



C. $\frac{u-v}{uv}$

D. $\frac{uv}{u-v}$



Q59 General Science

Red colour is scattered the _____ by fog or smoke because its wavelength is _____ than the wavelength of other colour components of white light.

- A. most, less
- B. most, more
- C. least, more
- D. least, less



Q60 General Science

Which enzyme requires the presence of hydrochloric acid for its action in the process of digestion?

- A. Lipase
- B. Trypsin
- C. Pepsin
- D. Amylase



Q61 General Science

A bulb filament is made of a _____ metal with _____ melting point.

- A. weak, low
- B. weak, high
- C. strong, low
- D. strong, high



Q62 General Science

Which among the following is NOT a use of sodium hydroxide?

- (i) Used in making soaps and detergents.
- (ii) Used in the manufacture of paper.
- (iii) Used for removing permanent hardness of water.

A. Only i

B. Only ii

C. Only iii



D. Both ii and iii

Q63 General Science

What is the process of transport of soluble products of photosynthesis and other materials from the leaves to other tissues of the plant called?

A. Tropic movement

B. Translocation



C. Guttation

D. Transpiration

Q64 General Science

Consider the following statements about magnetic field due to a current-carrying solenoid:

- (a) The magnetic field inside the solenoid is in the form of parallel straight lines.
- (b) The strong magnetic field produced inside the solenoid can be used to magnetise a piece of a magnetic material.

Which of the above statements is/are correct?

A. Only (a)

B. Only (b)

C. Neither (a) nor (b)

D. Both (a) and (b)



Q65 General Science

What specialisations are found in the germ cells of sexually reproducing animals with complex body designs?

- A. Male germ cell - small and motile, Female - large with food store ✓
- B. Male germ cell - small with food store, Female - large and motile
- C. Male germ cell - large with food store, Female - small and motile
- D. Male germ cell - large and motile, Female - small with food store

Q66 General Science

Two resistors, A of $8\ \Omega$ and B of $12\ \Omega$, are connected in series with a battery of 6 V. If V_1 and V_2 are the potential drops across A and B and I_1 and I_2 are the currents through them, respectively, then (V_1/V_2) and (I_1/I_2) are respectively _____.

- A. $(\frac{2}{3})$ and $(\frac{3}{2})$
- B. $(\frac{2}{3})$ and 1 ✓
- C. $(\frac{3}{2})$ and $(\frac{2}{3})$
- D. $(\frac{3}{2})$ and 1

Q67 General Science

The catenation property shown by carbon refers to which of the following properties?

- A. Self-degeneration property
- B. Property of occurring as different allotropes
- C. Self-combining capacity to form a long chain of atoms ✓
- D. Property of carbon to give combustive nature to its compounds

Q68 General Science

A converging lens having focal length 50 cm is kept in contact with a diverging lens having focal length 20 cm. The power of combination of the two lenses is:

- A. -3 D ✓
- B. +3 D
- C. 8 D
- D. -8 D



Q69 General Science

An optical device X has a focal length of -30 cm. X can be:

- A. either a concave lens or a concave mirror
- B. either a convex lens or a convex mirror
- C. either a convex lens or a concave mirror
- D. either concave lens or a convex mirror

Q70 General Science

Which of the following statements is TRUE?

- A. Plastic bags should be used to keep food.
- B. Shopkeepers are required to use plastic bags by law.
- C. After use, we should dispose of plastic bags by burning them.
- D. We should not place waste in plastic bags and discard them.

Q71 General Science

Which of the following devices is NOT based on the concept of force on a current-carrying conductor in a magnetic field?

Loudspeaker, Voltmeter, Ammeter, Electric fuse

- A. Loudspeaker
- B. Voltmeter
- C. Ammeter
- D. Electric fuse



Q72 General Science

The following table shows different epithelial tissues in animals and their location in different parts. Identify the correct option.

Epithelial Tissue	Location
A. 	i) Respiratory tract
B. 	ii) Skin
C. 	iii) Lining of blood vessels
D. 	iv) Ducts of salivary glands

A. A-i, B-ii, C-iii, D-iv

B. A-ii, B-iii, C-iv, D-i

C. A-iii, B-iv, C-i, D-ii

D. A-iii, B-iv, C-ii, D-i

Q73 General Science

Which of the following combinations is an example of balanced meal?

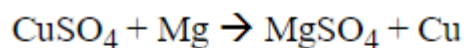
A. Roti, pulses, vegetables

B. Roti, vegetables, cold drink

C. Rice, chips, cold drink

D. Burger, chips, cold drink

Q74 General Science



In the above reaction Mg is the:

A. oxidising agent

B. catalyst

C. reducing agent

D. dissolving agent



Q75 General Science

A steady current I flows through an appliance of resistance R . The amount of heat produced by it in time t is:

A. IRt

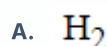
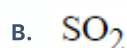
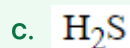
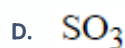
B. I^2Rt ✓

C. $(It)/R$

D. $(I^2t)/R$

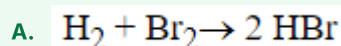
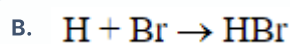
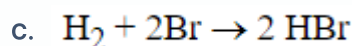
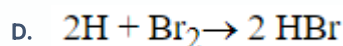
Q76 General Science

When sodium sulphide reacts with dilute hydrochloric acid, a gas with unpleasant smell is produced. This gas with unpleasant smell is:

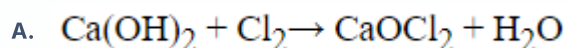
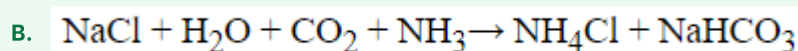
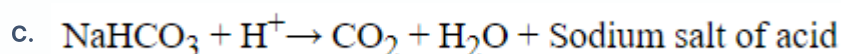
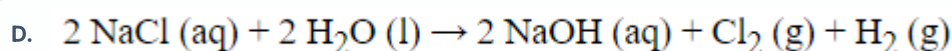
**Q77** General Science

The balanced reaction for the following chemical reaction is:

Hydrogen + Bromine $\rightarrow$ Hydrogen bromide

**Q78** General Science

Which of the following is the chemical reaction involved in the baking soda preparation?



Q79 General Science

Identify the correct order if A, B, C, D, E are the atomic numbers of the elements in positions of rows 1 to 4 of the periodic table of Groups 15, 16, 17 respectively, as specified in figure below

Group 15	Group 16	Group 17
A	C	-
-	-	-
-	-	E
B	D	-

A. $A > B > C > D > E$ B. $B > D > E > A > C$ C. $E > B > D > A > C$ D. $D > B > E > C > A$ ☒**Q80** General Science

The food prepared by the leaves of the plants is transported by phloem to which parts of the plant?

A. Only to roots and fruits

B. Only to seeds and growing regions

C. Only to roots and seeds

D. To storage organs of roots, seeds, fruits and growing regions ☒**General Awareness and Current Affairs**

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The shaggy horn wild ibex is found in _____ in India.

A. Tropical Deciduous Forest

B. Montane forests ☒

C. Mangrove Forests

D. Thorn Forests



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Q82 General Awareness and Current Affairs

Which committee recommended that Fundamental Duties be included in the Constitution of India?

- A. Swaran Singh Committee
- B. JB Kripalani Committee
- C. AV Thakkar Committee
- D. HC Mookherjee Committee

Q83 General Awareness and Current Affairs

Mahindra & Mahindra Financial Services Limited is an Indian rural non-banking financial company headquartered in _____.

- A. Mumbai
- B. Lucknow
- C. Goa
- D. Kerala

Q84 General Awareness and Current Affairs

Which formula is used for the calculation of Ex Ante Aggregate Demand?

- A. $\bar{C} + \bar{I} + cY$
- B. $\bar{C} + cY$
- C. $\bar{C} + \bar{I} - cY$
- D. $cY - \bar{C} + \bar{I}$

Q85 General Awareness and Current Affairs

Anthurium Festival is celebrated to promote farmers, flowers and horticulture in _____.

- A. Assam
- B. Mizoram
- C. Nagaland
- D. Arunachal Pradesh



Q86 General Awareness and Current Affairs

Poa Mecca situated on top of Garurachal Hill in the state of _____.

- A. Himachal Pradesh
- B. Kerala
- C. Assam
- D. Gujarat



Q87 General Awareness and Current Affairs

Which branch of Physical Geography studies the earth's form and structure?

- A. Climatology
- B. Biogeography
- C. Geomorphology
- D. Hydrology



Q88 General Awareness and Current Affairs

India's first Christian missionary organisation, Serampore Mission, was founded by _____.

- A. William Carey
- B. Mother Teresa
- C. Hudson Taylor
- D. Matteo Ricci



Q89 General Awareness and Current Affairs

The Balwant Rai Mehta Committee recommended in 1957 for the establishment of a _____ Panchayati Raj System in India.

- A. Five-tier
- B. Four-tier
- C. Three-tier
- D. Two-tier



Q90 General Awareness and Current Affairs

Which of the following disciplines attempts to explain the concept of 'temporal synthesis'?

- A. History
- B. Philosophy
- C. Anthropology
- D. Geomorphology

Q91 General Awareness and Current Affairs

Which player holds the record for most runs (6411) in Indian Premier League (IPL) (as of July 2022)?

- A. Rohit Sharma
- B. Virat Kohli
- C. Shikhar Dhawan
- D. Suresh Raina

Q92 General Awareness and Current Affairs

In March 2022, Union Cabinet of India approved the establishment of the World Health Organization Global Centre for Traditional Medicine (WHO GCTM) in Jamnagar, Gujarat. Under which ministry will this centre be set up?

- A. Ministry of Health and Family Welfare
- B. Ministry of Cooperation
- C. Ministry of Women and Child Development
- D. Ministry of AYUSH

Q93 General Awareness and Current Affairs

Which of the following ministries released the draft National Air Sports Policy, 2022, in the January 2022?

- A. Ministry of Youth Affairs and Sports
- B. Ministry of Defence
- C. Ministry of Civil Aviation
- D. Ministry of Culture



Q94 General Awareness and Current Affairs

The 'Revised Pradhan Mantri Jan Vikas Karyakram' is being implemented (w.e.f 2022-23) by the _____.

- A. Ministry of Tribal Affairs
- B. Ministry of Home Affairs
- C. Ministry of Minority Affairs
- D. Ministry of Rural Development



Q95 General Awareness and Current Affairs

As per Union Budget of India 2022-23, 'One Station One Product' is an initiative taken by the Indian _____.

- A. railways
- B. roadways
- C. airways
- D. waterways



Q96 General Awareness and Current Affairs

Which of the following was added to the list of official languages of India in 1967?

- A. Konkani
- B. Sindhi
- C. Manipuri
- D. Nepali



Q97 General Awareness and Current Affairs

The 'Stree Manoraksha' Project launched in Bengaluru by the Government of India in March 2022 aims at improving _____ health of women in India.

- A. physical
- B. mental
- C. social
- D. spiritual



Q98 General Awareness and Current Affairs

What is the range of the annual average temperature in sub-tropical vegetation zones in India?

A. 7°C to 17° C

B. Above 24°C

C. Below 7°C

D. 17°C to 24°C



Q99 General Awareness and Current Affairs

Who launched the beta version of 'Swarajability', India's first Artificial Intelligence based job platform for persons with disabilities?

A. IIT Hyderabad



B. IISc Bengaluru

C. IIT Roorkee

D. IIT Gandhinagar

Q100 General Awareness and Current Affairs

Who among the following appoints the Chief Justice of India?

A. The President of India



B. The Prime Minister of India

C. The Supreme Court Judge of India

D. The Attorney General of India



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Simplify $2^3 \times 3^2 \times 7$.

A. 603

B. 506

C. 702

D. 504



Q2 Mathematics

If twice the son's age is added to the father's age, the sum is 34 years. If 1.5 times the father's age is added to the son's age, the sum is 45 years. What is the father's age (in years)?

A. 26

B. 28



C. 30

D. 32

Q3 Mathematics

Three times the present age of Sujatha is 5 years more than two times the present age of Vanita. After 3 years, three times the age of Vanita will be 4 years less than four times the age of Sujatha. The age of Vanita is k years more than that of Sujatha. What is the value of k ?

A. 3

B. 4



C. 7

D. 9

Q4 Mathematics

A train P going at the speed of 70 km/h completely passes train Q of length 170 m, going in the same direction on parallel tracks, at 56 km/h, in $1\frac{1}{2}$ minutes. How much time (in seconds) will P take to cross completely train R of length 220 m, going at 74 km/h in the opposite direction?

A. 10



B. 12

C. 14

D. 15



Q5 Mathematics

Find the nature of roots of $2(p + q)^2x^2 + 2(p + q)x + 1 = 0$

- A. Real roots
- B. Real and equal roots
- C. Real and distinct roots
- D. Imaginary roots

**Q6 Mathematics**

Five solid cubes, each of volume 216 cm^3 , are joined end to end in a linear manner only (single row arrangement) to form a cuboid. What is the lateral surface area (in cm^2) of the cuboid?

- A. 360
- B. 432
- C. 468
- D. 504

**Q7 Mathematics**

An article is marked 50% above its cost price. If the shopkeeper gives two successive discounts of 10% and 25%, and still earns a profit of ₹15, then the cost price of the article is:

- A. ₹1,200
- B. ₹1,750
- C. ₹1,600
- D. ₹1,500

**Q8 Mathematics**

The sum of a number, its half, its $\frac{1}{3}$ and 27, is 71. Find the number.

- A. 22
- B. 23
- C. 24
- D. 25



Q9 Mathematics

The area of a square is 900 cm^2 . Its perimeter is equal to the perimeter of a regular hexagon. What is the area (in cm^2) of the hexagon?

A. 300

B. $400\sqrt{3}$

C. $600\sqrt{3}$ ✓

D. 600

Q10 Mathematics

Two successive discounts of 40% and 60% on a deal are equivalent to a single discount of:

A. 80%

B. 76% ✓

C. 70%

D. 66%

Q11 Mathematics

The monthly wages of 6 employees in a company are ₹5,000, ₹6,000, ₹8,000, ₹8,500, ₹9,300, and ₹9,500. Find the median of their wages.

A. ₹8,000

B. ₹8,250 ✓

C. ₹8,500

D. ₹8,750

Q12 Mathematics

The third proportional of $(a + b)$ and $(a + b)^2$ is

A. $(a + b)$

B. b

C. a

D. $(a + b)^3$ ✓



Q13 Mathematics

A line joining two end points is called a/an:

A. line segment



B. ray

C. parallel line

D. intersecting line

Q14 Mathematics

P is any point inside the rectangle ABCD. If $PA = 27$ cm, $PB = 21$ cm, $PC = 6$ cm, then the length PD (in cm) is equal to:

A. 10

B. 12

C. 15

D. 18



Q15 Mathematics

Sankar and Vishnu work alternately in a tailoring shop on an order of stitching 21 suits. Sankar starts the work, stitches 3 suits in two days, and takes a break, during which Vishnu stitches 3 suits in three days, and then takes a break. This pattern is repeated till all the 21 suits are stitched. How many days did it take the duo to complete the work?

A. 15 days

B. 16 days

C. 17 days



D. 18 days

Q16 Mathematics

Three numbers are in the ratio 1: 2: 5 and their LCM is 1600. Find the HCF of the numbers.

A. 800

B. 480

C. 320

D. 160



Q17 Mathematics

If $x + \frac{1}{x} = 3$, then

$x^2 + \frac{1}{x^2}$ is:

A. 9

B. 8

C. 7



D. 6

Q18 Mathematics

One pipe can fill the tank in 20 min while another pipe can empty it in 60 min. If both the pipes are operated together, how long will it take to fill the tank completely?

A. 20 min

B. 30 min



C. 40 min

D. 10 min

Q19 Mathematics

Raghav's average earning per month in the first three months of a year was ₹45,000. In April, his earning was $33\frac{1}{3}\%$ more than the average earning in the first three months. If his average earning per month for the whole year is ₹45,300, then what will be Raghav's average earning (in ₹) per month from May to December?

A. 43,425

B. 43,450

C. 43,575



D. 43,580

Q20 Mathematics

If $x = -1$ and $x = -2$ are the solutions of the quadratic equation $3x^2 + px + q = 0$, then what is the value of $(3p - 2q)$?

A. 12

B. 13

C. 15



D. 17



Q21 Mathematics

In what ratio should sugar costing ₹45 per kg be mixed with sugar costing ₹52 per kg so that by selling the mixture at ₹55.20 per kg, there is a profit of 15%?

A. 3 : 2

B. 4 : 3



C. 5 : 4

D. 2 : 1

Q22 Mathematics

Three numbers $x \leq y \leq z$ which are co-prime to each other are such that the product of the first two numbers is 143 and that of the last two numbers is 195. The sum of the three numbers is _____

A. 29

B. 39



C. 45

D. 62

Q23 Mathematics

The simple interest on a sum of ₹3,600 for 3 years and 4 months is ₹840. The rate of interest per annum is:

A. 9%

B. 8%

C. 7%



D. 6%

Q24 Mathematics

Find the smallest number that can be added to 467851 to make the sum a perfect square.

A. 6

B. 5



C. 4

D. 3



Q25 Mathematics

If $\sec \theta = \frac{5}{3}$, and θ is an acute angle, then the value of $\frac{3 \tan \theta - 5 \cos \theta}{5 \sin \theta - 3 \sec \theta} = ?$

A. 0

B. 1

C. -1



D. 4

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

In a class of students, Radhika is 18th from the top and 32nd from the bottom. What is the total number of students in the class?

A. 50

B. 49



C. 51

D. 52

Q27 General Intelligence and Reasoning

If 1 is subtracted from each odd digit and 2 is added to each even digit in the number 9345712, what will be difference between the largest and smallest digits thus formed?

A. 8



B. 6

C. 2

D. 4

Q28 General Intelligence and Reasoning

This question is based on the following 3-letter words.

(left) ROW MAD LAY CAT (right)

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel?

A. None

B. Two



C. Three

D. One



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Q29 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(13, 182, 91)

(17, 306, 153)

A. 15, 200, 125

B. 9, 125, 50

C. 8, 72, 36



D. 11, 154, 67

Q30 General Intelligence and Reasoning HINDI - no English version saved

एक कथन और उसके बाद दो धारणाएं I और II दी गई हैं। आपको कथन में दी गई संपूर्ण जानकारी को सत्य मानते हुए, यह तय करना है दी गई धारणाओं में से कौन-सी कथन में निहित हैं?

कथन:

अधिक चॉकलेट खाने से दांत खराब हो सकते हैं।

धारणाएं:

- I. चॉकलेट में चीनी की मात्रा अधिक होती है जिसके परिणामस्वरूप बैक्टीरिया लग सकते हैं।
- II. दिन में दो बार ब्रश करने से दांत मजबूत रहते हैं।

A. केवल धारणा I निहित है



B. केवल धारणा II निहित है

C. न तो धारणा I और न ही II निहित है

D. I और II दोनों धारणाएं निहित हैं



Q31 General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$B \leq T = N > O = Q \geq M = R$$

Conclusions:

1. $N \geq B$
2. $N < B$
3. $O < R$
4. $T < M$

A. 1



B. 2

C. 3

D. 4

Q32 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

360, ?, 180, 60, 15, 3

A. 240

B. 180

C. 360



D. 270

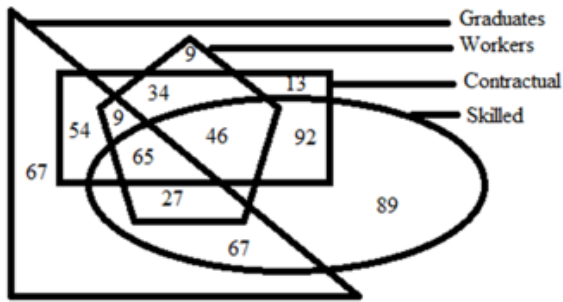


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Q33 General Intelligence and Reasoning

Study the Venn diagram presented below and answer the question that follows.



How many graduated skilled workers are NOT contractual?

A. 27



B. 65

C. 46

D. 9

Q34 General Intelligence and Reasoning

Madan and Mohan are standing in a row of people. Madan is standing at the 16th position from the left side of the row and Mohan is standing at the 19th position from the right side of the row. If both of them interchange their positions Madan becomes 28th from the left. How many people are standing in the row?

A. 46



B. 47

C. 35

D. 43

Q35 General Intelligence and Reasoning

If P denotes ' $\times$ ', T denotes ' $-$ ', M denotes ' $+$ ' and B denotes ' $\div$ ', what will come in place of the question mark (?) in the following equation?

$$54 \text{ B } 9 \text{ P } 11 \text{ T } 13 \text{ M } 17 = ?$$

A. 78

B. 74

C. 73

D. 70



Q36 General Intelligence and Reasoning

Mr. Amardeep started his drive from his office and drove for 8 km towards the south. Then he took a left turn and drove for 15 km to reach city centre. Then he turned 90° in the anti-clockwise direction and drove for 8 km to reach the city palace. From the city palace, he took a left turn and drove for 8 km to reach his home. In which direction is Amardeep's office from the city centre and his home, respectively? (All turns are 90 degree turns only)

- A. North-east and east
- B. North-west and west
- C. South-east and north
- D. South-west and west

Q37 General Intelligence and Reasoning

In a certain code language, 'RECOVERY' is written as 'YRFVPCFR' and 'REQUIRED' is written as 'DFRJVQFR'. How will 'RIGOROUS' be written in that language?

- A. RJGPRPVS
- B. SVPRPGJR
- C. SVRPPHJR
- D. SVPPRJGR

Q38 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

ASD: EWH

FGH: JKL

- A. NSP: ORQ
- B. JKL: NOP
- C. CBH: GFM
- D. GYU: JCY



Q39 General Intelligence and Reasoning

Which of the following interchanges of numbers would make the given equation correct?

$$6 \times 40 \div 8 + 2 - 5 = 11$$

A. 8, 40

B. 2, 6



C. 5, 6

D. 2, 5

Q40 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. Some glasses are windows.
2. Some windows are white.
3. All white are brittle.

Conclusions

- I. Some white are glasses.
- II. Some brittle are glasses.
- III. Some brittle are windows.

A. Only conclusion I is true

B. Only conclusion II is true

C. Only conclusion III is true



D. Only I and II are true

Q41 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

AJM72, DMP81, GPS90, JSV99, ?

A. MYV108

B. MVJ105

C. MVY108



D. MSV105



Q42 General Intelligence and Reasoning

Seven boxes P, Q, R, S, T, U and V are kept one over the other but not necessarily in the same order. S is kept third from the bottom. Only V is kept between P and S. Only three boxes are kept between T and V. T is kept immediately below U. Q is kept immediately above S. R is kept third from the top. How many boxes are kept between U and S?

- A. One
- B. Two
- C. Three
- D. Four

**Q43** General Intelligence and Reasoning

The following table shows the marks scored by A, B, C and D in four subjects i.e., Mathematics, Hindi, English and Science. Marks given are out of 100. Study the table and answer the question.

Subject / Student	A	B	C	D
Mathematics	90	85	83	78
Hindi	86	80	74	82
English	75	73	70	76
Science	92	88	64	68

What is the ratio of 'the sum of the marks scored by A in Mathematics and B in Hindi' to 'the sum of the marks scored by C in Science and D in English'?

- A. 14 : 13
- B. 2 : 3
- C. 12 : 7
- D. 17 : 14

**Q44** General Intelligence and Reasoning

Study the following number arrangement and answer the question given below. All numbers given below are 2 digit numbers.

13 56 46 23 16 34 25 19 78 85 86 24 29 73 94 52 64 63

What will be the difference between the sum of the first half and second half of the above series?

- A. 290
- B. 260
- C. 310
- D. 315



Q45 General Intelligence and Reasoning

Susheela started her morning walk and noted that her shadow is at her back. After some time she turned left and then again turned right. Finally she turned right and started running. In which direction was she running? (All turns are 90 degree turns only)

- A. East
- B. West
- C. North
- D. South



Q46 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

8 : 19 :: 5 : 13 :: 7 : ?

- A. 19
- B. 17
- C. 15
- D. 21



Q47 General Intelligence and Reasoning

Seven persons N, O, P, Q, R, S, and T are sitting in a row facing North. Only three persons are sitting between P and T. N is sitting at one end. P is sitting somewhere to the left of N. O is to the immediate right of P and immediate left of R. Exactly two people are sitting to the right of T who is sitting to the immediate right of Q. Who is sitting in the middle?

- A. T
- B. S
- C. Q
- D. O



Q48 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $Q > A \geq Z > X < R \leq H < M$

A. $Q > M > H$

B. $Q > X > A$

C. $Z > X \geq M$

D. $M > R > X$

**Q49** General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the middle of the sides. D sits third to the left of F. D sits at one of the corners. C sits second to the right of A. A does not sit at any of the corners. A is not an immediate neighbour of D. G is an immediate neighbour of E. G does not sit at any of the middle of the sides. Only three people sit between G and B.

Who sits second to the right of H?

A. B



B. E

C. G

D. C

Q50 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- I. All grounds are plane.
- II. Some planes are covered.
- III. All covered are wets.

Conclusions:

- I. Some wets are plane.
- II. Some wets are grounds.
- III. Some planes are grounds.

A. Conclusions I and II follow

B. Conclusions I and III follow



C. Conclusions II and III follow

D. Conclusions I, II and III follow



Q51 General Intelligence and Reasoning

If each vowel in the word DUSTER is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, how many letters will appear twice in the group of letters thus formed?

A. zero



B. One

C. Two

D. Three

Q52 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) K & ^ 5 T & B 4 @ 3 # 1 A 3 P H 9 L % 9 2 (Right)

If all letters are dropped from the series, which of the following will be fifth from the left?

A. &

B. 3

C. 4



D. #

Q53 General Intelligence and Reasoning

In a certain code language, 'AFPQV' is written as 'CITVB' and 'DLNPG' is written as 'FORUM'. How will 'LNAGK' be written in that language?

A. NQELQ



B. NQEQL

C. QNEPK

D. NQQLQ

Q54 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

1, 0, 2, 1, 3, 2, 4, 5, 5, 26, ?, 677

A. 52

B. 47

C. 26

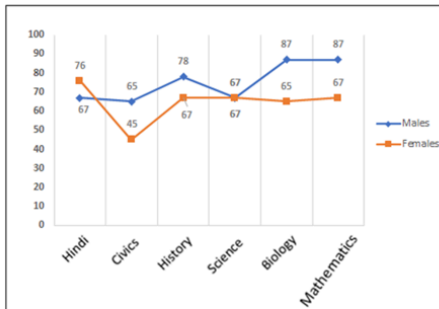
D. 6



Q55 General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The graph presents total number of students who opted for different subjects in a college.



What is the difference between the total number of students who have opted for 'Biology and Mathematics' & total number of students who have opted for 'Civics and History'?

A. 49

B. 50

C. 51



D. 52

General Science

25 Questions • Answer Key

Q56 General Science

Induced EMF in a coil during the phenomenon of electromagnetic induction is directly proportional to:

A. magnetic flux

B. resistance of the circuit

C. change in magnetic flux

D. rate of change in magnetic flux



Q57 General Science

In the absence of atmosphere, the colour of the sky would be:

A. blue

B. white

C. black



D. red



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निम्न में से कौन सा तत्व कार्बन के समान श्रृंखलन गुण प्रदर्शित करता है?

A. Ne

B. O

C. K

D. Si



What is the subunits composition of prokaryotic ribosomes?

A. 50S and 40S

B. 50S and 30S

C. 60S and 40S

D. 60S and 30S



Which of the following practices is least harmful in the conservation of forests and wildlife?

A. Collecting non-timber forest produce

B. Converting forests to plantations

C. Building roads and dams in forested areas

D. Using forests as a source of raw material for industries



जब हम समूह में नीचे की ओर जाते हैं, तो क्षारीय ऑक्साइड के निर्माण की प्रवृत्ति _____।

A. बढ़ती है

B. घटती है

C. नियत रहती है

D. पहले बढ़ती है, फिर घटती है



बोमेन संपुट (Bowman's capsule) मानव शरीर में कहां स्थित होता है?

A. वृक्क में



B. आमाशय में

C. फेफड़ों में

D. यकृत में

Q63 General Science

Two resistors, A ($20\ \Omega$) and B ($30\ \Omega$), are connected in parallel. The combination is connected to a 3 V battery. The current through the battery is:

A. 0.15 A

B. 0.25 A



C. 0.30 A

D. 0.50 A

Q64 General Science

Which of the following instruments is used to measure blood pressure?

A. Spectrophotometer

B. Sphygmomanometer



C. Urinometer

D. Haemoglobin meter

Q65 General Science

Which of the following parts of a flower develops into a fruit after fertilisation?

A. Ovule

B. Ovary



C. Pistil

D. Petal



Q66 General Science HINDI - no English version saved

जब एसिटिक अम्ल को सोडियम हाइड्रॉक्साइड से उपचारित किया जाता है, तो _____ और जल बनेगा।

- A. सोडियम कार्बोनेट
- B. लैक्टिक अम्ल
- C. सोडियम एसीटेट ✓
- D. सोडियम बाईकार्बोनेट

Q67 General Science

Voice change during puberty occurs due to _____.

- A. the development of larynx ✓
- B. the development of lungs
- C. cigarette smoking
- D. muscular development

Q68 General Science HINDI - no English version saved

नीचे दिए गए कथनों पर विचार कीजिए, और सही उत्तर का चयन कीजिए।

कथन-I: लिटमस विलयन एक बैंगनी रंजक (purple dye) है, जो थैलोफाइटा वर्ग से संबंधित पादप, लाइकेन से निकाला जाता है।

कथन-II: लाल गोभी के पत्ते, हल्दी, कुछ फूलों की रंगीन पंखुड़ियां, जैसी कई प्राकृतिक सामग्रियां हैं, जो किसी विलयन में अम्ल या क्षारक की उपस्थिति का संकेत देती हैं।

- A. दोनों कथन सत्य हैं। ✓
- B. दोनों कथन असत्य हैं।
- C. कथन-I सत्य है, और कथन-II असत्य है।
- D. कथन-II सत्य है, और कथन-I असत्य है।



Q69 General Science

Match the following characteristics in the modern periodic table:

i. Total number of blocks in table	a. 4
ii. Total number of periods	b. 2
iii. Number of elements in K shell	c. 8
iv. Number of elements in M shell	d. 7
v. Number of elements in L shell	e. 18

A. i-a, ii-b, iii-c, iv-d, v-e

B. i-a, ii-d, iii-b, iv-e, v-c



C. i-b, ii-a, iii-d, iv-c, v-e

D. i-e, ii-c, iii-a, iv-b, v-d

Q70 General Science

The potential difference across a copper wire is 5.0 V when a current of 0.5 A flows through it. The resistance of the wire is:

A. 2.5 Ω

B. 5.0 Ω

C. 0.1 Ω

D. 10.0 Ω

**Q71** General Science

A current-carrying straight conductor is placed in a magnetic field. The conductor experiences the maximum force when the angle between the direction of the current in it and the direction of the magnetic field is:

A. 30°

B. 45°

C. 60°

D. 90°



Q72 General Science HINDI - no English version saved

नीचे दिए गए कथनों पर विचार कीजिए, और सही उत्तर का चयन कीजिए।

कथन-I: भोजन को वायुरोधी कंटेनरों में रखने से ऑक्सीकरण को धीमा करने में मदद मिलती है।

कथन-II: चिप्स विनिर्माता सामान्यतः चिप्स को ऑक्सीकृत होने से बचाने के लिए चिप्स के बैग को ऑक्सीजन जैसी गैस के साथ फलश करते हैं।

- A. दोनों कथन सत्य हैं।
- B. दोनों कथन असत्य हैं।
- C. कथन-I सत्य है, और कथन-II असत्य है।
- D. कथन-I असत्य है, और कथन-II सत्य है।

Q73 General Science HINDI - no English version saved

निम्न कथनों पर विचार कीजिए:

(a) लाल प्रकाश की तरंग दैर्घ्य, नीले प्रकाश की तरंग दैर्घ्य से लगभग 1.8 गुना अधिक होती है।

(b) जब सूर्य का प्रकाश वायुमंडल से गुजरता है, तो सूक्ष्म कण, लाल प्रकाश की तुलना में नीले प्रकाश को अधिक तीव्रता से प्रकीर्णित करते हैं।

उपरोक्त में से कौन से कथन हमें स्वच्छ आकाश के नीले रंग को समझने में मदद करते हैं?

- A. (a) और (b) दोनों
- B. न तो (a) न ही (b)
- C. केवल (a)
- D. केवल (b)

Q74 General Science

The resistance of a wire of length L and area of cross-section A is 1.0Ω . The resistance of a wire of the same material, but of length $4L$ and area of cross-section $5A$ will be:

- A. 0.4Ω
- B. 0.8Ω
- C. 1.25Ω
- D. 2.5Ω



Q75 General Science

An object is placed at a distance of 10 cm in front of a concave mirror. Its image is formed at a distance at 15 cm on the same side. The focal length of the mirror is:

- A. 6 cm
- B. -6 cm
- C. 30 cm
- D. -30 cm

Q76 General Science

In an organic compound, a functional group determines:

- A. its chemical properties
- B. the length of carbon chain
- C. the nature of the carbon chain
- D. its molecular mass

Q77 General Science

In which of the following cases does a concave mirror form a real image?

- (i) Object placed between focus and pole
- (ii) Object placed at infinity
- (iii) Object placed at focus

- A. Both (i) and (ii)
- B. Both (ii) and (iii)
- C. Both (i) and (iii)
- D. (i), (ii) and (iii)



Q78 General Science HINDI - no English version saved

जाइलम के कौन से तत्व मृत कोशिकाओं से बने होते हैं, और फिर भी पौधों में जल और खनिजों के परिवहन के लिए उत्तरदायी होते हैं?

- A. वाहिनिका (Tracheids) और जाइलम मृदूतक (Xylem parenchyma)
- B. वाहिनिका (Tracheids) और वाहिका (Vessels) ✓
- C. वाहिनिका (Tracheids) और जाइलम तंतु (Xylem Fibre)
- D. वाहिका (Vessels) और जाइलम मृदूतक (Xylem parenchyma)

Q79 General Science

Which of the following is an artificial ecosystem that is manmade?

- A. Crop field ✓
- B. Forest
- C. Pond
- D. Lake

Q80 General Science

Hardness of water can be removed by using:

- A. vinegar
- B. POP
- C. common salt
- D. washing soda ✓

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs HINDI - no English version saved

भगवान पद्मसंभव के सम्मान में कौन सा महोत्सव मनाया जाता है?

- A. सागा दावा महोत्सव
- B. हेमिस महोत्सव ✓
- C. गणगौर महोत्सव
- D. हॉर्नबिल महोत्सव



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Q82 General Awareness and Current Affairs

Which of the following sports/activities is NOT covered under the National Air Sports Policy 2022?

- A. Gliding
- B. Ballooning
- C. Parasailing
- D. Aerobatics



Q83 General Awareness and Current Affairs

In March 2022, Bharat Biotech partnered with which country's bio-pharmaceutical firm Biofabri for TB vaccine?

- A. Canada
- B. Australia
- C. Spain
- D. USA



Q84 General Awareness and Current Affairs HINDI - no English version saved

1931 में, इलाहाबाद के अल्फ्रेड पार्क में पुलिस से लड़ते हुए निम्नलिखित में से किस क्रांतिकारी ने खुद को गोली मार ली थी?

- A. रास बिहारी बोस
- B. चंद्रशेखर आजाद
- C. राम प्रसाद बिस्मिल
- D. खुदीराम बोस



Q85 General Awareness and Current Affairs

Which institution is the country's premier organisation for literary discourse, publication and promotion, and the only one that does so in 24 Indian languages, including English?

- A. Sahitya Akademi ✓
- B. Indira Gandhi National Open University
- C. English and Foreign Languages University
- D. Hindi Granth Academy

Q86 General Awareness and Current Affairs

Identify the wrong pair (Bank and related category) from following-

- A. Axis Bank Ltd - Private Sector Bank
- B. AU Bank Ltd – Small Finance Bank
- C. Canara Bank – Payments Bank ✓
- D. Punjab National Bank – Public Sector Bank

Q87 General Awareness and Current Affairs

Who is the chairperson of National Commission for Women in India (As of July 2022)?

- A. Dr. Girija Vyas
- B. Mamta Sharma
- C. Meeta Rajivlochan
- D. Rekha Sharma ✓

Q88 General Awareness and Current Affairs

The Tadoba National Park is located in which state of India?

- A. Bihar
- B. Rajasthan
- C. Uttar Pradesh
- D. Maharashtra ✓



Q89 General Awareness and Current Affairs

A Memorandum of Understanding (MoU) was signed between the Survey of India, Government of India and Assam State Government in June 2021 for the implementation of which scheme for rural property survey?

A. Svamitva scheme



B. Mission Suraksha

C. Sahakar Mitra Scheme

D. Mission Sagar

Q90 General Awareness and Current Affairs HINDI - no English version saved

निम्नलिखित में से कौन सा 'आगम' जैन धर्म में अहिंसा का वर्णन करता है?

A. समवायांग सूत्र

B. अंतः क्रदाशांग सूत्र

C. सूत्रक्रातांग सूत्र



D. स्थानांग सूत्र

Q91 General Awareness and Current Affairs

In which of the following years did the fourteen major Indian scheduled commercial banks get nationalised in India?

A. 1950

B. 1969



C. 1970

D. 1972

Q92 General Awareness and Current Affairs

Which of the following herbs is found only in India and is used to treat blood pressure?

A. Tulsi

B. Jamun

C. Sarpagandha



D. Kachnar



Q93 General Awareness and Current Affairs

_____ means the additional satisfaction or benefit (utility) that a consumer derives from buying an additional unit of a commodity or service.

A. Marginal Utility



B. Total Utility

C. Equilibrium

D. Consumer Demand

Q94 General Awareness and Current Affairs

Which country won the bronze at the men's Hockey Asia Cup 2022 in Jakarta?

A. Japan

B. Pakistan

C. India



D. South Korea

Q95 General Awareness and Current Affairs

What is the ranking of India in plant diversity in the world as on December 2010?

A. 20th

B. 15th

C. 10th



D. 25th



Q96 General Awareness and Current Affairs

As of March 2022, the common High Court for the states of Punjab and Haryana is located at _____.

- A. Firozpur
- B. Chandigarh
- C. Karnal
- D. Faridabad



Q97 General Awareness and Current Affairs HINDI - no English version saved

भारतीय संविधान की प्रस्तावना में आए शब्द '_____' का अर्थ 'राज्य के निर्वाचित प्रमुख' से है।

- A. प्रभुत्व संपन्न
- B. समाजवादी
- C. लोकतांत्रिक
- D. गणराज्य



Q98 General Awareness and Current Affairs

How many airlines were nationalised under The Air Corporation Act, 1953?

- A. 18
- B. 09
- C. 13
- D. 11



Q99 General Awareness and Current Affairs

The 73rd Amendment of the Constitution enables the states with a population of less than 20 lakhs to have a minimum _____ structure in the local governance of the state.

A. two-tier



B. three-tier

C. one-tier

D. union rule

Q100 General Awareness and Current Affairs HINDI - no English version saved

नेशनल इनोवेशन फाउंडेशन - भारत ने मवेशियों में होने वाले कृमियों के इलाज के लिए रासायनिक विधियों के विकल्प के रूप में _____ नामक एक स्वदेशी हर्बल दवा विकसित की है।

A. वर्मीवेट (Wormivet)



B. लोबेंडाजोल (Lobendazole)

C. स्टमक क्लीन (Stomach clean)

D. वर्मीक्लियर (Vermiclear)



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A shopkeeper has the following 3 schemes:

(I) Two successive discounts of 30% and 35%

(II) Buy 6, get 4 free

(III) Buy 5, get 6 free

Which scheme has the maximum discount percentage?

A. Only I

B. Only II

C. Only III



D. Both II and III

Q2 Mathematics

If the product of two numbers, not necessarily distinct from each other, is 25 and their HCF is 5, then their LCM is:

A. 4

B. 5



C. 6

D. 7

Q3 Mathematics

Find the area of a trapezium (in sq. unit) with parallel sides of length 3 unit and 5 unit and the shortest distance between its parallel sides is 6 unit.

A. 24



B. 12

C. 48

D. 15



Q4 Mathematics

Which is the correct formula for median of grouped data?

Consider:

L = lower limit of median class

CF_0 = cumulative frequency of preceding class

F = frequency of median class

H = class width

N = the total of frequency

A. $L + \frac{N}{2} - CF_0 - F \times H$

B. $L + \frac{\frac{N}{2} - CF_0}{F} \times H$



C. $\frac{\frac{N}{2} - CF_0}{F} \times H$

D. $L + \frac{\frac{N}{2} - CF_0}{F}$

Q5 Mathematics

The sum of two positive numbers is 45 and their difference is 19. What are the numbers?

A. 25, 20

B. 32, 13



C. 31, 15

D. 30, 15



Q6 Mathematics

If α and β are the roots of the equation $6x^2 + x - 15 = 0$, where $\alpha > \beta$, then the value of $(\alpha - \beta)$ is:

- A. $\frac{1}{6}$
- B. $\frac{1}{3}$
- C. $\frac{20}{3}$
- D. $\frac{19}{6}$

**Q7 Mathematics**

A 280 m long train overtakes a man moving at a speed of 8 km/h (in same direction) in 16 seconds. How much time (in seconds) will it take this train to completely cross another 380 m long train, moving in the opposite direction at a speed of 37 km/h?

- A. 20
- B. 22
- C. 25
- D. 28

**Q8 Mathematics**

In $\triangle ABC$, $DE \parallel AC$, where D and E are the points on sides AB and BC, respectively. If $BD = 4$ cm and $AD = 2\sqrt{2}$ cm, then what is the ratio of the area of $\triangle BDE$ to the trapezium ADEC?

- A. $2 : (1 + 3\sqrt{2})$
- B. $1 : (1 + 2\sqrt{2})$
- C. $2 : (1 + \sqrt{2})$
- D. $2 : (1 + 2\sqrt{2})$

**Q9 Mathematics**

If an exterior angle of a regular polygon is 40° , then the number of sides in the regular polygon is:

- A. 10
- B. 9
- C. 8
- D. 7



Q10 Mathematics

If $9.6 : 16.8 :: 18 : x$, what is the value of x ?

- A. 20.4
- B. 24.8
- C. 25.5
- D. 31.5



Q11 Mathematics

The cost of 2 tables and 3 chairs is ₹540, while that of 2 tables and 1 chair is ₹470. What is the cost of 5 chairs?

- A. ₹185
- B. ₹245
- C. ₹175
- D. ₹205



Q12 Mathematics

If $(\sin\beta + \operatorname{cosec}\beta)^2 + (\sec\beta - \cos\beta)^2 = a + \tan^2\beta + \cot^2\beta$, then the value of a is:

- A. 0
- B. 2
- C. 3
- D. 5



Q13 Mathematics

Find the value of $529 \div 23 \times 61 - 1403$.

- A. 1
- B. 2
- C. 0
- D. 3



Q14 Mathematics

If the ratio of two numbers is 4 : 3 and the product of their LCM and their HCF is 432, then the sum of the reciprocals of the LCM and the HCF is:

A. $\frac{13}{72}$



B. $\frac{13}{2}$

C. $\frac{13}{7}$

D. $\frac{13}{27}$

Q15 Mathematics

A dealer buys apples at ₹50, ₹40 and ₹30 per kilogram. He mixes them in the ratio 2 : 4 : 9 respectively, by weight, and sells at a profit of 30%. At what approximate price per kilogram does he sell the apples?

A. ₹45.9/kg



B. ₹23.5/kg

C. ₹10.8/kg

D. ₹75/kg

Q16 Mathematics

The sum of two times the present age of A and three times the present age of B is 106 years. Four times the present age of B exceeds three times the present age of A by 11 years. What will be the sum of the ages (in years) of A and B, 4 years from now?

A. 43

B. 47

C. 49

D. 51

**Q17 Mathematics**

A man covers distances of 300 km, 225 km, and 375 km at the speed of 15 km/h, x km/h and 30 km/h, respectively. If his average speed for the whole journey is 20 km/h, then what is the value of x ?

A. 15

B. 18



C. 20

D. 24



Q18 Mathematics

The simplified value of $\frac{(0.11)^2 + (0.06)^2 + (0.031)^2}{(0.011)^2 + (0.006)^2 + (0.0031)^2}$ is:

A. 1000

B. 100



C. 10

D. 1

Q19 Mathematics

If $x^2 - 4x + 4 = 0$, then the value of $x^3 + x^2 + \frac{1}{x} + \frac{1}{x^2}$ is:

A. 15.75

B. 14.75

C. 13.75

D. 12.75



Q20 Mathematics

If $x^2 - 2x + 1 = 0$, then it has:

A. two roots



B. three roots

C. four roots

D. five roots

Q21 Mathematics

Krishna has a few coins of 1 rupee, 50 paise and 25 paise in the ratio $\frac{1}{4} : \frac{1}{2} : \frac{1}{2}$. If the number of 25 paise coins is 100, then the total amount with Krishna is:

A. ₹ 75

B. ₹ 120

C. ₹ 100

D. ₹ 125



Q22 Mathematics

A car covers certain distance in $2\frac{1}{4}$ hours at 36 miles/h and another distance in $1\frac{3}{4}$ hours at 56 miles/h. Find the total distance (in miles) travelled by the car.

A. 139

B. 159

C. 179



D. 200

Q23 Mathematics

A sum of ₹36,000 deposited at a certain rate of compound interest, compounded annually, becomes three times itself after 6 years. How much will it become after 18 years at the same rate of compound interest?

A. ₹10,72,000

B. ₹9,72,000



C. ₹8,72,000

D. ₹7,72,000

Q24 Mathematics

There are 4 pipes attached to a tank. Two to fill the tank and the other two to transfer the water into a cistern. The first two pipes can fill the tank in 40 sec and 80 sec, respectively, when opened alone, while the last two can empty in 80 sec and 160 sec, respectively, when opened alone. If all the pipes are opened together, in how much time will the tank be filled?

A. 21.2 sec

B. 24.44 sec

C. 53.33 sec



D. 16.8 sec

Q25 Mathematics

The sides of a triangle are 15 cm, 28 cm, and 41 cm. What is the length of its altitude corresponding to the side with a length of 28 cm?

A. 9 cm



B. 10 cm

C. 12 cm

D. 14 cm



Q26 General Intelligence and Reasoning

HARKED is related to RAHDEK in a certain way. In the same way, RACIAL is related to CARLAI. To which of the following is NIMBLE related, following the same logic?

A. NIMELB

B. MINELB



C. NIMLEB

D. MINLEB

Q27 General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$H \geq Y < T \leq L = X > W$$

Conclusions:

1. $H > T$ 2. $H < T$ 3. $Y < X$ 4. $L = W$

A. 1

B. 2

C. 3



D. 4

Q28 General Intelligence and Reasoning

Six girls, P, Q, R, S, T and V, are sitting in a circle, facing the centre of the circle. P sits to the immediate right of Q. S is 3rd to the right of P, and to the immediate left of R. V and T are immediate neighbours. T is second to the left of R. Who is to the immediate left of V?

A. Q

B. P



C. T

D. S



Q29 General Intelligence and Reasoning

From the given numbers 452, 243, 361, 579 and 674, if in each number, the first and the second digits of each number are interchanged, then which of the following will be the highest number?

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

A. 452

B. 361

C. 579

D. 674



Q30 General Intelligence and Reasoning

Five persons, P, Q, R, S and T travelled in different months of the same year viz. January, February, March, April and May.

R travelled in February. Only one person travelled between R and S. Only three people travelled between Q and T. T travelled in a month after S. Who among them travelled in May?

A. Q

B. S

C. T

D. P



Q31 General Intelligence and Reasoning

Select the combination of letters that when placed from left to right in the same sequence in the blanks of the given series will complete the series.

XY_YZ_ _XY_ _ABXY_ _ZAB_ _YYZA_

A. YABYZYYXYY

B. XABYZYYXYB

C. YABYZYYXYB

D. YZBYZYYXYB



Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

99, 101, 104, 109, 116, ?

A. 132

B. 128

C. 124

D. 127



Q33 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

All bins are plastics

Some plastics are nylon

Some nylons are green

Conclusions:

(I) Some nylons are plastics

(II) All plastics are bins

(III) Some greens are nylons

A. Only conclusion I follows

B. Only conclusion II follows

C. Only conclusions I and III follow



D. None of the conclusions follow

Q34 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

J F V I E J E M V E F O J V E J J V M E X

How many such consonants are there each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A. One

B. Two



C. Three

D. Four



Q35 General Intelligence and Reasoning

Pole F is to the north of pole B and west of pole E. Pole R is to the east of pole E and north of pole U. What is the position of pole R with respect to pole B?

A. North

B. North-east



C. South

D. South-east

Q36 General Intelligence and Reasoning

All 50 students of a class are standing in a straight row facing north. Rakesh is 17th from the right end, while Kamlesh is 22nd from the left end. How many students are standing between Rakesh and Kamlesh?

A. 11



B. 5

C. 16

D. 8

Q37 General Intelligence and Reasoning

In a code language, BRAIN is coded as YIZRM and COACH is coded as XLZXS. What is the code for ENTRY in that language?

A. UMFIB

B. VNFIB

C. VMGIB



D. UNGIB

Q38 General Intelligence and Reasoning

Which of the following interchanges of numbers would make the given equation correct?

$$5 \times 15 \div 5 + 22 - 18 = 25$$

A. 22, 18

B. 5, 15

C. 22, 25



D. 5, 25



Q39 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

13 : 31 :: 15 : 33 :: 20 : ?

A. 40

B. 36

C. 32

D. 38



Q40 General Intelligence and Reasoning

Given below is a decision followed by two statements I and II. Read the information carefully and select the correct option.

Decision:

The state government has decided to start free education programs for all uneducated females living in villages in order to provide them with basic education.

Statements:

I. Similar programs in other states had resulted in 63% more employed women in just 2 years.

II. Some of the women in the said state, currently have children below 5 years of age, due to which they do not have much free time.

A. Both statements I and II strengthen the decision.

B. Statement I strengthens the decision but statement II is neutral.



C. Both statements I and II weaken the decision.

D. Statement I is neutral but statement II weakens the decision.

Q41 General Intelligence and Reasoning

Seven boxes A, B, C, D, E, F and G are kept one above the other, not necessarily in the same order. Box E is the topmost box. Box G is the third box above box A. Box F is immediately above box G. Box B is immediately below box C. There is only one box between box B and box D.

How many boxes are there between D and G?

A. One

B. Two

C. Three



D. Four



Q42 General Intelligence and Reasoning

While returning home from school Rana misdirected from his way. From school he first walked for 3 km towards the south and then turned left and walked for 2 km. From there, he turned towards the left and further walked for 3 km. Finally he again turned to his left and walked for 1 km to reach his home. In which direction is his home from school? (All turns are 90 degree turns only)

A. East



B. West

C. North

D. South

Q43 General Intelligence and Reasoning

Study the following arrangement and answer the question given below. All numbers given below are 2 digit numbers.

85 34 @ 36 # 56 67 * 79 \$ 42 48 % 32 81 Ø 57 38 ^ 73 / 51

What will be the sum of those odd numbers which are followed by symbols and even numbers which are preceded by symbols?

A. 548

B. 523

C. 498

D. 466



Q44 General Intelligence and Reasoning

How many such pairs of letters are there in the word FRANCK (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. None

B. One

C. Two

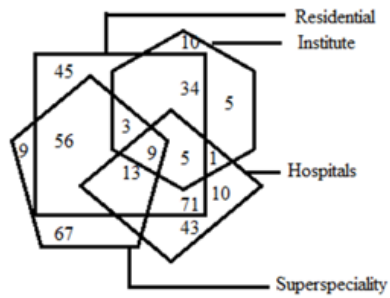


D. Three



Q45 General Intelligence and Reasoning

Study the given Venn diagram and answer the question that follows.



How many residential super-specialty hospitals are institutes?

A. 3

B. 13

C. 5

D. 9



Q46 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$14.96 + 10.96 + 13.16 - 12.89 \times 2.04 + 24.93 \div 5.1 = ?$$

A. 20

B. 16

C. 18

D. 22



Q47 General Intelligence and Reasoning

There are eight persons P, Q, R, S, T, U, V and W, sitting around a rectangular table in such a way that four of them sit at four corners of the table while the other four sit in the middle of each of the four sides. All the eight persons face toward the centre. T sits third to the right of V, but T is not the immediate neighbour of U. R sits second to the right of Q. S sits second to the right of U. P sits third to the right of Q. Who among the following is sitting 4th to the right of P?

A. R

B. W

C. U

D. S



Q48 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

2 : 10 :: 3 : 30 :: 4 : ?

A. 70

B. 58

C. 72

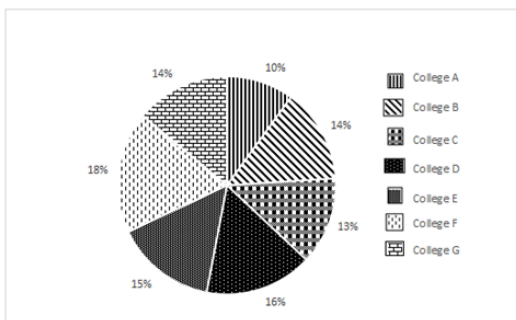
D. 68



Q49 General Intelligence and Reasoning

Study the given pie-chart and answer the question that follows.

The pie-chart presents the percentage of law students enrolled in different colleges of Agra district.



If the total number of law students in the district is 23786, how many students are studying in colleges A, D and G taken together? (approximately)

A. 9520

B. 10701

C. 9514

D. 7134



Q50 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $X > E \geq U < W = T > J < L$

Conclusions:

I. $T < E$

II. $X < U$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true

**Q51** General Intelligence and Reasoning

The following table shows the marks scored by A, B, C and D in four subjects i.e., Mathematics, Hindi, English and Science. Marks given are out of 100. Study the table and answer the question.

Subject / Student ↓ →	A	B	C	D
Mathematics	94	85	83	78
Hindi	86	78	74	82
English	75	73	70	74
Science	92	88	66	68

What is the ratio of 'the sum of the marks scored by A in Mathematics and Hindi' to 'the sum of the marks scored by C in Science and Hindi'?

A. 1 : 2

B. 8 : 9

C. 5 : 3

D. 9 : 7



Q52 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 534 945 317 354 781 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

If all the numbers are arranged in ascending order, the position of how many numbers will remain unchanged?

A. 0



B. 1

C. 2

D. 3

Q53 General Intelligence and Reasoning

In a certain code language, 'ENTER' is written as 'UBWKH' and 'SHIFT' is written as 'WCLEV'. How will 'TOUCH' be written in that language?

A. WXLKZ

B. KZXLW



C. WLXZK

D. KFXRW

Q54 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All envelopes are letters.
2. No letter is a paper.
3. Some papers are notebook.

Conclusions:

- I. Some papers are envelopes.
- II. All notebooks can never be letters.
- III. Some notebooks are envelopes.

A. Only conclusion I follows

B. Only conclusion II follows



C. Only conclusion III follows

D. None of the conclusions follow



Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

4, 21, 47, 100, 198, ?

A. 395

B. 359



C. 355

D. 399

General Science

25 Questions • Answer Key

Q56 General Science

When Mendel studied the inheritance of two traits in the pea plant, in what phenotypic ratio did he get for the plants in F₂ generation?

A. 9 : 7

B. 9 : 4 : 2 : 1

C. 9 : 3 : 2 : 2

D. 9 : 3 : 3 : 1



Q57 General Science

Which of the following CANNOT be explained using the phenomenon of scattering of light?

A. Red colour used for danger signals

B. Reddening of sun during sunrise

C. Blue colour of sky

D. Twinkling of stars



Q58 General Science

A unicellular organism has a definite shape, takes food in at a specific spot, and uses hair like cilia to move food to that spot. Identify the organism,

A. Lice

B. Paramecium



C. Plasmodium

D. Euglena



Q59 General Science

Which gases are evolved during complete decomposition of ferrous sulphate crystals?

- A. Only SO_2
- B. Only SO_3
- C. Both SO_2 and SO_3 ✓
- D. O_2

Q60 General Science

An object of size 1.0 cm is placed in front of a concave mirror of focal length 16 cm, at a distance of 24 cm. The image formed is _____ and its height is _____.

- A. inverted, 2.0 cm ✓
- B. erect, 2.0 cm
- C. inverted, 0.4 cm
- D. erect, 0.4 cm

Q61 General Science

Which of the following parts of the human body is/are NOT lined with squamous epithelium?

- A. Mouth
- B. Oesophagus
- C. Kidney tubules ✓
- D. Skin

Q62 General Science

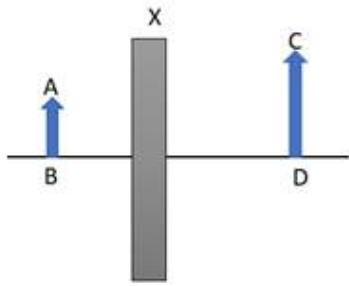
Which of the following has the highest boiling point?

- A. $LiCl$
- B. $NaCl$
- C. $CaCl_2$
- D. CaO ✓



Q63 General Science

An optical device X forms an image CD for an object AB as shown in the figure. The device X is a:



- A. convex mirror
- B. concave mirror
- C. convex lens
- D. concave lens

Q64 General Science

What is the waste product in photosynthesis?

- A. Water
- B. Oxygen
- C. Carbon dioxide
- D. Glucose

Q65 General Science

Direction of rotation of armature of motor can be found with the help of _____.

- A. Maxwell's corkscrew rule
- B. Right hand thumb rule
- C. Fleming's left-hand rule
- D. Fleming's right-hand rule

Q66 General Science

When resistors are connected in series combination, then potential difference across each resistor will be:

- A. Equally divided
- B. Proportional to thickness
- C. Proportional to resistance
- D. Similar



Q67 General Science

When magnetic field is acting towards north and current is moving in east to west direction through a conductor, then the conductor will move _____ direction

- A. towards left
- B. towards right
- C. in the upward
- D. in the downward



Q68 General Science

Rays coming from the sun are refracted by the atmosphere. Due to this, the apparent sunset is about _____ the actual sunset.

- A. 1 minute after
- B. 1 minute before
- C. 2 minutes after
- D. 2 minutes before



Q69 General Science

Which of the following is the most electronegative element?

- A. Cl
- B. S
- C. Mg
- D. Al



Q70 General Science

Who suggested that the origin of life must have been from simple inorganic substances?

- A. Gregor Mendel
- B. Charles Darwin
- C. JBS Haldane
- D. Stanley L Miller



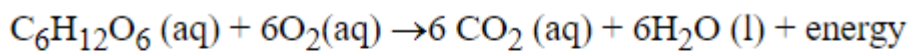
Q71 General Science

In a chemical equation, the arrow head points towards:

- A. reaction conditions
- B. Solvent
- C. products
- D. Reactants



Q72 General Science



The special name for the given reaction is:

- A. respiration
- B. digestion
- C. metabolism
- D. energy conversion



Q73 General Science

Mendeleev's period table examined the relationship between the atomic mass of elements and their _____.

- A. physical properties only
- B. chemical properties only
- C. physical and chemical properties both
- D. colour



Q74 General Science

When a 24 V potential is applied across a conductor and 96 mA current is flowing through it then the resistance of the conductor is:

- A. 40 Ω
- B. 0.250 Ω
- C. 0.04 Ω
- D. 250 Ω



Q75 General Science

How much energy is released when water is used to break down the terminal link of ATP?

A. 30.5 kJ/mol



B. 31.5 kJ/mol

C. 35.6 kJ/mol

D. 37.2 kJ/mol

Q76 General Science

Some statements about food chain and energy flow through an ecosystem are given below. Select the INCORRECT statement.

A. All organisms that are not producers are consumers.

B. Food webs include two or more food chains.

C. A single organism can feed at several trophic levels.

D. The lower the trophic level at which an organism feeds, the less energy it has.



Q77 General Science

A conductor is connected to a battery of 6V. Let V_1 be the potential difference across the conductor. When a battery of 9 V is connected, the potential difference becomes V_2 . (V_1/V_2) is:

A. 1.5

B. $\frac{1}{3}$

C. $\frac{2}{3}$



D. 3

Q78 General Science

Aashi, by mistake used an unknown solution to clean her clothes, in place of detergent. Her clothes faded. The solution could be:

A. common salt

B. baking soda powder

C. bleaching powder



D. talcum powder



Q79 General Science

The first member of the alkyne group of hydrocarbons is:

- A. methyne
- B. ethyne
- C. propyne
- D. butyne



Q80 General Science

Which of the following issues is NOT a problem concerning large dams?

- A. Deforestation and the loss of biological diversity
- B. Displacement of people
- C. Storage of water for irrigation
- D. Low benefits compared to costs involved



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

'Loo' winds are usually associated with _____ in India.

- A. summer seasons
- B. winter seasons
- C. advancing monsoons
- D. retreating monsoons



Q82 General Awareness and Current Affairs

In which year was Bandhan Financial Services, a micro lender based out of Kolkata granted in-principle approval by RBI to start a universal bank?

- A. 2004
- B. 2010
- C. 2014
- D. 2018



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Q83 General Awareness and Current Affairs

Consumer theory is how people decide to spend their _____.

- A. relations
- B. time
- C. money
- D. energy



Q84 General Awareness and Current Affairs

India's First Five Year Plan covered the period from _____, which mainly focused in the development of the primary sector.

- A. 1956 to 1961
- B. 1947 to 1952
- C. 1951 to 1956
- D. 1949 to 1954



Q85 General Awareness and Current Affairs

How many languages are included in the Indo-Aryan language family as per Family-Wise Grouping of The 122 Scheduled and Non-Scheduled Languages - 2001?

- A. 12
- B. 21
- C. 15
- D. 25



Q86 General Awareness and Current Affairs

The water currents flowing from tropical zones of lower latitudes to higher temperate and sub-polar zones are known as _____.

- A. cold currents
- B. warm currents
- C. water drift
- D. tides

Q87 General Awareness and Current Affairs

At the inauguration of 'Tech NEEV @ 75' in November 2021, Union Minister of State for Science and Technology, Jitendra Singh announced the setting up of 30 STI Hubs in different parts of the country for Scheduled Tribes (STs) by the end of 2022. STI stands for _____.

- A. Science, Technology and Innovation
- B. Special Technological Industry
- C. Scientific and Technological Investigation
- D. Science, Technology and Industrialization

Q88 General Awareness and Current Affairs

Baisakhi festival is celebrated in the month of _____ in India.

- A. January
- B. February
- C. March
- D. April

Q89 General Awareness and Current Affairs

Which of the following mountain ranges is NOT a part of the Himalayan mountains?

- A. Zaskar Range
- B. Pir Panjal Range
- C. Karakoram Range
- D. Mahadeo Range



Q90 General Awareness and Current Affairs

In which Indian state will you find The Sumi Baptist Church?

- A. Kerala
- B. Goa
- C. Manipur
- D. Nagaland



Q91 General Awareness and Current Affairs

In 1993, the Government of India established an institution, the NHRC, to monitor the violations of human rights. What is the full form of NHRC?

- A. National Human Rights Commission
- B. National Human Rights Constitution
- C. National Hindu Rights Commission
- D. National Human Rights Committee



Q92 General Awareness and Current Affairs

Which of the following events related to India's freedom struggle is matched correctly with its year of occurrence?

- A. 1922 – Mahatma Gandhi halted the Non-cooperation Movement on the national level as a direct result of the Chauri Chaura incident
- B. 1928 – The Indian National Congress passed the resolution on Purna Swaraj
- C. 1932 – Dr. B.R. Ambedkar, organized the Dalits into the Depressed Classes Association
- D. 1918 – General Dyer opened fire at a gathering at Jallianwala Bagh



Q93 General Awareness and Current Affairs

The State Election Commission does NOT conduct elections to _____.

- A. Town Municipal Councils
- B. Municipal Corporations
- C. State Legislative Assemblies
- D. Gram Panchayats



Q94 General Awareness and Current Affairs

In India, the constitutional head of the Executive of the Union is the _____.

- A. Vice President
- B. Prime Minister
- C. Speaker of Lok Sabha
- D. President



Q95 General Awareness and Current Affairs

Which of the following schemes of the Government of India aims to empower the students belonging to minority communities and prepare them for competitive examinations?

- A. Maulana Azad National Fellowship
- B. Nai Udaan
- C. Nai Manzil
- D. Naya Savera



Q96 General Awareness and Current Affairs

Which of the following formulas is used to determine the Gross Fiscal Deficit?

- A. Total Expenditure – (Revenue Receipts + Non-debt creating Capital Receipts)
- B. Total Expenditure – (Revenue Receipts + Capital Receipt)
- C. Capital Receipt – (Revenue Expenditure + Capital Expenditure)
- D. Total Receipt – Total Expenditure



Q97 General Awareness and Current Affairs

The 'SMILE' Scheme, which is a Central Sector Scheme, an acronym of 'Support for Marginalised Individuals for Livelihood and Enterprise' was launched in February 2022 by the Union Minister for Social Justice and Empowerment, _____, in Delhi.

- A. Virendra Kumar
- B. Amit Shah
- C. Arjun Munda
- D. Smriti Zubin Irani



Q98 General Awareness and Current Affairs

The Ministry of Civil Aviation released the Draft National Air Sports Policy, 2022 with a vision to make India one of the top Air Sports nations by the year _____.

A. 2027

B. 2030



C. 2032

D. 2035

Q99 General Awareness and Current Affairs

In the year 2022, _____ player Mithali Raj announced her retirement.

A. badminton

B. hockey

C. cricket



D. football

Q100 General Awareness and Current Affairs

At which place ARTPARK, India's first AI and Robotics Technology Park was launched with a seed funding of ₹230 crore, in March 2022?

A. Bengaluru



B. Chennai

C. Lucknow

D. Mumbai



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The sum of two consecutive multiples of 6 is 66. Find the smaller of these two multiples.

A. 24

B. 42

C. 36

D. 30



Q2 Mathematics

Two numbers are in the ratio 2 : 7. If the first number is increased by 14 and the second number is decreased by 6, then the ratio becomes 4 : 3. What is the sum of the original two numbers?

A. 18

B. 27



C. 36

D. 45

Q3 Mathematics

A trader gives 5% discount on the marked price of an article and gives 2 articles free for buying 14 articles and gains 33% in the entire transaction. Assuming a customer pays for 14 articles, the marked price of an article is what per cent more than its cost price?

A. 48%

B. 50%

C. 55%

D. 60%



Q4 Mathematics

If the length of a rectangle is thrice its breadth and the perimeter of that rectangle is 48 cm, then find its breadth.

A. 4 cm

B. 6 cm



C. 8 cm

D. 9 cm



Q5 Mathematics

The total surface area of a solid cylinder having radius 24 cm and height 6 cm is:

A. $4440 \pi \text{ cm}^2$

B. $3440 \pi \text{ cm}^2$

C. $2440 \pi \text{ cm}^2$

D. $1440 \pi \text{ cm}^2$ ✓

Q6 Mathematics

A train travelling at a speed of 45 km/h crosses a pole in 24 sec. What is the length of the train?

A. 125 m

B. 30 m

C. 1.5 m

D. 300 m ✓

Q7 Mathematics

Simplify the given expression.

$$(13^2 - 5^2)^{\frac{3}{2}} \times 8^{\frac{2}{3}} \div \left(\frac{1}{6}\right)^{-3}$$

A. 32 ✓

B. 24

C. 16

D. 12

Q8 Mathematics

The mean and the mode of a set of data are 58.7 and 61.1, respectively. Find the median of the data, using the empirical formula.

A. 54.6

B. 55.2

C. 55.8

D. 59.5 ✓



Q9 Mathematics

A shopkeeper marks an article at ₹ x and offers a discount of 20% on it. He sells it for ₹432 after charging VAT of 12.5% on the discounted price. What is the value of ₹ x ?

A. ₹450

B. ₹480



C. ₹500

D. ₹520

Q10 Mathematics

A retailer permits a trade discount of 25% followed by a cash discount of 8% on the already discounted price of his goods, and still makes a net gain of 17.3% of the cost price. At what percentage above the cost price of the goods is the marked price fixed?

A. 50%

B. 60%

C. 70%



D. 75%

Q11 Mathematics

The cost of 12 pens and 7 pencils is ₹233. If the cost of a pen decreases by ₹1.50 and the cost of a pencil increases by ₹1, then the cost of 2 pens and 3 pencils is ₹48. What is the original cost of 4 pens and 1 pencil?

A. ₹71



B. ₹77

C. ₹74

D. ₹78

Q12 Mathematics

The positive square root of $(34^2 - 16^2)$ is:

A. 60

B. 50

C. 40

D. 30



Q13 Mathematics

If angles A, B, C and D of a quadrilateral ABCD, taken in order, are in the ratio 3: 7: 6: 4, then ABCD is a:

- A. parallelogram
- B. trapezium
- C. rhombus
- D. kite

Q14 Mathematics

The sides (in cm) of a right triangle are $(x - 2)$, $(x - 4)$ and x . Its area (in cm^2) is:

- A. 12
- B. 24
- C. 40
- D. 60

Q15 Mathematics

In $\triangle ABC$, $BD \perp AC$ at D and $\angle DBC = 44^\circ$. E is a point on BC such that $\angle CAE = 34^\circ$. What is the measure of $\angle AEB$?

- A. 56°
- B. 46°
- C. 80°
- D. 78°

Q16 Mathematics

What is the value of $(2x + 3y)$, if mean of the following distribution is 54?

Class	0-20	20-40	40-60	60-80	80-100	Total
Frequency	7	11	x	9	y	50

- A. 59
- B. 57
- C. 56
- D. 69



Q17 Mathematics

Which of the following quadratic equations has one of its roots as $4 - 2\sqrt{5}$?

A. $x^2 - 8x - 4 = 0$



B. $x^2 - 8x + 4 = 0$

C. $x^2 - 4x - 8 = 0$

D. $x^2 - 4x + 4 = 0$

Q18 Mathematics

Express $0.\overline{74} + 0.\overline{876}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $1\frac{676}{990}$

B. $1\frac{15}{22}$

C. $1\frac{37}{55}$

D. $1\frac{133}{198}$



Q19 Mathematics

Find the greatest number by which when the numbers 158 and 215 are divided, it leaves remainders 4 and 5, respectively.

A. 14



B. 18

C. 21

D. 7

Q20 Mathematics

Find the area (in square units) of a triangle with vertices $(3, 4)$, $(5, 7)$ and $(-3, 6)$.

A. 2

B. 11



C. 1

D. 5



Q21 Mathematics

A can do a piece of work in 15 days and B can do the same work in 20 days. The time taken by them working together to do the same work is:

A. $10\frac{4}{7}$ days

B. $9\frac{4}{7}$ days

C. $8\frac{4}{7}$ days



D. $7\frac{4}{7}$ days

Q22 Mathematics

The sum of two numbers is 35 and their LCM is 306. The two numbers are:

A. 16, 19

B. 17, 18



C. 14, 21

D. 13, 22

Q23 Mathematics

If the simple interest on ₹4,800 at 15% per annum for 'n' years is ₹2,160, then find the value of 'n'.

A. 5

B. 6

C. 4

D. 3

**Q24 Mathematics**

If $x = (\sec \theta - \cos \theta)(\cot \theta + \tan \theta)$ and $y = \sec \theta(\sec \theta + \tan \theta)(1 - \sin \theta)$, $0^\circ < \theta < 90^\circ$, then xy is equal to:

A. $\cot \theta$

B. $\tan \theta \sec \theta$



C. $\operatorname{cosec} \theta \cot \theta$

D. $\sin \theta$



Q25 Mathematics

In a mixture of 80 litres, the ratio of milk to water is 3: 1. If this ratio is to be 2: 3, then the quantity of water to be further added is:

A. 70 litres



B. 30 litres

C. 20 litres

D. 50 litres

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

1, 2, 11, 36, 85, ?, 287

A. 90

B. 166



C. 184

D. 168

Q27 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 429 847 922 213 757 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

If all the numbers are arranged in descending order, the position of how many numbers will remain unchanged?

A. 0

B. 1



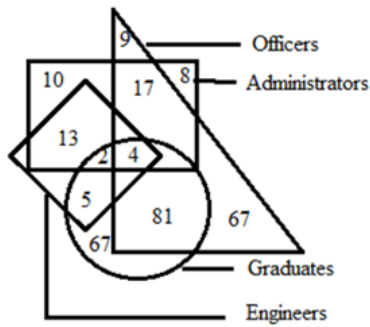
C. 2

D. 3



Q28 General Intelligence and Reasoning

Study the Venn diagram given below and answer the question that follows.



How many non-graduate officers are neither administrators nor engineers?

A. 67

B. 76



C. 9

D. 8

Q29 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the assumptions is/are implicit in the statement.

Statement:

Increase in the tax rates will hurt the pockets of the salaried middle class.

Assumptions:

- I. Increase in the prices of goods will hurt the poor too.
- II. The middle class will reduce their extra expenditure to save money.

A. Only assumption I is implicit

B. Only assumption II is implicit



C. Neither assumption I nor II is implicit

D. Both assumptions I and II are implicit

Q30 General Intelligence and Reasoning

Seven people, A, B, C, D, E, F and G, are sitting in a straight row, facing north. Only three people sit between F and E. Only two people sit to the left of F. D is not an immediate neighbour of E. D sits second to the right of A. G sits to the immediate right of B. Who sits at the extreme left end of the row?

A. A

B. C



C. B

D. D



Q31 General Intelligence and Reasoning

Raghav starts from Point A and drives 16 km towards the north. He then takes a right turn, drives 10 km, turns right and drives 17 km. He then takes a right turn and drives 13 km. He takes a final right turn, drives 1 km and stops at Point P. How far and towards which direction should he drive in order to reach Point A from Point P in a straight line? (All turns are 90 degree turns only)

- A. 5 km towards the north
- B. 3 km towards the west
- C. 1 km towards the south
- D. 3 km towards the east

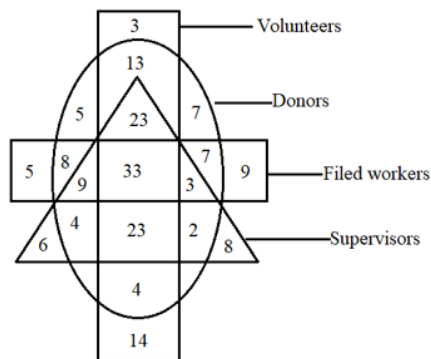
**Q32** General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. S is taller than only four other friends. R is taller than only one friend. U is taller than T but shorter than P. P is not the tallest. Who is the second tallest among all the friends?

- A. S
- B. Q
- C. P
- D. T

**Q33** General Intelligence and Reasoning

Study the Venn Diagram given below and answer the question that follows.



How many volunteers are supervisors but neither donors nor field workers?

- A. 8
- B. 14
- C. 33
- D. 0



Q34 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

58, 118, 208, 334, ?, 718

A. 502



B. 510

C. 512

D. 524

Q35 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '×' means '+', and '÷' means '×', what will come in place of the question mark (?) in the following equation?

$$40 - 17 \div 3 + 25 \times 5 = ?$$

A. 90

B. 86



C. 88

D. 92

Q36 General Intelligence and Reasoning

Y, Z, A, B, C and D live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 6.

Only Y lives on the floor between the floors occupied by D and C. B lives on an even numbered floor, but not on floor 6. Z lives on the lowermost floor. D is immediately above B. Who is on the topmost floor?

A. C

B. A



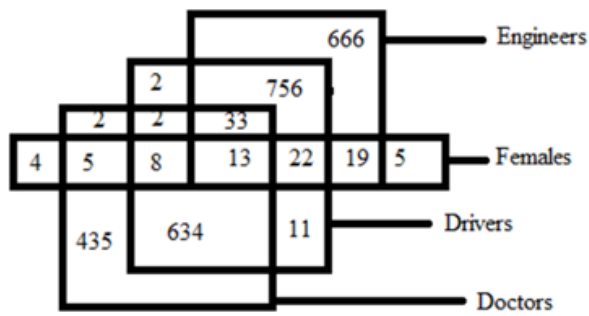
C. D

D. Y



Q37 General Intelligence and Reasoning

Study the Venn Diagram given below and answer the question that follows.



How many female engineers are drivers but NOT doctors?

A. 22



B. 19

C. 13

D. 8

Q38 General Intelligence and Reasoning

In a certain code language, 'GAURD' is written as 'LDYTE' and 'CLOVE' is written as 'HOSXF'. How will 'HORSE' be written in that language?

A. IHFGD

B. MRVUF



C. MORDG

D. DGOJO

Q39 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)
(14, 98)
(22, 242)

A. 6, 18



B. 8, 48

C. 12, 132

D. 16, 80



Q40 General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$E \geq R = S \leq T < N > O = Z$$

Conclusions:

1. $E \geq S$
2. $T \geq E$
3. $R > N$
4. $T < Z$

A. 1



B. 2

C. 3

D. 4

Q41 General Intelligence and Reasoning

Four friends Aman, Renu, Mohan and Rakesh are sitting at the corners of a square table and all are facing the centre. Only two persons are sitting between Aman and Renu. Rakesh is sitting to the immediate right of Mohan. If Aman is sitting immediately to the left of Mohan, which of the following statements is definitely true?

A. Aman is sitting diagonally opposite to Mohan.

B. Rakesh is sitting diagonally opposite to Mohan.

C. Renu is sitting diagonally opposite to Mohan.



D. Aman is sitting diagonally opposite to Renu.

Q42 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) D 2 R X 5 8 T ^ & 9 3 H 8 C % K T A # 3 T 5 4 \$ % 9 & R % 5 (Right)

If all the letters are dropped from the series, which of the following will be in the middle of the series formed?

A. 5

B. #



C. \$

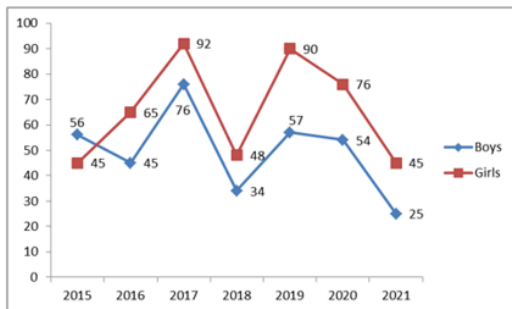
D. %



Q43 General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The graph presents the number of athletes that qualified for national camp during the years 2015 to 2021.



By what percentage (approximately) have the girls qualified more than the boys in the given years taken together?

A. 46%

B. 33%

C. 25%

D. 15%

Q44 General Intelligence and Reasoning

In a certain code language, 'PUTRE' is written as 'RXXWK' and 'DGHKL' is written as 'FJLPR'. How will 'ZSHJL' be written in that language?

A. BVLRO

B. BVLOR

C. BVROL

D. BRVOL

Q45 General Intelligence and Reasoning

Pole A is to the west of pole B and north of pole D. Pole E is to the east of pole D, and pole C is to the west of pole D. What is the position of pole D with respect to pole B?

A. South

B. South-west

C. North

D. North-east



Q46 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

GP32S, LU35X, QZ38C, VE41H, ?

A. AM44J

B. AJ44M

C. JA44M

D. MJ42A

Q47 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. D sits fourth to the right of A. B sits third to the right of D. C sits fifth to the left of A. There are only two persons between B and E. If no other person is sitting in the row, what is the total number of persons seated?

A. 9

B. 14

C. 16

D. 11

Q48 General Intelligence and Reasoning

In a straight row of students facing north, the position of P is 32nd from the left side of the row and 47th from the right side of the row. Find the total number of students in the row.

A. 78

B. 80

C. 79

D. 77

Q49 General Intelligence and Reasoning

Study the given arrangement carefully and answer the question that follows.

(Left) 8 @ ! 3 ^ 3 f & 6 @ 4 @ & 8 ¥ 2 4 % 1 £ % 7 (Right)

How many such symbols are there in the above arrangement each of which is immediately followed by an odd number and immediately preceded by a symbol?

A. None

B. 1

C. 2

D. 3



Q50 General Intelligence and Reasoning

Refer to the following series and answer the question (all numbers are single digit numbers only)

3 7 5 2 8 6 4 1 3 7 4 3 7 6 8 2 6 5 8 9 7 8 6 1 2 7 3

How many such odd digits are there, each of which is immediately preceded by a perfect square and immediately followed by an odd digit? (NOTE: 1 is also a perfect square)

A. One

B. Two

C. Three



D. Four

Q51 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

5 : 30 :: 6 : 42 :: 7 : ?

A. 58

B. 50

C. 56



D. 60

Q52 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$4.98 \times 2 + 1.96 \times 4 - 8 \div 2 + 1 = ?$

A. 12

B. 15



C. 20

D. 18



Q53 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$14.999 \times 4.999 + 17.988 \div 2.998 + 24.999 \div 4.998 - 8.997 = ?$$

A. 70

B. 72

C. 77



D. 87

Q54 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

BFHN : HBDI :: DHFM : JDBH :: FSWL : ?

A. LPSF

B. KOTF

C. LOSG

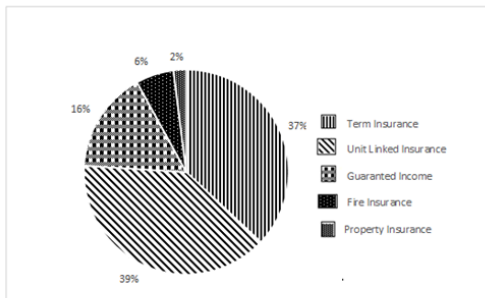


D. KPSH

Q55 General Intelligence and Reasoning

Study the given pie-chart and answer the question that follows.

The pie-chart presents the total share of different insurance products offered by an insurance company.



If the total insurance sold by the company in a given year was 36000, then how many fire and property insurances were sold in that year?

A. 5760

B. 2880



C. 2160

D. 720



Q56 General Science

A ray of light is incident on a refracting surface AB of a glass prism, kept in air, and emerges out of the other refracting surface AC. Consider the following statements:

- (a) The angle of refraction at surface AB is less than the angle of incidence.
- (b) The angle of refraction at the surface AC is more than the angle of incidence.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b) ✓
- D. Neither (a) nor (b)

Q57 General Science

Which of the following statements is correct?

- A. Enzymes, bacteria or other saprophytes act on biodegradable substances and decompose them. ✓
- B. Non-biodegradable substances cannot be decomposed by physical processes like heat and pressure.
- C. Biodegradable substances persist for a long time in the environment.
- D. Non-biodegradable substances help the various members of the ecosystem.

Q58 General Science

Which of the following properties is NOT governed by the position of elements in the Periodic Table?

- A. Electrons present in outermost shell
- B. Valency
- C. Atomic size
- D. Colour of element ✓



Q59 General Science

Which of the following point(s) always lie(s) on the principal axis of a lens?

- (i) Point of refraction
- (ii) Optical Centre
- (iii) Point of incidence

- A. Only (i)
- B. Only (ii)
- C. Both (i) and (ii)
- D. Both (i) and (iii)



Q60 General Science

Which of the following organisms shows a parasitic nutritive strategy?

- A. Cuscuta
- B. Mushroom
- C. Amoeba
- D. Yeast



Q61 General Science

Clouds appear white during sunshine because the particles in clouds are _____ than the wavelength of different colours in white light coming from the sun and all colours of white light are scattered by _____ amount(s).

- A. smaller, about the same
- B. larger, about the same
- C. smaller, different
- D. larger, different



Q62 General Science

An object is placed in front of a concave mirror at a distance equal to its focal length. The image is formed at:

- A. infinity
- B. a point between F and C
- C. C
- D. a point between P and F



Q63 General Science

The magnetic field around a current carrying conductor:

- A. increases with increase in distance
- B. remains constant with increase in distance
- C. decreases with increase in distance ✓
- D. is unaffected by any variation in distance

Q64 General Science

If the current passing through a conductor is doubled and the potential difference is tripled then the power will increase:

- A. two fold
- B. three fold
- C. six fold ✓
- D. five fold

Q65 General Science

Identify the double displacement reaction from the following.

- (i) $2\text{AgCl(s)} \rightarrow 2\text{Ag(s)} + \text{Cl}_2\text{(g)}$
- (ii) $\text{Mg(s)} + 2\text{HCl(aq)} \rightarrow \text{MgCl}_2\text{(aq)} + \text{H}_2\text{(g)}$
- (iii) $2\text{KBr(aq)} + \text{BaI}_2\text{(aq)} \rightarrow 2\text{KI(aq)} + \text{BaBr}_2\text{(s)}$
- (iv) $\text{Pb(s)} + \text{CuCl}_2\text{(aq)} \rightarrow \text{PbCl}_2\text{(aq)} + \text{Cu(s)}$

- A. (i)
- B. (ii)
- C. (iii) ✓
- D. (iv)

Q66 General Science

Which of the following elements has the highest effective nuclear charge?

- A. Li
- B. C
- C. F ✓
- D. B



Q67 General Science

Consider the below statements and identify the correct answer.

Statement-I: The metals high up in the reactivity series are very reactive.

Statement-II: The metals high up in the reactivity series can be obtained from their compounds by electrolytic reduction.

- A. Both the statements are true. ✓
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

Q68 General Science

The figure given below shows the different stages of gradual decay of tooth in humans. All of the following statements related to tooth decay are correct except one. Which one is NOT correct?



- A. Bacteria act on leftover food in the mouth
- B. Bacteria break down sugars and produce acids
- C. Acids soften the enamel, causing tooth ache and tooth loss
- D. No role of bacteria, caused by a virus ✓

Q69 General Science

Consider the below statements and identify the correct answer.

Statement I: Most carbon compounds are good conductors of electricity.

Statement II: The force of attraction between the molecules of carbon compounds is not very strong.

- A. Statement I is correct, and Statement II is incorrect.
- B. Statement II is correct, and Statement I is incorrect. ✓
- C. Both the statements are correct.
- D. Both the statements are incorrect.



Q70 General Science

The movement of food in the alimentary canal is brought about by the smooth muscles in the body. Which of the following options has all the organs having smooth muscles?

- A. Bones, ureters, bronchi of lungs
- B. Iris of the eye, bronchi of lungs, ureters
- C. Heart, iris of the eye, bones
- D. Blood vessels, ureters, bones



Q71 General Science

Three resistors of $10\ \Omega$, $15\ \Omega$ and $30\ \Omega$ are connected in parallel. The resistance of the combination is:

- A. $55\ \Omega$
- B. $7.5\ \Omega$
- C. $6\ \Omega$
- D. $5\ \Omega$



Q72 General Science

Which element is NOT more reactive than copper?

- A. Fe
- B. Zn
- C. Pb
- D. Ag



Q73 General Science

In Mendel's experiment, when F1 generation plants were self-pollinated, what was the genotypic ratio?

- A. $1 : 2 : 1$
- B. $2 : 2 : 1$
- C. $3 : 2 : 1$
- D. $1 : 2 : 3$



Q74 General Science

The angle between thumb and middle finger in Fleming's left-hand rule is:

- A. 45°
- B. 180°
- C. 120°
- D. 90°



Q75 General Science

What is the main difference observed between a slide of human cheek cells and a slide of onion peel when viewed under a compound microscope?

- A. Presence of cell wall in onion peel cells
- B. Presence of mitochondria in onion peel cells
- C. Presence of plastids in cheek cells
- D. Presence of cell wall in human cheek cells



Q76 General Science

What is the formula of cyclohexane?

- A. C_6H_{14}
- B. C_6H_{10}
- C. C_6H_{12}
- D. C_6H_6



Q77 General Science

Which of the following activities is environmentally friendly?

- A. Using solar-power for generation of electricity
- B. Using ACs and coolers during the summer
- C. Using polythene bags for shopping
- D. Construction of skyscrapers



Q78 General Science

When $6\ \Omega$, $9\ \Omega$ and $6\ \Omega$ resistors are connected in parallel combination then the resultant resistance will be:

- A. $2.40\ \Omega$
- B. $2.75\ \Omega$
- C. $2.25\ \Omega$ ✓
- D. $2.50\ \Omega$

Q79 General Science

Which of the following statements is INCORRECT regarding the surgical methods of birth control?

- A. They block gamete transport and prevent fertilisation
- B. They are also called sterilisation procedures
- C. In males vas deferens and in females fallopian tube is blocked
- D. They are not very effective methods ✓

Q80 General Science

Which of the following is NOT a use of plaster of Paris?

- (i) Manufacture of glass, soap and paper
 - (ii) used in plaster for supporting fractured bones.
 - (iii) making toys, materials for decoration and for making surfaces smooth.
 - (iv) Used in chemistry laboratories for sealing air gaps in apparatus where air tight arrangement is required.
- A. only i ✓
 - B. only ii
 - C. only iii
 - D. ii and iii



Q81 General Awareness and Current Affairs

Generally, a Gram Panchayat is constituted for _____ year/s.

- A. one
- B. three
- C. five
- D. four



Q82 General Awareness and Current Affairs

Who is the highest law officer in India?

- A. Prime Minister of India
- B. President of India
- C. Attorney General of India
- D. Advocate General of India



Q83 General Awareness and Current Affairs

In the Government Budget, when the expenses made by a nation are more than the source of income, then the difference between the income and expenses is termed as _____.

- A. Revenue Deficit
- B. Budget Deficit
- C. Financial Statement
- D. Unbalanced Budget



Q84 General Awareness and Current Affairs

Which Fundamental Duty was added through the 86th Constitutional Amendment Act, 2002?

- A. The 10th Fundamental Duty
- B. The 11th Fundamental Duty
- C. The 9th Fundamental Duty
- D. The 8th Fundamental Duty



Q85 General Awareness and Current Affairs

NABARD and which of the following organisations has jointly launched the Adavi brand to market the forest produce harvested by Nilambur tribes people?

- A. Jan Sikshan Sansthan ☒
- B. Jan Raksha Sansthan
- C. Sarva Raksha Sansthan
- D. Sarva Sikshan Sansthan

Q86 General Awareness and Current Affairs

Sri Lanka is separated from India by a narrow channel of sea called the _____.

- A. Palk Strait ☒
- B. Malacca Strait
- C. Otranto Strait
- D. Sunda Strait

Q87 General Awareness and Current Affairs

The Tamil language was declared as the classical language of India in _____.

- A. 2002
- B. 2003
- C. 2004 ☒
- D. 2005

Q88 General Awareness and Current Affairs

Which of the following schemes aims to establish a lab focusing on the development of sustainable technologies for a rural area?

- A. Cognitive Science Research Initiative (CSRI)
- B. Clinical Training/Translational Research Workshops
- C. Cross-Cutting and Futuristic Initiatives ☒
- D. Clinical/Public Health Research Centre Schemes



Q89 General Awareness and Current Affairs

_____, established by Atmaram Pandurang in Bombay (Mumbai) in 1867, was a movement for religious and social reform.

- A. Brahmo Samaj
- B. Prarthana Samaj
- C. Arya Samaj
- D. Satya Shodhak Samaj

Q90 General Awareness and Current Affairs

Maru Sri (or Maru Shri) is a desert pageant held at the _____.

- A. Hornbill Festival
- B. Jaisalmer Desert Festival
- C. Pushkar Fair
- D. Goa Carnival

Q91 General Awareness and Current Affairs

In March 2022, Indian badminton player _____ defeated Olympic champion Viktor Axelsen to enter the men's singles final of the German Open Tournament.

- A. Lakshya Sen
- B. Srikanth Kidambi
- C. B Sai Praneeth
- D. Chirag Shetty

Q92 General Awareness and Current Affairs

In February 2022, scientists from Defence Research and Development Organisation (DRDO) and _____ successfully demonstrated Quantum Key Distribution link between Prayagraj and Vindhyachal in Uttar Pradesh.

- A. Indian Institute of Technology (IIT) Kharagpur
- B. Indian Institute of Technology (IIT) Delhi
- C. Indian Institute of Technology (IIT) Kanpur
- D. Indian Institute of Technology (IIT) Madras



Q93 General Awareness and Current Affairs

Select the correct match in the context of microfinance.

- A. Muhammad Yunus – Grameen Bank
- B. Muhammad Yunus – Vishvaas Bank
- C. Grameen Bank – Bhutan
- D. Muhammad Yunus – Sri Lanka

Q94 General Awareness and Current Affairs

The river _____ flows through the Chotanagpur Plateau.

- A. Damodar
- B. Tungabhadra
- C. Bhima
- D. Meghna

Q95 General Awareness and Current Affairs

When was the Prime Minister's Rozgar Yojana (PMRY) launched?

- A. 1990
- B. 1993
- C. 1995
- D. 2000

Q96 General Awareness and Current Affairs

In June 2022, who has become India's first weightlifter to win a gold medal at the IWF Youth World Championships in Leon, Mexico?

- A. Vijay Prajapati
- B. Gurunaidu Sanapathi
- C. T Madhavan
- D. Muna Nayak



Q97 General Awareness and Current Affairs

Which of the following Vedas is a 'Book of rituals'?

- A. The Rigveda
- B. The Samaveda
- C. The Yajurveda
- D. The Atharvaveda



Q98 General Awareness and Current Affairs

The Tropical Deciduous Forests in India receives rainfall between_____.

- A. 40 to 60 cm
- B. Below 25 cm
- C. 25 to 50 cm
- D. 70 to 200 cm



Q99 General Awareness and Current Affairs

The Minimum Needs Programme was introduced in India in the _____ year of the Fifth Five-Year Plan.

- A. fourth
- B. third
- C. second
- D. first



Q100 General Awareness and Current Affairs

As of July 2022, a life insurance cover of _____ under the Pradhan Mantri Jan Dhan Yojana, gives life insurance cover on death of the life assured, due to any reason, to the deceased's family.

- A. ₹30,000
- B. ₹40,000
- C. ₹50,000
- D. ₹75,000



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The expression $\frac{1+x}{1-x} - \frac{1-x}{1+x} + \frac{4x}{1+x^2} + \frac{8x^3}{1-x^4}$ is equal to:

A. $\frac{8x}{1-x^2}$



B. $\frac{4x}{1+x^2}$

C. $\frac{4x}{1-x^2}$

D. $\frac{8x}{1+x^2}$

Q2 Mathematics

A man sold a shirt for ₹960, at a loss of 4%. He sells a sweater for ₹840 at a profit of 20%. Find his net profit or loss.

A. Profit, ₹123

B. Loss, ₹100

C. Loss, ₹123

D. Profit, ₹100



Q3 Mathematics

Find the values of b for which the quadratic equation $4x^2 + bx + 1 = 0$ has equal roots.

A. -4 and 4



B. Only 4

C. Only -4

D. -8 and 8



Q4 Mathematics

Harish bought an article for ₹520 and sold it to Renu at a loss of 30%. With this amount, Harish bought another article and sold it at a gain of 55%. What is Harish's overall gain percentage?

A. 8.5%



B. 7.8%

C. 9%

D. 9.5%

Q5 Mathematics

Amita travels a certain distance at a speed of 50 km/h and double the earlier distance at 60 km/h. She then returns to the starting point through same route. If her average speed for the entire journey is 45 km/h, then what is her average speed (in km/h) for the return journey?

A. 37.5



B. 40

C. 42.5

D. 42

Q6 Mathematics

Four bells ring at intervals of 4 minutes, 8 minutes, 12 minutes, and 24 minutes respectively. All the four bells rang together at 12 noon. How many times after 12 noon will all the four bells ring together in the next four hours, with the ringing at 4 p.m. being included?

A. 8 times

B. 9 times

C. 10 times



D. 11 times

Q7 Mathematics

If α and β , where $\alpha > \beta$, are the roots of the equation $5x^2 - 3x - 2 = 0$, then what is the value of $(\alpha - 2\beta)$?

A. $\frac{7}{5}$

B. $\frac{1}{5}$

C. $\frac{9}{5}$



D. $\frac{11}{5}$



Q8 Mathematics

If $x^2 + y^2 - 4x + 8y + 20 = 0$, then the value of $x^2 + y^2$ is :

A. 40

B. 30

C. 20



D. 10

Q9 Mathematics

A man has to cover a distance of 150 km in 12 hours. If he covers two-third of this distance in $\frac{5}{8}$ of the time, then what should be his speed (in km/h, correct to one decimal place) to cover the remaining distance in the time left?

A. 6.7

B. 10.5

C. 11.1



D. 11.5

Q10 Mathematics

How many cubic cm of water can a hemispherical container of radius 7 cm hold (rounded off to 2 decimal places) (use $\pi = \frac{22}{7}$)?

A. 616.25

B. 154.75

C. 718.67



D. 1437.33

Q11 Mathematics

The value of $\sqrt{75 + \sqrt{41 - \sqrt{21 + \sqrt{19 - \sqrt{9}}}}}$ is:

A. 9



B. 6

C. 5

D. 3



Q12 Mathematics

The simple interest on a certain sum for $4\frac{2}{5}$ years at the rate of 9.5% p.a. is ₹3,553. What will be the amount payable on the same sum at 8.4% p.a. simple interest in $7\frac{1}{2}$ years?

A. ₹14,855

B. ₹13,850

C. ₹13,855



D. ₹13,950

Q13 Mathematics

For a data, if the mean is 28.5 and the median is 32, then the mode using empirical formula is:

A. 42

B. 41

C. 40

D. 39

**Q14** Mathematics

The value of $84 - 4 \div 2 \times 3 + 7$ is:

A. 85



B. 127

C. 173

D. 97

Q15 Mathematics

ABCD is a quadrilateral in which $AB \parallel DC$, and E and F are the mid points of the diagonals AC and BD, respectively. If $AB = 28$ cm, $BC = 15$ cm, $DC = 40$ cm, and $AD = 9$ cm, then what is the length (in cm) of EF?

A. 6



B. 8

C. 9

D. 12



Q16 Mathematics

The value of $\frac{20 + 20 \tan^2 A}{50 + 50 \cot^2 A}$ is:

A. $\frac{5}{2} \cot^2 A$

B. $\frac{2}{5} \cot^2 A$

C. $\frac{5}{2} \tan^2 A$

D. $\frac{2}{5} \tan^2 A$ ✓

Q17 Mathematics

A and B started moving at the same time towards each other from points X and Y, respectively. After meeting on the way, A and B took 5.4 hours and p hours, respectively to reach Y and X, respectively. If the speed of B is 50% more than that of A, then what is the value of p ?

A. 1.8

B. 2.7

C. 2.4 ✓

D. 3.6

Q18 Mathematics

If $1.6 : 0.6 :: 0.6 : x$, find the value of x .

A. 0.225 ✓

B. 0.25

C. 0.275

D. 0.98

Q19 Mathematics

For a regular polygon, the sum of the interior angles is 200% more than the sum of its exterior angles. Each interior angle of the polygon measures x° . What is the value of x° ?

A. 144°

B. 135° ✓

C. 140°

D. 108°



Q20 Mathematics

C is twice as efficient as A, while B takes thrice as many days as C to do the same work. A takes 10 days to do the work alone. If they work in pairs [like (A, B), (B, C) and (C, A)], with (A, B) working on the first day, then (B, C) working on the second day and (C, A) working on the third day and continuing the cycle till the work gets completed, then how many days will be required to complete this work?

A. $7\frac{5}{8}$ days

B. $6\frac{1}{8}$ days

C. $5\frac{7}{8}$ days

D. $4\frac{3}{8}$ days ✓

Q21 Mathematics

If the number 6484y6 is divisible by 8, then find the least value of y?

A. 3

B. 1 ✓

C. 7

D. 4

Q22 Mathematics

If $a : b = 7 : 9$ and $b : c = 15 : 7$, then $a : b : c$ is:

A. 35 : 45 : 21 ✓

B. 45 : 35 : 21

C. 21 : 35 : 45

D. 35 : 45 : 25

Q23 Mathematics

Three times the present age of Renu is 11 years more than two times the present age of Manav, and three times the present age of Manav is 9 years less than four times the present age of Renu. The sum of the present ages (in years) of Renu and Manav is:

A. 29

B. 31

C. 32 ✓

D. 37



Q24 Mathematics

Sanjay is 25 years older than his son and Sanjay's wife is 65 years old. If the average age of all the three members of this family is 58 years, then find the age of the son.

A. 42 years



B. 41 years

C. 45 years

D. 43 years

Q25 Mathematics

The surface area of a cuboid having length 6 cm, breadth 7 cm and height 8 cm is:

A. 592 cm^2

B. 492 cm^2

C. 392 cm^2

D. 292 cm^2

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the term from among the given options that can replace the question mark (?) in the following series.

ABCD, ABCD1, ABC1D1, AB1C1D1, A1B1C1D1, A1B1C1D2, ?

A. A1B1C2D2



B. A1B1C2D11

C. A1B1C2D12

D. A1B1C2D22

Q27 General Intelligence and Reasoning

If each vowel in the word RUBAL is changed to the next vowel in the English alphabetical order and each consonant is changed to the next letter in the English alphabetical order, which letter will be present in the newly formed word?

A. R

B. U

C. A



D. L



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Q28 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. All pots are sands.
2. Some sands are clays.
3. All greys are clays.

Conclusions:

- I. Some greys are pots.
- II. All clays are sands is a possibility.
- III. Some clays are pots.

A. Only conclusion I is true

B. Only conclusion II is true

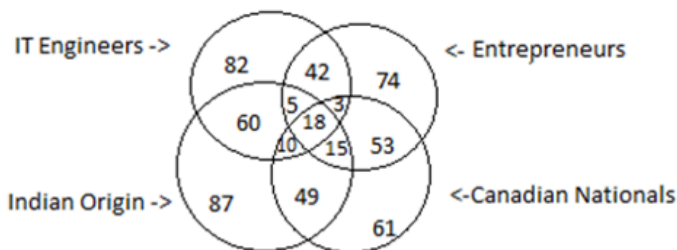


C. Only conclusion III is true

D. Only conclusion I and II are true

Q29 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many Canadian nationals are there who are entrepreneurs of Indian origin but NOT IT engineers?

A. 18

B. 15



C. 33

D. 36



Q30 General Intelligence and Reasoning

In the given letter-cluster triads, the letter-clusters in a particular triad are related following a certain logic. Study the given triads carefully and from the given options, select the triad that follows the same logic.

ABC : DFH : ILO

RST : UWY : ZCF

A. STU : VWX : YZA

B. FGH : IKM : NQT



C. OPQ : RTV : WYA

D. EFG : HKN : ORU

Q31 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

25 : 6 :: 64 : 9 :: 9 : ?

A. 2

B. 3

C. 5

D. 4



Q32 General Intelligence and Reasoning

Seven people R, S, T, U, V, W and X were sitting around a circular table, facing the centre. They were equidistant to one another. T was sitting to the immediate right of S. W was sitting to the immediate left of V. R and U were immediate neighbours. Only X was sitting between V and S. U was sitting to the immediate right of T. Who was sitting to the immediate left of W?

A. U

B. S

C. R



D. T



Q33 General Intelligence and Reasoning

Refer to the following letter series and answer the question that follows.

(Left) A F R G H U I N H F W D C T V G Y J M K O Q (Right)

If every third letter in the above series is dropped, which letter would appear at the fifth place from the left?

A. H

B. N

C. U

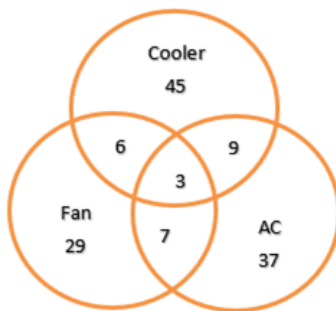
D. I



Q34 General Intelligence and Reasoning

Study the given diagram carefully and answer the questions. The numbers in different sections indicate the number of things.

Which number represents AC which are coolers but are not fans?



A. 6

B. 3

C. 9

D. 7



Q35 General Intelligence and Reasoning

Prince starts from Point A and walks 6 km toward south, and then turns to the right, walks for 4 km. He takes a final turn to the left and walks 6 km. Now, in which direction is he from the starting place?

(All turns are 90 degree turns only)

A. South

B. South-west

C. South-east

D. East



Q36 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully and decide which of the conclusions logically follow(s) from the statement(s).

Statements:

$$L \leq R < M \geq Q, N > Q \geq T$$

Conclusions:

I. $N \geq M$

II. $Q \leq R$

III. $M > L$

IV. $N \geq L$

A. Only conclusions I and IV follow

B. Only conclusions III and IV follow

C. Only conclusion III follows



D. All conclusions I, II, III and IV follow

Q37 General Intelligence and Reasoning

This question is based on the following 3-letter words

(left) BOW SAD LOW RAY (right)

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel?

A. None

B. Three



C. Two

D. One

Q38 General Intelligence and Reasoning

Harsh walks 45 m towards the west and turns to left and walks 25 m. He then turns to the left and walks 21 m. Again, he turns left and walks 18 m. After that he turns right and walks 23 m and finally, he turns left and walks for 37 m. Which direction is Harsh facing now?

(All turns are 90 degree turns only)

A. East

B. West

C. South

D. North



Q39 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$2.04 + 5.019 - 3.001 \times 2.04 = ?$$

A. 1



B. 3

C. 5

D. 4

Q40 General Intelligence and Reasoning HINDI - no English version saved

एक कथन और उसके बाद दो धारणाएं । और ॥ दी गई हैं। आपको कथन में दी गई संपूर्ण जानकारी को सत्य मानते हुए, यह तय करना है दी गई धारणाओं में से कौन-सी कथन में निहित हैं?

कथन:

किताबें पढ़ना आपको नैतिक रूप से अच्छा इंसान बनाएगा।

धारणाएं:

- I. किताबें पढ़ने से ज्ञान प्राप्त करने में मदद मिलती है।
- II. सभी सफल लोग किताबें पढ़ते हैं।

A. न तो धारणा I और न ही II निहित है



B. I और II दोनों धारणाएं निहित हैं

C. केवल धारणा I निहित है

D. केवल धारणा II निहित है

Q41 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 6.

B lives on an even numbered floor but not on floor number 4. Only two people live between B and E. D lives immediately below A. A lives on an even numbered floor. Neither D nor C live on the lowermost floor. Who lives on floor number 4?

A. C

B. A



C. E

D. F



Q42 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

2, 8, 4, 16, 8, 32, ?, 64

A. 96

B. 16



C. 32

D. 48

Q43 General Intelligence and Reasoning

Out of a few people who participated in a race, Sandeep ranked 17th from the top and 15th from the bottom. How many persons participated in the race?

A. 29

B. 30

C. 31



D. 32

Q44 General Intelligence and Reasoning

Which of the following interchanges in signs and numbers will make the given equation correct?

$$9 - 11 \times 24 = 75$$

A. $\times$ and $=$, 24 and 9

B. $-$ and $\times$, 75 and 11

C. $\times$ and $-$, 9 and 11



D. $=$ and $-$, 75 and 24

Q45 General Intelligence and Reasoning

In a certain code language, 'ANGLE' is written as 'CQKQK' and 'BEING' is written as 'DHMSM'. How will 'BROKE' be written in that language?

A. DUKSP

B. DUSKP

C. DUSPK



D. DUPPK



Q46 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$28 - 168 \times 4 + 10 \div 2 = ?$$

A. 25

B. 30

C. 40

D. 50



Q47 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(33, 56)

(44, 67)

A. (11, 36)

B. (7, 38)

C. (12, 36)

D. (5, 28)



Q48 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. A is taller than only three other friends. B is taller than F. D is taller than only one friend. C is taller than D but shorter than F. Who is the second tallest among all the friends?

A. A

B. F



C. C

D. B



Q49 General Intelligence and Reasoning

P, Q, R, S, T, U, V and W are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the middle of the sides. R sits third to the left of U. R sits at one of the corners. T does not sit at any of the corners. V sits second to the right of T. T is not an immediate neighbour of R. Only three people sit between S and Q. S is an immediate neighbour of W. S does not sit at any of the middle of the sides.

Who sits second to the left of V?

A. W

B. T



C. U

D. S

Q50 General Intelligence and Reasoning

In a code language, 'let's cook dinner' is written as 'li mu ha', 'dinner is late' is written as 'ha ve ka', and 'let's go out' is written as 'yo pa mu'. What is the code for the word 'cook' in that language?

A. ve

B. mu

C. ha

D. li



Q51 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

12, 17, 27, 42, 62, ?

A. 80

B. 82

C. 85

D. 87



Q52 General Intelligence and Reasoning

Five friends P, Q, R, S, and T live in a five-storeyed building numbered from 1 (lowest floor) to 5 (top most floor). Each of them lives on different floor of the building. R lives on the floor below Q's floor. T does not live on the top floor. There are equal number of people living above and below the floor on which S lives. Two people live between the floors where T and R live. Q does not live above or below the floor where S lives. Who lives on second floor?

- A. R
- B. S
- C. T
- D. P

**Q53** General Intelligence and Reasoning

The following table shows the expenditures of a company (in ₹ lakh) per annum over the given years. Study the following table carefully and answer the question that follows.

Year	Item of Expenditure				
	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
2016	355	56	3.5	34.2	75
2017	285	85	4.2	28.6	61
2018	361	72	4.0	29.4	83
2019	310	69	5.5	45.6	71
2020	395	76	5.1	38.2	98

Total expenditure on all the items in 2018 was what percent of the total expenditure of all the items in 2020?

- A. 89.93%
- B. 89.73%
- C. 87.93%
- D. 88.63%

**Q54** General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) H ^ 2 K L 4 D & 3 \$ D @ 5 7 % J B # S (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

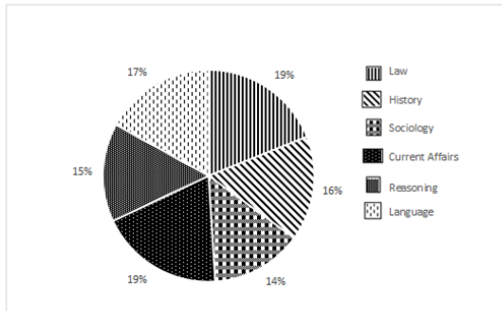
- A. 1
- B. 2
- C. 3
- D. 4



Q55 General Intelligence and Reasoning

Study the given pie-chart and answer the question that follows.

The pie-chart shows the percentage of questions asked in a competitive examination.



If the total number of question asked in the examination was 350, how many questions were asked in History, Law and Language taken together?

A. 122.50

B. 182.00



C. 111.50

D. 171.50

General Science

25 Questions • Answer Key

Q56 General Science

It is found that during dispersion of white light by a glass prism, the more a colour component is bent, the more is the refractive index of the glass for that colour component. If μ_B , μ_Y and μ_G are refractive indices for blue, yellow and green lights, respectively, then which of the following relations between them is correct?

A. $\mu_Y > \mu_G > \mu_B$

B. $\mu_Y = \mu_G = \mu_B$

C. $\mu_G > \mu_B > \mu_Y$

D. $\mu_B > \mu_G > \mu_Y$

**Q57 General Science**

The pH of milk of magnesia is about _____.

A. 2.9

B. 4.7

C. 10.4



D. 13.2



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Q58 General Science

Consider the below statements and identify the correct answer.

Statement-I: The chemical formula for baking soda is NaHCO_3 .

Statement-II: It is used in soda-acid fire extinguisher.

- A. Both the statements are true. ✓
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

Q59 General Science

If the resistance of a conductor is doubled then the heat produced is:

- A. Half
- B. Two times ✓
- C. Unchanged
- D. Zero

Q60 General Science

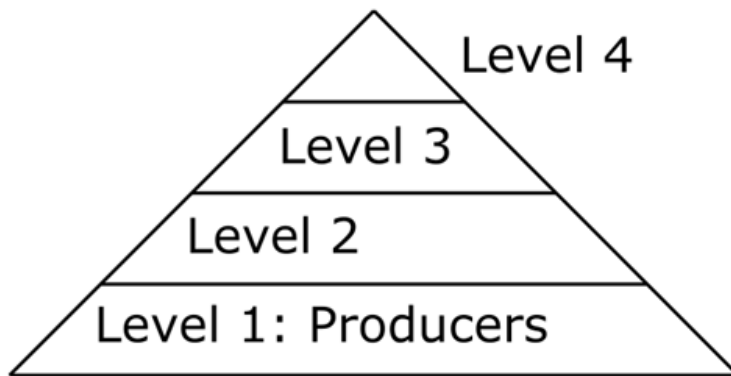
Arun was performing an experiment in the laboratory. He took a solution of ferric chloride and added some smaller pieces of zinc. When the yellow colour of ferric chloride disappeared, which compound was formed?

- A. ZnCl_2 ✓
- B. FeCl_2
- C. Zn(OH)_2
- D. Fe(OH)_3



Q61 General Science

In the following figure, deer occupies _____.



A. Level 1

B. Level 2



C. Level 3

D. Level 4

Q62 General Science

Which of the following statements about double displacement reactions is correct?

A. An exchange of ions between two reactants.



B. The number of products should be one.

C. The reactant should be organic.

D. Only one reactant is required.

Q63 General Science

Which element is neither metal nor non-metal?

A. Mg

B. Al

C. Ge



D. P



Q64 General Science

Which of the following methods is a surgical method that is used to prevent sperm transfer from males?

A. Vas deferens is blocked



B. Fallopian tubes are blocked

C. Copper T is inserted

D. Condom is used

Q65 General Science

An object is placed in front of a convex mirror of focal length 9 cm, at a distance of 18 cm. Its image is formed at a distance of:

A. 6 cm



B. 12 cm

C. 18 cm

D. 24 cm

Q66 General Science

Combustion of one methane gas molecule gives _____ carbon dioxide and _____ water molecules, respectively.

A. 2; 3

B. 1; 2



C. 3; 2

D. 2; 1

Q67 General Science

Which of the following elements is most metallic in nature?

A. Be

B. Ca

C. Ba



D. Sr



Q68 General Science

Some reasons for conserving coal and petroleum are given below. Select the INCORRECT option.

- A. Decreases the effect of climate change
- B. Saves money of citizens
- C. No acidification of oceans causing death of aquatic animals
- D. Increases air pollution even upon judicious usage



Q69 General Science

The direction of the current in a coil of a motor is reversed by:

- A. brushes
- B. split ring
- C. slip ring
- D. axle



Q70 General Science

Which of the following pairs will be in the same homologous series?

- A. $\text{C}_2\text{H}_5\text{OH}$ and CH_3COOH
- B. CH_3OH and HCOOH
- C. CH_3CHO and CH_3OH
- D. CH_3COCH_3 and $\text{C}_2\text{H}_5\text{COCH}_3$



Q71 General Science

A concave mirror is made from a section of the surface of a sphere of radius 18.0 cm. According to New Cartesian Sign Convention, its principal focus is located at $x =$ _____.

- A. -18 cm
- B. -9 cm
- C. 18 cm
- D. 9 cm



Q72 General Science

Which of the following organisms has a three chambered heart?

A. Fish

B. Man

C. Frog



D. Bird

Q73 General Science

Some features of a respiratory surface in animals are mentioned below. Select the INCORRECT option.

A. Has a large surface area

B. Is very thick



C. Usually placed inside the body

D. presence of a mechanism for moving air in and out of this area

Q74 General Science

The carbon and energy requirements of plants are fulfilled by which of the following processes?

A. Transpiration

B. Absorption

C. Photosynthesis



D. Translocation

Q75 General Science

Which of the following has NO effect on the resistance of a conductor?

A. Length

B. Thickness

C. Temperature

D. Shape



Q76 General Science

The power of a convex lens of focal length 20 cm is _____.

- A. -0.05 D
- B. 0.05 D
- C. -5.0 D
- D. 5.0 D



Q77 General Science

Two resistors, A ($10\ \Omega$) and B ($20\ \Omega$), are connected in parallel. The combination is connected to a 6 V battery. The currents in A and B are respectively _____.

- A. 0.3 A and 0.6 A
- B. 0.6 A and 0.3 A
- C. 0.2 A and 0.2 A
- D. 0.6 A and 0.6 A



Q78 General Science

Which of the following cellular components is absent in most of the prokaryotes?

- A. Nuclear membrane
- B. Ribosome
- C. Cell wall
- D. Cytoplasm



Q79 General Science

Magnetic field lines at north pole of a magnet are:

- A. parallel lines
- B. lines emerging from the pole
- C. lines merging at the pole
- D. intersecting lines



Q80 General Science

What is a possible reason for young females becoming teen mothers?

- A. Familial and societal pressure ✓
- B. Good education to the females
- C. Females belonging to educated families
- D. Good support from family and society

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following is NOT an example of 'fiat' money in India?

- A. ₹100 note
- B. ₹500 note
- C. ₹1 coin
- D. ₹1,000 cheque ✓

Q82 General Awareness and Current Affairs

The Planning Commission was set up on _____ and the plan era started from 1 April 1951 with the launching of the First Five-Year Plan (1951-56).

- A. 26 January 1950
- B. 15 August 1949
- C. 15 March 1950 ✓
- D. 1 March 1950

Q83 General Awareness and Current Affairs

The Kumaun Himalayas (according to the east-west division of the Himalayas) lie between which of the following two rivers?

- A. Indus and Sutlej
- B. Sutlej and Kali ✓
- C. Kali and Teesta
- D. Teesta and Dibang



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Q84 General Awareness and Current Affairs

Gandhiji founded Harijan Sevak Sangh in _____ to eradicate untouchability and uplift the depressed classes.

- A. 1924
- B. 1929
- C. 1936
- D. 1932



Q85 General Awareness and Current Affairs

In India, _____ is/are governed by the provisions of Section 29A of the Representation of the People Act, 1951.

- A. registration of political parties
- B. general duties of chief electoral officers
- C. appointment of dates for nominations, etc.
- D. withdrawal of candidature



Q86 General Awareness and Current Affairs

Kendriya Hindi Sansthan is an autonomous educational institution established in 1960 by the Department of Higher Education of the Ministry of Education, Government of India. Where is its headquarters located?

- A. Agra
- B. Meerut
- C. Lucknow
- D. Kanpur



Q87 General Awareness and Current Affairs

In which state is the five day religious festival of 'Shad Nongkrem' celebrated?

- A. Uttar Pradesh
- B. Meghalaya
- C. Andhra Pradesh
- D. Tripura



Q88 General Awareness and Current Affairs

In which year was the Panchayats (Extension to the Scheduled Areas) Act (PESA act) passed in India?

A. 1996



B. 1994

C. 1992

D. 1990

Q89 General Awareness and Current Affairs

Which team won the Pro Kabaddi League title of Season 8 in 2022?

A. U Mumba

B. Bengaluru Bulls

C. Patna Pirates

D. Dabang Delhi KC



Q90 General Awareness and Current Affairs

Which Article of the Constitution of India says that 'No person shall be deprived of his life or personal liberty except according to procedure established by law'?

A. Article 21



B. Article 22

C. Article 23

D. Article 24

Q91 General Awareness and Current Affairs

As of July 2022, under the National Pension Scheme for Traders and Self-employed Persons, beneficiaries are entitled to receive minimum monthly assured pension of how much after attaining the age of 60 years?

A. ₹2,500

B. ₹3,000



C. ₹4,500

D. ₹5,000



किस वेद में ऋचाओं (verses) की संख्या सर्वाधिक है?

A. यजुर्वेद

B. ऋग्वेद



C. सामवेद

D. अथर्ववेद

Researchers at IIT Guwahati have developed a 'smart' window material in May 2021. What is the use of this material?

A. It maintains oxygen pressure that works without electricity.

B. It allows automatic climate control of buildings.



C. It increases the life of medical oxygen cylinders.

D. It locates sources of faint light from distant quasars

River _____ flows through the Malwa Plateau.

A. Rangeet

B. Godavari

C. Betwa



D. Bhima

_____, the first 'made in India' Petascale supercomputer that was deployed at IIT Roorkee in March 2022, has a supercomputing capacity of 1.66 Petaflops.

A. PARAM Ganga



B. PARAM Brahma

C. PARAM Shakti

D. PARAM Yukti



Q96 General Awareness and Current Affairs

According to India State Forest Survey Report 2021, the forest cover in India is _____ of the geographical area of the country.

A. 24.62%



B. 31.05%

C. 27.50%

D. 37.05%

Q97 General Awareness and Current Affairs

Who among the following holds the record of presenting the maximum number of budgets in the history of independent India by presenting 10 budgets during his stint as union finance minister?

A. Morarji Desai



B. P Chidambaram

C. Pranab Mukherjee

D. Yashwant Sinha

Q98 General Awareness and Current Affairs

Which of the following is a characteristic of public goods?

A. Elasticity

B. Excludable

C. Inelasticity

D. Non-rivalry



Q99 General Awareness and Current Affairs

In 2021, who among the following was awarded the Major Dhyan Chand Khel Ratna award?

A. Tara Iyer

B. Jwala Gutta

C. PV Sindhu

D. Ravi Kumar



Under the 'Jiyo Parsi' scheme launched by the Government of India Rupees _____ is the maximum amount of childcare support per child per month only up to the age of 18 years as per the guidelines w.e.f. 22nd Oct 2021.

A. 8000



B. 10,000

C. 12,000

D. 15,000



Mathematics

25 Questions • Answer Key

Q1 Mathematics

If $\frac{(15x-9)}{x} + \frac{(15y-9)}{y} + \frac{(15z-9)}{z} = 0$, then the value of $\frac{1}{x} + \frac{1}{y} + \frac{1}{z}$ is:

A. 7

B. 6

C. 5



D. 4

Q2 Mathematics

The value of $\sqrt{74529}$ is:

A. 243

B. 259

C. 239

D. 273



Q3 Mathematics

The HCF of the numbers 64, 86, 108 and 260 is:

A. 2



B. 4

C. 6

D. 8

Q4 Mathematics

Five times a number is 65. Find the number.

A. 10

B. 11

C. 13



D. 15



Q5 Mathematics

A boat takes 21 minutes to go 12.6 km upstream. The ratio of the speed of the boat in still water to that of the stream is 7 : 2. How much total time (in hours) will the boat take to go 43.2 km upstream and 38.88 km downstream?

A. 1.6

B. 1.8



C. 2

D. 2.4

Q6 Mathematics

Let $0^\circ < \theta < 90^\circ$. $\sqrt{\frac{\sec^2 \theta + \operatorname{cosec}^2 \theta}{\tan^2 \theta - \sin^2 \theta}} \times \frac{(1 + \tan^2 \theta) \sin^2 \theta}{(\operatorname{cosec} \theta - \cot \theta)(1 + \cos \theta)}$ is equal to:

A. $\operatorname{cosec}^2 \theta \sec^2 \theta$



B. $\sin^2 \theta \cos^2 \theta$

C. $\cot^2 \theta$

D. $\sec^2 \theta$

Q7 Mathematics

A solid metallic cuboid of sides 4 cm × 10 cm × 15 cm is melted and made into small identical dices of 2 cm × 2 cm × 2 cm. How many such dices can be made?

A. 43

B. 75



C. 36

D. 40

Q8 Mathematics

How many prime numbers are there between 20 and 80?

A. 13

B. 14



C. 15

D. 16



Q9 Mathematics

In a quadrilateral ABCD, $\angle A = 86^\circ$ and $\angle B = 72^\circ$. The bisectors of $\angle C$ and $\angle D$ meet at O. What is the measure of $\angle DOC$?

A. 69° B. 79° ✓C. 91° D. 101° **Q10** Mathematics

The volume of a cube whose side is 12 cm is:

A. 1928 cm^3 B. 1828 cm^3 C. 1728 cm^3 ✓D. 1628 cm^3 **Q11** Mathematics

AB is parallel to CD. A transversal PQ intersects AB and CD at E and F, respectively, and $\angle PEB = 78^\circ$. G is a point between AB and CD such that $\angle BEG = 18^\circ$ and $\angle GFE = 30^\circ$. What is the measure of $\angle EGF$?

A. 58° B. 66° ✓C. 68° D. 72° **Q12** Mathematics

If $a = 5$, then $\sqrt{(4a^2 - 4a + 1)} + 6a$ is:

A. 69

B. 59

C. 49

D. 39 ✓



Q13 Mathematics

A large tanker can be filled by pipes A and B in 60 minutes and 30 minutes, respectively. How much time will it take to fill the empty tanker, if for half the time pipe B is opened and for the remaining time pipes A and B are opened?

- A. 15 minutes
- B. 20 minutes
- C. 24 minutes
- D. 28 minutes

**Q14** Mathematics

A quadratic equation whose roots are $-\frac{2}{3}$ and $-\frac{3}{2}$ is:

- A. $6x^2 + 13x + 1 = 0$
- B. $6x^2 + 13x + 6 = 0$
- C. $6x^2 - 13x + 6 = 0$
- D. $6x^2 - 13x - 1 = 0$

**Q15** Mathematics

Pipe P can fill $\frac{3}{4}$ part of a tank in 18 hours and pipe Q can fill $\frac{3}{5}$ part of the same tank in 12 hours. Both P and Q were kept open for 4 hours, then both were closed. Pipe R alone was then opened and it emptied the water in the tank in $5\frac{1}{2}$ hours. Pipes P, Q and R together can fill the empty tank in:

- A. 30 hours
- B. 35 hours
- C. 36 hours
- D. 40 hours

**Q16** Mathematics

For the equation $2x^2 + bx + 3 = 0$, the smaller root is 0.5. Find the value of b.

- A. 5
- B. -7
- C. -2
- D. 1



Q17 Mathematics

If the mean of the following data is 22, then what is the value of x ?

Class	0-10	10-20	20-30	30-40	40-50
Frequency	12	16	6	7	x

A. 6

B. 9



C. 13

D. 19

Q18 Mathematics

By selling an article for ₹19.50, a man makes a profit of 30%. By how much should the sales price be increased to make a profit of 40%?

A. ₹2.00

B. ₹1.90

C. ₹1.50



D. ₹4

Q19 Mathematics

If ₹12,500 amounts to ₹15,680 in 2 years at $x\%$ compound interest per annum, compounded annually, then the value of x is:

A. 11

B. 12



C. 15

D. 20

Q20 Mathematics

The mean of the first 7 odd prime numbers is:

A. 8.61

B. 7.91

C. 5.41

D. 10.71



Q21 Mathematics

A shopkeeper professes to sell his goods at a 10% loss but uses a false balance and gains 15%. The actual weight (correct to one decimal place) he uses for 1 kg is:

A. 782.6 gm



B. 784.4 gm

C. 785.6 gm

D. 788.4 gm

Q22 Mathematics

The sum of the present ages of a father and his son is 6 years more than 3 times the present age of the son. After 2 years, 2 times the father's age will be 7 years less than 5 times the son's age. The difference (in years) between the ages of the father and the son is:

A. 17

B. 19



C. 20

D. 23

Q23 Mathematics

If $3.2 : x :: x : 16.2$, and $x > 0$, then find the value of x .

A. 5.4

B. 6.3

C. 7.2



D. 9.7

Q24 Mathematics

Suman's present age is twice that of Venkat's. Venkat's age, after 12 years, will be 21 years. Find Suman's present age.

A. 18 years



B. 20 years

C. 22 years

D. 16 years



Q25 Mathematics

The annual income of Ram is ₹5,62,400. He spent 20% of this income on house rent, 15% of the remaining income on food, and 30% of the income still remaining with him on children's education. If the amount still remaining was his savings, which of the following amounts is closest to his actual savings?

A. ₹2,67,730

B. ₹2,76,703

C. ₹2,67,037

D. ₹2,67,703

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

A certain number of people are sitting in a row and all are facing north. Exactly one person is sitting between G and K. I is sitting third to the right of J. H is sitting to the immediate right of G. Exactly four persons are sitting between I and K. M is sitting at the second position to the left of K. If it is given that there is no other person sitting in the row, what is the total number of people in the row?

A. 12

B. 10

C. 11

D. 13

**Q27** General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

Some woods are charcoals

Some petrol is diesel

All diesel are fossils

Conclusions:

(I) Some petrol are charcoals

(II) Some fossils are petrol

(III) Some woods are diesel

A. Only conclusion I follows

B. Only conclusion II follows

C. Only conclusion I and III follows

D. None of the conclusions follow



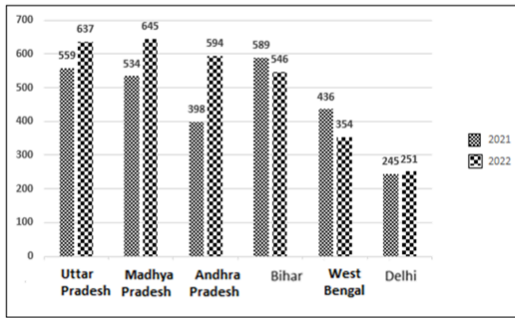
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Q28 General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The graph presents the total production of crops (in metric tonnes) in six different states/UTs of the country in the years 2021 and 2022.

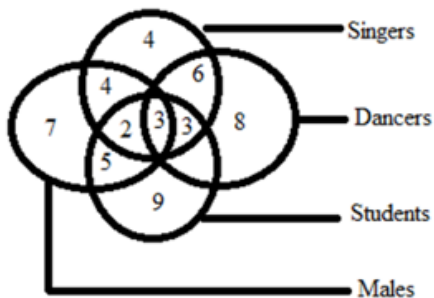


In which pair of states/UTs is the ratio of total crop production for both the years 1 : 2?

- A. West Bengal and Madhya Pradesh
- B. Delhi and Andhra Pradesh
- C. Delhi and Uttar Pradesh
- D. West Bengal and Andhra Pradesh

Q29 General Intelligence and Reasoning

Study the Venn Diagram given below and answer the question that follows.



How many male students are neither singers nor dancers?

- A. 4
- B. 5
- C. 2
- D. 3



Q30 General Intelligence and Reasoning

How many such pairs of letters are there in the word LOVABLE (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. 1



B. 3

C. 5

D. 6

Q31 General Intelligence and Reasoning

Refer to the following letter and symbol series and answer the question.

(Left) E # R & H & @ J & M N # B & V & & D # P @ W % & Q & A % & # E & (Right)

If all the symbols are dropped from the series, which of the following will be third from the left?

A. H



B. J

C. M

D. Q

Q32 General Intelligence and Reasoning

Sharad walks 4 km towards the west and then turns right and walks 5 km. Again, he turns left and walks 7 km. Finally, he turns to his left and walks 5 km. How far is he from the starting point?

(All turns are 90 degree turns only)

A. 10 km

B. 11 km



C. 14 km

D. 21 km

Q33 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. B sits fourth to the right of E. C sits third to the right of B. A sits sixth to the left of E. There are only two persons between C and D. If no other person is sitting in the row, what is the total number of persons seated?

A. 12

B. 9

C. 17



D. 20



Q34 General Intelligence and Reasoning

Six friends, A, B, C, D, E and F, are sitting in a circle facing the centre of the circle. A is 2nd to the right of E. Only one person sits between F and D. B and D are immediate neighbours. F is 3rd to the right of B. C is second to the right of D. Who sits between D and F?

A. A



B. B

C. C

D. D

Q35 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

188, 187, 183, 174, 158, ?

A. 139

B. 137

C. 133



D. 129

Q36 General Intelligence and Reasoning

If 2 is added to each odd digit and 2 is subtracted from each even digit in the number 485136785, what will be the difference between the digits which are second from the left and third from the right?

A. 1

B. 2

C. 3



D. 4

Q37 General Intelligence and Reasoning

If in a certain code language, CARBON is coded as DCUFTT and ENABLE is coded as FPDFQK, then how is CANDLE coded in that language?

A. EDRIQK

B. EDRIKQ

C. DCHQKQ

D. DCQHQB



Q38 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

Country B has been importing 80% of its crude oil and petroleum from country Y for a few decades now to fulfil their fuel needs. However, owing to the current financial crisis in country Y, it exports the crude oil and petroleum to other countries at 30% higher prices now.

Which of the following can be concluded from the given information?

I. The car resale industry in country B will be on verge of a total shut down in the coming months.

II. Country B will increase fuel tax by 30%.

- A. Only I can be concluded from the given information.
- B. Only II can be concluded from the given information.
- C. Both I and II can be concluded from the given information.
- D. Neither I nor II can be concluded from the given information. ✓

Q39 General Intelligence and Reasoning

Refer to the following letter series and answer the question that follows.

A F R C D S Y H N T E D C I D Q A C V Y U I N G R F S C W R

How many such consonants are there each of which is immediately preceded by a vowel and also immediately followed by a vowel?

- A. Zero ✓
- B. One
- C. Two
- D. Three

Q40 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

10, 132, 234, 318, ?, 440.

- A. 332
- B. 369
- C. 373
- D. 386 ✓

Q41 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

13 : 195 :: 11 : 143 :: 7 : ?

A. 63



B. 105

C. 91

D. 107

Q42 General Intelligence and Reasoning

Six classmates L, M, N, O, P and Q compare the IGCSE results of their final exam. Each of them scored different marks. O scored more than N but less than L. M scored more than N. P scored less than N but more than Q. L scored less than M. Who among the six scored the most?

A. M



B. L

C. O

D. N

Q43 General Intelligence and Reasoning

Pinky walked 160 m towards north, then she turned right and walks 240 m. Then she turned right and walked 280 m, then she turned left and walked 120 m. Finally, she turned left and walked 120 m. In which direction and how many metres is she from the starting position?

(All turns are 90 degree turns only)

A. East, 120 m

B. West, 120 m

C. West, 360 m

D. East, 360 m



Q44 General Intelligence and Reasoning

Study the following line graph and answer the question.



The average annual exports during the given period for Company B is what percentage of the average annual exports for Company C?

A. 93.99%

B. 95.90%

C. 96.65%

D. 97.32%

Q45 General Intelligence and Reasoning

Select the term from among the given options that can replace the question mark (?) in the following alpha-numeric series to make it logically complete.

3Z6, 8Y12, 15X18, 24W24, 35V30, ?

A. 36U48

B. 48V36

C. 36V48

D. 48U36

Q46 General Intelligence and Reasoning

There are 88 mobile phones, each of separate brands, arranged in a straight row at a mobile centre. The K brand mobile is 47th from the left side of the row and the M brand mobile is 34th from the right side of the row. How many mobile phones are between K and M brands?

A. 10

B. 9

C. 8

D. 7



Q47 General Intelligence and Reasoning

If each of the digits in the number 417593286 is arranged in ascending order from left to right, the position of how many digits will remain unchanged as compared to that in the original number?

A. 1



B. 2

C. 3

D. 4

Q48 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

13 : 28 :: 15 : 30 :: 20 : ?

A. 42

B. 40

C. 36

D. 35



Q49 General Intelligence and Reasoning

A, B, C, D, W, X, Y and Z are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the middle of the sides. C sits third to the left of W. C sits at one of the corners. A does not sit at any of the corners. Y sits second to the right of A. A is not an immediate neighbour of C. Only three people sit between B and D. B is an immediate neighbour of Z. B does not sit at any of the middle of the sides.

Who sits second to the left of Y?

A. B

B. D

C. A



D. C

Q50 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

PROFESS : ORPSSEF :: CONTAIN : NOCNIAI :: ROUTINE : ?

A. TORENIU

B. UORENIT



C. UROEINT

D. UORNETI



Q51 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) N 3 F P # 1 C B 5 \$ L Q 6 & N 8 D @ K 9 R (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. 1



B. 2

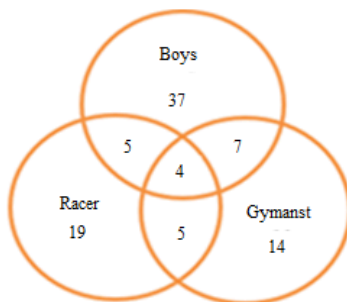
C. 3

D. 4

Q52 General Intelligence and Reasoning

Study the given diagram carefully and answer the questions. The numbers in different sections indicate the number of persons.

In the following Venn diagram, the how many boys are there who are racers and gymnasts?



A. 5

B. 4



C. 7

D. 14

Q53 General Intelligence and Reasoning

In a certain code language, '856 458 1265' means 'you are good', 568 235 1265 1452 means 'good boy bad habit ', and '25475 458 568' means 'evils are bad'. In that language, which code stands for 'are'?

A. 856

B. 458



C. 235

D. 1265



Q54 General Intelligence and Reasoning

Which two signs should be interchanged to make the following equation correct?

$$13 + 6 \div 12 - 4 \times 5 = 4$$

A. $\div$ and $\times$

B. $-$ and $\times$

C. $\div$ and $-$



D. $\times$ and $+$

Q55 General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. R is taller than only three other friends. T is taller than only one friend. Q is taller than T but shorter than U. U is shorter than P. Who is the second tallest among all the friends?

A. R

B. Q

C. U



D. P

General Science

25 Questions • Answer Key

Q56 General Science

An object is placed at a distance of 40 cm from a convex lens having focal length 20 cm. Which option given below, correctly describes the nature and the relative size of the image formed in the respective order?

A. Real, inverted and same sized



B. Real, inverted and diminished

C. Virtual, erect and enlarged

D. Virtual, erect and diminished

Q57 General Science

When baking soda is heated it converts into _____, water, and carbon dioxide.

A. sodium chloride

B. sodium acetate

C. sodium hydroxide

D. sodium carbonate



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Q58 General Science

An element X combines with chlorine to form a compound XCl . The element X is placed on the left side of the periodic table. Which of the following statements are correct for element X?

- (i) Has one valence electron.
- (ii) Is a metal and is solid.
- (iii) Is a non-metal and is a gas.
- (iv) Has five valence electrons.

- A. Only (iii)
- B. Only (iv)
- C. Only (i) and (iii)
- D. Only (I), (ii) and (iii)

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q59 General Science

Which instrument aids in the detection of the heartbeat?

- A. Stethoscope
- B. Sphygmomanometer
- C. Spirometer
- D. Thermometer

Q60 General Science

What is the natural resource from which petrol and diesel are obtained?

- A. Petroleum
- B. Coke
- C. Bitumen
- D. Coal tar



Q61 General Science

The Resistance of a conductor is:

- A. The ratio of I and V
- B. The product of I and V
- C. The ratio of V and I
- D. The Difference of V and I



Q62 General Science

In which of the following situations will there be no potential difference induced in the coil?

- (a) A bar magnet moving towards a stationary coil
- (b) A coil moving towards a stationary bar magnet
- (c) A coil and a bar magnet moving in the same direction with the same speed
- (d) A coil and a bar magnet moving towards each other with the same speed

- A. (a)
- B. (b)
- C. (c)
- D. (d)



Q63 General Science

Which of the following diagrams correctly represents the path of a light ray incident parallel to the principal axis after refraction through the lens?

- A.
- B.
- C.
- D.



Q64 General Science

Which of the following wastes CANNOT be degraded by bacteria or other saprophytes?

- A. Excreta
- B. Paper
- C. Plastic
- D. Leather



Q65 General Science

Match the following:

Compound	Name
i. C_6H_6	a. Ethane
ii. $H_2C=CH_2$	b. Benzene
iii. CH_3-CHO	c. Acetaldehyde
iv. CH_3COCH_3	d. Ethylene
v. CH_3CH_3	e. Acetone

- A. i-d, ii-c, iii-a, iv-b. v-e
- B. i-a, ii-b, iii-c, iv-e v-d
- C. i-b, ii-d, iii-c, iv-e, v-a
- D. i-d, ii-c, iii-e, iv-b v-a



Q66 General Science

Who gave the laws of inheritance?

- A. Carl Linnaeus
- B. Charles Darwin
- C. Watson and Crick
- D. Gregor Mendel



Q67 General Science

A 2200 W electric toaster operates at 220 V. The resistance of its coil is:

A. 11 Ω

B. 22 Ω ✓

C. 44 Ω

D. 88 Ω

Q68 General Science

In the process of storing and transferring ADP into ATP molecules, which of the following minerals is critical?

A. Phosphorus ✓

B. Calcium

C. Iron

D. Sodium

Q69 General Science

The centre of curvature of a convex mirror is located at +18 cm, as per New Cartesian Sign convention. Its focus is at

A. 9 cm ✓

B. -9 cm

C. 18 cm

D. -18 cm

Q70 General Science

Name the process by which soluble products of photosynthesis are transported to other parts of the plant.

A. Transpiration

B. Diffusion

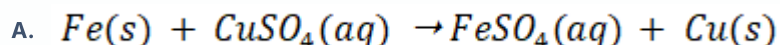
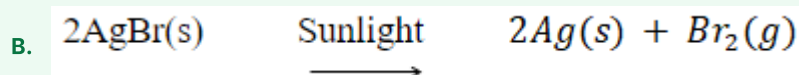
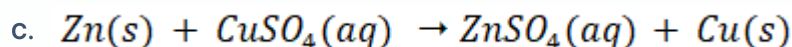
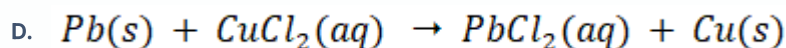
C. Translocation ✓

D. Osmosis



Q71 General Science

Which of the following reactions is NOT an example of a displacement reaction?



Q72 General Science

Catenation property is shown by:

A. carbon ✓

B. Oxygen

C. Nitrogen

D. Helium

Q73 General Science

Two coils, A and B, such that A is connected to a battery through a key and a rheostat, and B is connected to a galvanometer, are arranged parallel and close to each other. In which of the following durations, as described, is/are current(s) induced in B?

(a) 0 to 50 s : the current in A is steady

(b) 50 to 60 s : the current in A is decreased at a constant rate

A. Only (a)

B. Only (b) ✓

C. Neither (a) nor (b)

D. Both (a) and (b)

Q74 General Science

How many resistors of $12\ \Omega$ must be connected in parallel combination to obtain $4\ \Omega$ resistance?

A. 2 resistors

B. 4 resistors

C. 8 resistors

D. 3 resistors ✓



Q75 General Science

Bone is an example of which of the following types of tissues?

- A. Muscular tissue
- B. Connective tissue
- C. Epithelial tissue
- D. Nervous tissue

Q76 General Science

In the reaction $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$:

- A. MnO_2 is oxidized to MnCl_2
- B. MnO_2 is reduced to MnCl_2
- C. MnCl_2 is reduced to MnO_2
- D. Mn does not undergo redox reaction

Q77 General Science

Which of following molecules govern the inheritance of a trait by the offspring?

- A. Only paternal DNA
- B. Paternal and maternal DNA
- C. Proteins
- D. Only maternal DNA

Q78 General Science

Which of the following is NOT an alkali?

- A. NH_4OH
- B. $\text{Ba}(\text{OH})_2$
- C. $\text{Cu}(\text{OH})_2$
- D. LiOH



Q79 General Science

A ray of light is incident on a concave mirror at point M. The ray makes an angle of 10° with a line joining M to the centre of curvature. The ray is reflected at an angle of _____.

A. 10°



B. 20°

C. 30°

D. 40°

Q80 General Science

Which of the following is NOT a metal?

A. Ga

B. Sc

C. Si



D. Pb

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The 74th Constitutional Amendment Act provides for _____ for a transitional area between a rural and urban area.

A. Nagar Panchayat



B. Municipal Corporation

C. Municipal Council

D. Gram Panchayat

Q82 General Awareness and Current Affairs

The part of the northern plains of India comprising older alluvium is known as:

A. Bhabar

B. Khadar

C. Bhangar



D. Terai



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Q83 General Awareness and Current Affairs

Red and Yellow soils can easily be found in parts of _____ and _____.

- A. Rajasthan and Gujarat
- B. Odisha and Chhattisgarh
- C. Manipur and Sikkim
- D. Jammu and Kashmir and Ladakh

Q84 General Awareness and Current Affairs

The Women's Day week to raise awareness on 'Safety and Security of Women' was celebrated from _____ in 2022.

- A. 1st to 8th March
- B. 4th to 11th March
- C. 7th to 14th March
- D. 10th to 17th March

Q85 General Awareness and Current Affairs

Which one of the following districts in Western India recorded a temperature of 1.1 degrees Celcius on December 18, 2021?

- A. Churu
- B. Banswara
- C. Morbi
- D. Patan

Q86 General Awareness and Current Affairs

What is the main role of the Reserve Bank of India?

- A. It lends money to all people.
- B. It conducts consolidated supervision of the financial sector in India.
- C. It provides fund to the private sector industries.
- D. It maintains the profit generated by the banking sector.



Q87 General Awareness and Current Affairs

Which of the following is an indigenously developed automatic train protection system tested in India in March 2022?

- A. SANRAKSHAN
- B. RAKSHAA
- C. KAVACH
- D. BACHAAV



Q88 General Awareness and Current Affairs

Which of the following statements about the Rajya Sabha is correct?

- A. One-third of the members retire every year.
- B. One-third of the members retire every second year.
- C. One-fifth of the members retire every second year.
- D. Half of the members retire every year.



Q89 General Awareness and Current Affairs

In March 2022, in which state did the World Health Organization sign an agreement with India to set up a Global Centre for Traditional Medicine?

- A. Rajashtan
- B. Gujarat
- C. Himachal Pradesh
- D. Kerala



Q90 General Awareness and Current Affairs

Which of the following features of the Constitution of India is borrowed from the Constitution of Ireland?

- A. Directive principles of state policy
- B. Rule of law
- C. Parliamentary system of government
- D. Single citizenship



Q91 General Awareness and Current Affairs

In July 2022, the Supreme Court of India gave an order giving more power to the right to be forgotten, which has been acknowledged as a facet of the right to privacy by the top court in its 2017 landmark judgment, the new order is related to _____.

- A. print media
- B. search engines and internet
- C. phone calls
- D. medical history



Q92 General Awareness and Current Affairs

On which national festival is the National Flag of India hoisted by the Prime Minister at the Red Fort in old Delhi?

- A. National Constitution Day
- B. Gandhi Jayanti
- C. Republic Day
- D. Independence Day



Q93 General Awareness and Current Affairs

_____, the then largest NBFC – MFI got merged with IndusInd bank in July 2019.

- A. Bharat Financial Inclusion Limited
- B. Bandhan Financial Services Limited
- C. Annapurna Finance Private Limited
- D. CreditAccess Grameen Limited



Q94 General Awareness and Current Affairs

In India, Petrol price was liberalized and deregulated in June:

- A. 2017
- B. 2008
- C. 2010
- D. 2014



Q95 General Awareness and Current Affairs

_____ is a type of crescent-shaped sand dune formed in desert regions where the wind direction is very constant.

- A. Blowhole
- B. Barchan
- C. Bergschrund
- D. Bluff

Q96 General Awareness and Current Affairs

Who was the Viceroy of British India when the Rowlatt Act was passed?

- A. Lord Chelmsford
- B. Lord Curzon
- C. Lord Reading
- D. Lord Canning

Q97 General Awareness and Current Affairs

Under the 'Talent Search and Development' component of 'Khelo India' programme to carry out talent identification, the country has been divided into how many zones as of July 2022?

- A. Three
- B. Four
- C. Five
- D. Seven

Q98 General Awareness and Current Affairs

Which of the following is a classical language among the 22 languages in the 8th Schedule of the Indian Constitution?

- A. Konkani
- B. Sanskrit
- C. Santhali
- D. Bengali



Q99 General Awareness and Current Affairs

The sayings or day-to-day teachings of Prophet Muhammad after his death were compiled by his followers and called _____.

A. Quran

B. Hadith



C. Sunnah

D. Sharia

Q100 General Awareness and Current Affairs

How many teams were scheduled to be a part of the 15th edition of the Indian Premier League (Cricket), 2022?

A. 10



B. 12

C. 15

D. 17



Mathematics

25 Questions · Answer Key

Q1 Mathematics

Anu is four times as good as Binni in doing a work. Together they finish the same work in 12 hrs. In how many hrs will Anu alone finish the work?

- A. 10 hrs
- B. 11 hrs
- C. 13 hrs
- D. 15 hrs



Q2 Mathematics

What is the median of the following data?

41, 32, 50, 28, 35, 19, 27, 31, 45, 16, 34, 37

- A. 32.5
- B. 33
- C. 33.5
- D. 34



Q3 Mathematics

The cost of 3 pens and 2 pencils is ₹53 and the cost of 2 pens and 5 pencils ₹50. The cost of 5 pens and 3 pencils is:

- A. ₹72
- B. ₹81
- C. ₹87
- D. ₹95



Q4 Mathematics

The shorter side of a rectangle is 10 cm less than the longer side. The numerical value of its area is equal to 6 times the numerical value of its perimeter. What is the length (in cm) of its longer side?

- A. 20
- B. 25
- C. 30
- D. 35



Q5 Mathematics

A shopkeeper sells an item for ₹571.20 after giving two successive discounts of 20% and 15% on its marked price. Had he not given any discount, he would have earned a profit of 12%. What is the cost price (in ₹) of the item?

A. 700

B. 720

C. 750



D. 780

Q6 Mathematics

The volume of a cuboid whose length, breadth and height are 3 cm, 4 cm and 5 cm, respectively, is:

A. 90 cm^3 B. 80 cm^3 C. 70 cm^3 D. 60 cm^3 **Q7 Mathematics**

Three pipes A, B and C can fill a tank in 5 hours, 8 hours and 12 hours, respectively. If all the pipes are opened at the same time, then the time taken to fill the tank is:

A. $5\frac{22}{49}$ hoursB. $4\frac{22}{49}$ hoursC. $3\frac{22}{49}$ hoursD. $2\frac{22}{49}$ hours**Q8 Mathematics**

If ABCD is a rhombus such that $\angle ACB = 40^\circ$, then $\angle ADB$ is:

A. 40° B. 45° C. 50° D. 60° 

Q9 Mathematics

A train crosses a platform of length 200 metres in 40 seconds and a man in 20 seconds. The length of the train is:

- A. 500 metres
- B. 400 metres
- C. 300 metres
- D. 200 metres



Q10 Mathematics

If $4^x - 4^{x-1} = 24$, then the value of $\frac{2x-1}{2x+3}$ is:

- A. $\frac{1}{3}$
- B. $\frac{1}{2}$
- C. $\frac{1}{5}$
- D. $\frac{3}{7}$



Q11 Mathematics

Vamsi's father is 60 years old. He is 20 years older than twice Vamsi's age. Find Vamsi's age.

- A. 20 years
- B. 25 years
- C. 15 years
- D. 30 years



Q12 Mathematics

The corresponding sides of two similar triangles are in the ratio of 2: 3. If the area of the smaller triangle is 48 cm^2 , then the area of the bigger triangle is:

- A. 230 cm^2
- B. 106 cm^2
- C. 107 cm^2
- D. 108 cm^2



Q13 Mathematics

The current population of a town is 15,625. It increases by 8% and 12% in two successive years but decreases by 22% in the third year. What is the population of the town at the end of the third year?

A. 13,230

B. 14,742



C. 15,120

D. 14,042

Q14 Mathematics

Find the surface area of a sphere whose diameter is equal to 14 cm.

A. 616 cm^2



B. 524 cm^2

C. 1232 cm^2

D. 1048 cm^2

Q15 Mathematics

If the simple interest on a certain sum for 8 years is $\frac{11}{25}$ of the sum, then the rate of interest per annum is:

A. $8\frac{1}{2}\%$

B. $7\frac{1}{2}\%$

C. $6\frac{1}{2}\%$

D. $5\frac{1}{2}\%$



Q16 Mathematics

If 3 and -7 are the roots of a quadratic equation, then the quadratic equation is:

A. $-x^2 + 4x + 21 = 0$

B. $x^2 + 4x - 21 = 0$



C. $x^2 - 4x - 21 = 0$

D. $x^2 - 4x + 21 = 0$



Q17 Mathematics

When a number is divided by 15, the remainder is 9. What will be the remainder when the same number is divided by 5?

A. 1

B. 4



C. 2

D. 3

Q18 Mathematics

If the numerator of a fraction be increased by 10% and its denominator be reduced by 5%, then the fraction becomes $\frac{4}{5}$. Find the original fraction.

A. $\frac{19}{25}$ B. $\frac{17}{25}$ C. $\frac{23}{55}$ D. $\frac{38}{55}$ **Q19** Mathematics

The value of $\left(\frac{64}{25}\right)^{-\frac{3}{2}} \times \left(\frac{2}{5}\right)^4 \div \sqrt[5]{(32)^{-3}}$ is:

A. $\frac{1}{5}$ B. $\frac{2}{5}$ C. $\frac{8}{25}$ D. $\frac{1}{20}$ 

Q20 Mathematics

$\frac{(1 + \cot\theta - \operatorname{cosec}\theta)(1 + \tan\theta + \sec\theta)(\sec^2\theta)}{(\sec\theta - \cos\theta)(\cot\theta + \tan\theta)}$, $0^\circ < \theta < 90^\circ$, is equal to:

- A. $\cos \theta$
- B. $\sin \theta$
- C. $2 \sec \theta$
- D. $2 \operatorname{cosec} \theta$ ✓

Q21 Mathematics

The list price of a washing machine is ₹13,200. It is sold to a retailer after two successive discounts of 25% and 15%. The retailer wants to earn a profit of 20% on his cost after allowing a 25% discount (on its new list price) to the customer. At what price should he list the washing machine?

- A. ₹13,644
- B. ₹13,464 ✓
- C. ₹13,466
- D. ₹13,664

Q22 Mathematics

If the mode of a data exceeds its mean by 16.2, then the mode exceeds the median by _____. (Use empirical formula to find the answer.)

- A. 8.25
- B. 10.2
- C. 10.8 ✓
- D. 12.4

Q23 Mathematics

The value of $\left(\frac{x^b}{x^c}\right)^{b+c} \times \left(\frac{x^c}{x^a}\right)^{c+a} \times \left(\frac{x^a}{x^b}\right)^{a+b}$ is equal to:

- A. 3
- B. 2
- C. 1 ✓
- D. 0



Q24 Mathematics

If the product of two numbers is 8410 and their HCF is 29, then their LCM is:

A. 310

B. 290



C. 270

D. 330

Q25 Mathematics

3 bags and 4 pens together cost ₹1,285, whereas 5 bags and 3 pens together cost ₹1,995. The cost of 2 bags exceeds the cost of 11 pens by:

A. ₹390

B. ₹350

C. ₹310



D. ₹300

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. All sparrows are birds.
2. Some birds are animals.
3. All dogs are animals.

Conclusions:

- I. Some dogs are sparrows.
- II. All animals are birds is a possibility.
- III. Some animals are sparrows.

A. Only conclusion I is true

B. Only conclusion II is true



C. Only conclusion III is true

D. Only conclusion I and II are true



Q27 General Intelligence and Reasoning

If

'-' means '÷',

+' means '×',

÷' stands for '-' and

×' means '+',

then which of the following equations is correct?

A. $20 + 3 - 9 \div 5 \times 2 = 20$

B. $20 - 3 + 9 \times 5 \div 2 = 63$ ✓

C. $20 \times 3 \div 9 - 5 + 2 = 32$

D. $20 \div 3 \times 9 + 5 - 2 = 50$

Q28 General Intelligence and Reasoning

In this question, a group of letters is coded using letters/symbols as per the table given below, and the conditions that follow. The correct combination of codes following the conditions is your answer.

Letter/Symbols	O	E	R	L	A	V	&	\$	@
Code	7	6	1	4	8	2	3	5	9

Condition 1: If a word starts with a vowel but ends with a consonant then codes for first and last letter to be reversed.

Condition 2: If there are more than two vowels in a word, then first vowel is to be coded as 1, second vowel as 2 and so on.

Condition 3: If a word starts with a consonant and also ends with a consonant then vowels are to be coded after coding all the consonants.

What is the code for "ALOEVEA"?

A. 84232615

B. 14762618

C. 84762618

D. 14232415 ✓



Q29 General Intelligence and Reasoning

Seven people, A, B, C, D, E, F and G, are sitting in a straight row, facing north. Only three people sit between A and D. Only two people sit to the left of A. G is not an immediate neighbour of D. G sits second to the right of E. F sits to the immediate right of C. Who sits at the extreme left end of the row?

A. E

B. B



C. A

D. G

Q30 General Intelligence and Reasoning

Six children, F, G, H, I, J and K, were examined for intelligence and were given marks according to their performance in the test. Each child scored different marks. H scored more than J. H scored less than G and K. J scored less than I. F scored more than G. Who among the six children scored the least?

A. K

B. H

C. I

D. J



Q31 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$4.49 \div 1.49 - 3.33 \times 3 + 4.49 = ?$$

A. 4.5

B. 2.5

C. -2.5



D. -4.5

Q32 General Intelligence and Reasoning

Tamanna started her walk at 6 a.m. On her way she saw a tree in front of her. She noted that the shadow of the tree was exactly to her left. In which direction was Tamanna walking?

A. East

B. West

C. North



D. South



Q33 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word DUPLICATE is arranged in alphabetical order?

A. 1

B. 2

C. 3

D. 4

Q34 General Intelligence and Reasoning

Five persons, P, Q, R, S and T travelled in different months of the same year viz. January, February, March, April and May.

Q travelled in February. Only one person travelled between Q and P. Only three people travelled between T and R. R travelled in a month after P. Who among them travelled in May?

A. P

B. S

C. T

D. R

Q35 General Intelligence and Reasoning

In a certain code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	\$	5	%	6	^	7	4	&	8	*	9	1	!	2	@	3	#
Code	A	S	D	F	G	H	J	K	L	M	N	B	V	C	X	Z	Q

Conditions:

- I. If the first element is an even number and the last is an odd number, the codes for the first and last elements are to be interchanged.
- II. If both the second and third elements are even numbers, the code for these two will be K.
- III. If the first element is a number and the last a symbol, the last element code is to be used for the first element also.

What will be the code for 8%7\$9@ ?

A. LDHANX

B. LDHANL

C. XDHANX

D. XDHANL



Q36 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

17KDP, 20TMY, 23CVH, 26LEQ, ?

A. 27NZW

B. 29UNZ



C. 29NZW

D. 27UNZ

Q37 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

22 : 440 :: 14 : 168 :: 19 : ?

A. 380

B. 323



C. 228

D. 95

Q38 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) B 8 D 5 6 M S 8 # Z @ 7 K \$ 2 C B 4 5 N R (Right)

How many such numbers are there which are immediately preceded by a letter and also immediately followed by a number?

A. 1

B. 2



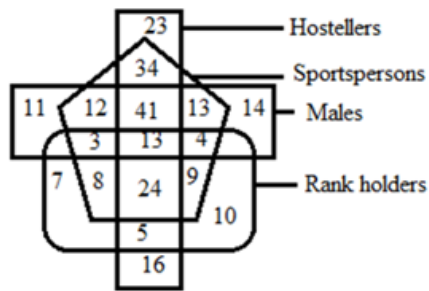
C. 3

D. 4



Q39 General Intelligence and Reasoning

Study the Venn diagram given below and answer the question that follows.



How many hosteller sportspersons are NOT males but rank holders?

A. 24



B. 13

C. 34

D. 5

Q40 General Intelligence and Reasoning

Read the given statements and conclusions carefully and decide which of the given conclusions logically follow(s) from the statements.

Statements:

In a race,

1. G is behind L who is behind D.
2. D is ahead of G who is ahead of R.
3. F is not behind V who is ahead of R.

Conclusions:

- I. V is behind D.
- II. F is ahead of R.
- III. D is ahead of R.

A. Conclusions I and II follow

B. Conclusions I and III follow

C. Conclusion III follows

D. Conclusions II and III follow



Q41 General Intelligence and Reasoning

If L denotes $\div$, M denotes $\times$, P denotes $+$ and Q denotes $-$, than which of the following statements is true out of the options given below?

A. $13 \text{ M } 64 \text{ P } 24 \text{ L } 18 \text{ Q } 6 = 36$

B. $17 \text{ Q } 22 \text{ M } 18 \text{ P } 13 \text{ L } 7 = 473$

C. $11 \text{ L } 34 \text{ M } 17 \text{ P } 8 \text{ Q } 3 = 42/4$ ✓

D. $12 \text{ Q } 13 \text{ L } 15 \text{ M } 19 \text{ P } 23 = 96$

Q42 General Intelligence and Reasoning

T, U, V, W, X, Y, Z and A are sitting in a straight row, facing north. Only Z sits between T and V. A sits at the extreme left end of the row. Only three people sit between Z and Y. Only X sits between V and W. T sits to the immediate right of U. Who sits to the immediate right of A?

A. W

B. T

C. Z

D. U ✓

Q43 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

12, 10, 11.5, 10.5, 11, 11, 10.5, 11.5, 10, ?

A. 8.5

B. 11

C. 12 ✓

D. 13



Q44 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

Following the recession in country F, many smaller companies have decided to lay off all their employees who were on probation period of six months. As a result, a little over 48% of the employees of company M were laid off.

Which of the following can be concluded from the given information?

- I. Company M had almost doubled in employee strength recently.
- II. The layoffs due to recession are not performance based.

- A. Only I can be concluded from the given information.
- B. Only II can be concluded from the given information.
- C. Both I and II can be concluded from the given information. ✓
- D. Neither I nor II can be concluded from the given information.

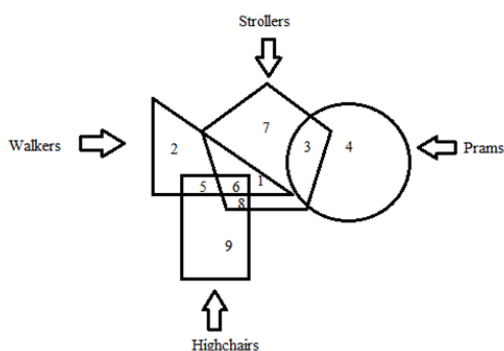
Q45 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word AMBUSHED is arranged in the reverse alphabetical order?

- A. zero ✓
- B. One
- C. Two
- D. Three

Q46 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of things.



How many such walkers are there that are also highchairs but NEITHER prams NOR strollers?

- A. 5 ✓
- B. 6
- C. 9
- D. 8

Q47 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

59 : 45 :: 46 : 24 :: 85 : ?

A. 38

B. 44

C. 40



D. 35

Q48 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing the north. R sits third to the left of P. Q sits fourth to the right of P. Only two persons sit between Q and T. If no other person is sitting in the row, what is the total number of persons seated?

A. 13

B. 12

C. 11



D. 15

Q49 General Intelligence and Reasoning

Refer to the following number, symbol series and answer the question.

7 4 & @ 3 4 % @ \$ 4 @ 3 4 % 4 \$ 5 * @ 4 3 4 5 * 3

How many 4s are there that are immediately followed by a symbol?

A. Seven

B. Five



C. Nine

D. Three

Q50 General Intelligence and Reasoning

Starting from point P, Sheetal walks 50 m towards the west. She takes a right turn and walks 20 m. Then she takes a left turn and walks 47 m. She takes a left turn again and walks 75 m. Again, she takes a left turn and walks 47 m. She takes a left turn again and walks 20 m. Then she takes a right turn and walks 50 m. Finally, she takes a left turn and walks 10 m to reach point Q. How far and in which direction is point P from point Q? (All turns are 90 degree turns only)

A. 25 m due north



B. 25 m due south

C. 35 m due north

D. 15 m due north



Q51 General Intelligence and Reasoning

Study the given table and answer the question that follows.

The table presents the total expenditure made by a company under different heads during the years 2016 to 2022.

Year	Expenditure				
	Raw Material	Transport	Salary	Establishments	Tax
2022	789	123	122	987	97
2021	786	112	132	789	98
2020	798	109	189	678	112
2019	879	101	196	897	134
2018	987	98	199	876	141
2017	890	95	173	766	108
2016	908	78	166	567	111

The total expenditure of the company in 2020 was approximately what per cent of the total expenditure in 2022?

A. 82%

B. 93%

C. 89%

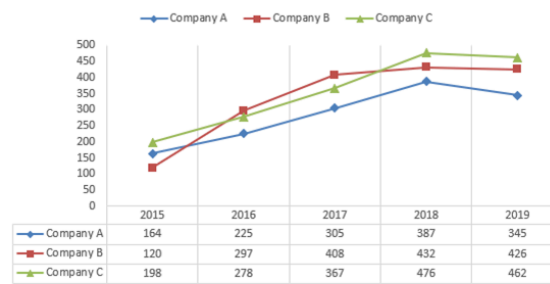


D. 95%

Q52 General Intelligence and Reasoning

Study the graph and answer the question.

Expenditures (₹ lakh) of three different companies in 5 different years



Total expenditure of all three companies together in the year 2018 was what percentage of the total expenditure of company B over all the years together?

A. 78.65%

B. 77.32%

C. 76.95%



D. 75.86%



Q53 General Intelligence and Reasoning

There are 43 cadets in a battalion, and the commander is planning for an straight row arrangement of cadets on stage, facing north. P is 18th from the left side of the row and Q is 31st from the right side of the row. Find the number of cadets standing between P and Q.

A. 6

B. 5

C. 4



D. 3

Q54 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

1.6, 2.3, 3, 3.7, 4.4, 5.1, 5.8, 6.5, ?, 7.9, 8.6

A. 7.2



B. 7.3

C. 7.1

D. 7.4

Q55 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

LAPTOP : QPUQBM :: MOBILE : FMJCPN :: DEVICE : ?

A. EFWJDF

B. FDJWFE



C. FDJFEW

D. FDJFFW

General Science

25 Questions • Answer Key

Q56 General Science

Toothpaste is generally _____ in nature.

A. acidic

B. basic



C. harmful

D. neutral



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Q57 General Science

Due to atmospheric refraction, the apparent position of a star is slightly _____ than its actual position, when viewed from near the horizon, and this apparent position _____. This results in twinkling of stars.

- A. higher, is stationary
- B. higher, keeps on changing
- C. lower, is stationary
- D. lower, keeps on changing

Q58 General Science

What did Mendel discover about the factors that influence heredity?

- A. Self-fertilisation shows paternal traits only.
- B. Traits are expressed due to production of hormones.
- C. All offspring in one generation appear like only one of the parents.
- D. A pair of factors in sexually reproducing organisms defines their characteristics.

Q59 General Science

Which of the following metals is obtained by electrolysis?

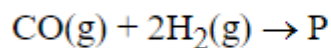
Na, Zn, Au, Ag, Mg, Al, Cu

- A. Au, Ag, Mg
- B. Na, Zn, Au
- C. Mg, Al, Cu
- D. Na, Mg, Al



Q60 General Science

Consider the following chemical reaction.



Predict the product (P) of this reaction.

- A. $\text{CHO} + \text{H}_2$
- B. $\text{COOH} + \text{H}_2$
- C. $\text{CHO} + 2\text{H}_2$
- D. CH_3OH ✓

Q61 General Science

An object is placed in front of a concave mirror of focal length 6 cm, at a distance of 24 cm. The magnification produced by the mirror is _____.

- A. $\frac{1}{3}$
- B. $-\frac{1}{3}$ ✓
- C. 3
- D. -3

Q62 General Science

Who discovered the law of octaves and compared this to the octaves found in music?

- A. John Newlands ✓
- B. Johann Döbereiner
- C. Dmitri Mendeléev
- D. Johann Jakob Balmer



Q63 General Science

Consider the following statements about a fuse wire:

- (a) It is connected in series with a device.
- (b) It is made of a material of low melting point.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b) ✓
- D. Neither (a) nor (b)

Q64 General Science

Many of the excretory products produced by plants are useful to humans. Identify the product that is harmful for humans when inhaled.

- A. Carbon dioxide ✓
- B. Resins
- C. Gums
- D. Oxygen

Q65 General Science

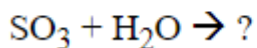
How many electrons are shared by one oxygen atom with a carbon atom in a carbon dioxide molecule?

- A. 1
- B. 2 ✓
- C. 3
- D. 4



Q66 General Science

What is the product of the following combination reaction?



A. SO_2

B. H_2S

C. H_2O_2

D. H_2SO_4



Q67 General Science

Resistivity of material depends on _____.

A. pressure

B. temperature



C. length

D. thickness

Q68 General Science

Some features of a prokaryotic cell are mentioned below. Select the INCORRECT option.

A. Very small in size

B. Single chromosome

C. Membrane-bound cell organelles present



D. Nuclear region known as nucleoid

Q69 General Science

An object, 2.0 cm in height, is placed at a distance of 6.0 cm in front of a concave mirror of focal length 8.0 cm, on its principal axis. Its image has a height of _____ and is _____.

A. less than 2.0 cm, erect

B. more than 2.0 cm, erect



C. less than 2.0 cm, inverted

D. more than 2.0 cm, inverted



Q70 General Science

A ray of light in air is incident at an angle of 45° on the surface separating air from a medium of refractive index $\sqrt{2}$. The ray is refracted in the medium at an angle of ____.

A. 15°

B. 30° ✓

C. 45°

D. 60°

Q71 General Science

Which disease in human beings is caused by UV radiation from the Sun?

A. Skin cancer ✓

B. Smallpox

C. Parkinson's disease

D. Pneumonia

Q72 General Science

Consider the below statements and identify the correct answer.

Statement-I: Dobereiner made the first observations on platinum as a catalyst and discovered similar triads of elements which led to the development of the periodic table of elements.

Statement-II: JW Dobereiner was the professor of chemistry and pharmacy at the University of Jena.

A. Both the statements are true. ✓

B. Both the statements are false.

C. Only statement I is true.

D. Only statement II is true.

Q73 General Science

What kind of resources are the fossil fuels coal and petroleum?

A. Exhaustible and renewable

B. Exhaustible and non-renewable ✓

C. Inexhaustible

D. Renewable



Q74 General Science

During fermentation in yeast, pyruvate is converted into which of the following products?

- A. Glucose and carbon dioxide
- B. Ethanol and carbon dioxide
- C. Water and carbon dioxide
- D. Lactic acid and carbon dioxide



Q75 General Science

If the armature of an AC generator is rotated faster, then:

- A. induced potential difference decreases
- B. induced potential difference increases
- C. induced current decreases
- D. there is no change in induced current



Q76 General Science

Which of the following molecules has three carbon atoms in it?

- A. Pyruvic acid
- B. Carbon dioxide
- C. Glucose
- D. Ethanol



Q77 General Science

If a $4\ \Omega$ resistor is connected to a 12 V battery, then the power consumed is:

- A. 3 Watt
- B. 9 Watt
- C. 36 Watt
- D. 1.25 Watt



Q78 General Science

_____ refers to the cessation of menstruation.

- A. Menopause
- B. Menarche
- C. Menses
- D. Hypermenorrhea

Q79 General Science

The area around a magnet in which force is exerted by the magnet is called:

- A. pole
- B. magnetic lines
- C. magnetic field
- D. magnetic material

Q80 General Science

Reactions in which there is an exchange of ions between the reactants are called:

- A. displacement reactions
- B. double displacement reactions
- C. precipitation reactions
- D. exchange reactions

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Jawaharlal Nehru classified which of the following Acts as 'a new charter of slavery'?

- A. Government of India Act, 1919
- B. Government of India Act, 1935
- C. The Charter Act, 1853
- D. Rowlatt Act



Q82 General Awareness and Current Affairs

The three-tier system of Panchayati Raj was first recommended by the _____ in 1957.

A. Balwant Rai Mehta Committee



B. Ashok Mehta Committee

C. GKV Rao Committee

D. Singhvi Committee

Q83 General Awareness and Current Affairs

Which of the following is the scheme of interest subsidy on educational loans for overseas studies for students belonging to the minority communities?

A. Padho Videsh

B. Padho Pardesh



C. Naya Savera

D. Nai Udaan

Q84 General Awareness and Current Affairs

Which of the following is a public sector bank in India?

A. IndusInd Bank

B. Tamilnad Mercantile Bank

C. Indian Overseas Bank



D. Bandhan Bank

Q85 General Awareness and Current Affairs

Shri Lal Bahadur Shastri National Sanskrit University is located at _____.

A. Dehradun

B. New Delhi



C. Jaipur

D. Lucknow



Q86 General Awareness and Current Affairs

The Constitution divided the powers between the Centre and the States in the terms of _____ lists.

- A. 2
- B. 3
- C. 4
- D. 5



Q87 General Awareness and Current Affairs

In Economics, $\text{Total variable cost} \div \text{Units of output produced} = \underline{\hspace{2cm}}$.

- A. Average fixed cost
- B. Average variable cost
- C. Total product
- D. Average product



Q88 General Awareness and Current Affairs

The river when in its lower course while entering the sea splits into numerous smaller channels known as _____.

- A. tributaries
- B. distributaries
- C. gorges
- D. arêtes



Q89 General Awareness and Current Affairs

The Fundamental Duties of Indian citizens are found in which Article of the Constitution of India?

- A. Article 244
- B. Article 307
- C. Article 13
- D. Article 51A



Q90 General Awareness and Current Affairs

According to Global MPI 2021, India's rank is _____ out of 109 countries.

A. 66



B. 87

C. 96

D. 99

Q91 General Awareness and Current Affairs

In January 2022, who launched NIPER Research Portal?

A. Narendra Modi

B. Mansukh Mandaviya



C. Amit Shah

D. Piyush Goyal

Q92 General Awareness and Current Affairs

Which of the following Fundamental Rights stands violated in a hypothetical situation where an officer of the armed forces is not promoted because she is a woman?

A. Right against Exploitation

B. Right to Equality



C. Right to Constitutional Remedies

D. Right to Freedom



Q93 General Awareness and Current Affairs

Tamil, the official and most prominent language of Tamil Nadu, is a member of _____ language family.

A. Dravidian



B. Munda

C. Indo-Aryan

D. Kra–Dai

Q94 General Awareness and Current Affairs

Which of the following festivals is celebrated in the month of January every year?

A. Pongal



B. Ugadi

C. Gudi Padwa

D. Onam

Q95 General Awareness and Current Affairs

Where is India's only confirmed active volcano located, which lies about 135 km south of the Andaman and Nicobar Island's capital, Port Blair?

A. Barren Island



B. Havelock island

C. Neill Island

D. Wilson Island

Q96 General Awareness and Current Affairs

Which player among the following won individual silver medal in the women's 10 m air pistol event in International Shooting Sport Federation (ISSF) World Cup 2022?

A. Rajshree Sancheti

B. Esha Singh



C. Shreya Aggarwal

D. Manu Bhaker



Q97 General Awareness and Current Affairs

India is a member of the General Agreement on Tariffs and Trade (GATT) since _____.

A. 1948



B. 1962

C. 1985

D. 1990

Q98 General Awareness and Current Affairs

Which city of India will host the 2023 International Olympic Committee Session?

A. Chennai

B. Shimla

C. Mumbai



D. Guwahati

Q99 General Awareness and Current Affairs

Which of the following companies launched India's first hydrogen fuel cell-powered electric car in March 2022?

A. Tata Motors Limited

B. Hyundai Motor India Limited

C. Renault India Private Limited

D. Toyota Kirloskar Motor Private Limited



Q100 General Awareness and Current Affairs

'e-RUPI' is a _____ based payments system to promote cashless transactions, launched by the National Payments Corporation of India (NPCI) in 2021.

A. voucher



B. credit card

C. mobile wallet

D. debit card



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The value of $22 \times (63 \div 7) \div 6 - \{7 \times 5 + 4 - (3 - 5) \div 2\}$ is:

A. -7



B. -9

C. 7

D. 11

Q2 Mathematics

The length, the breadth and the height of a closed cuboidal box are 2.5 m, 2 m and 90 cm, respectively. What would be the cost of a canvas needed to cover this box completely, if the cost of the canvas is ₹80 per m^2 ?

A. ₹1,448



B. ₹1,502

C. ₹1,600

D. ₹1,750

Q3 Mathematics

A, B and C together can complete a certain work in 40 days. B and C together can complete the same work in 60 days. B is 25% more efficient than A. A, B and C work together for 30 days. B alone will complete the remaining work in:

A. 20 days

B. 24 days



C. 30 days

D. 32 days



Q4 Mathematics

A and B can do a work alone in 30 days and 40 days, respectively. In how many days will the work be completed if they work on alternate days, starting with B on the first day?

A. $17\frac{1}{3}$ days

B. $17\frac{1}{7}$ days

C. $34\frac{1}{3}$ days



D. $34\frac{2}{3}$ days

Q5 Mathematics

The smallest four-digit number that is exactly divisible by each of 24, 40 and 56 is:

A. 1080

B. 1170

C. 1260

D. 1680

**Q6 Mathematics**

If $(-7)^{2k+1}(-7)^5 = (-7)^{12}$, then k is:

A. -2

B. -3

C. 2

D. 3

**Q7 Mathematics**

The speed of a stream is 4 km/h. A boat can go 40 km downstream and 12 km upstream in 4 hours. What is the speed (in km/h) of the boat in still water?

A. 10

B. 12



C. 14

D. 16



Q8 Mathematics

The value of $\frac{1\frac{2}{3} + 2\frac{1}{2} \times \frac{2}{3}}{5 - 4\frac{1}{2} \div \frac{3}{2}}$ is:

A. $1\frac{2}{3}$



B. $2\frac{1}{3}$

C. $3\frac{1}{3}$

D. $4\frac{2}{3}$

Q9 Mathematics

Four friends Ahmed, Suman, Raj and Madhu, started their own garment shops.

Ahmed provides successive discounts of 6% and 5%.

Suman offers successive discounts of 2% and 5%

Raj offers successive discounts 7% and 2% and Madhu offers successive discounts 5% and 4%.

Who is giving highest total discount to the customers?

A. Ahmed



B. Raj

C. Suman

D. Madhu

Q10 Mathematics

The LCM of the numbers 5, 12.5 and 0.05 is:

A. 1.25

B. 25



C. 12.5

D. 125



Q11 Mathematics

$\frac{\sin\theta(1+\cos\theta)}{1+\cos\theta-\sin^2\theta} \times (\sec\theta + \tan\theta)(1 - \sin\theta), 0^\circ < \theta < 90^\circ$, is equal to :

A. $\cos \theta$

B. $\sin \theta$

C. $\sec \theta$

D. $\operatorname{cosec} \theta$

Q12 Mathematics

12 years ago, the age of father was 28 years more than twice his son's age. After how many years, from now, will he be twice his son's age?

A. 14

B. 15

C. 16

D. 18

Q13 Mathematics

The lengths of the diagonals of a rhombus are 16 cm and 12 cm. The length of the side of the rhombus is:

A. 20 cm

B. 8 cm

C. 10 cm

D. 9 cm

Q14 Mathematics

A man loses 12% by selling an article for ₹330. If he sells it for ₹367.50, what will be his gain/loss percentage?

A. Gain, 2%

B. Loss, 2%

C. Gain, 4%

D. Loss, 4%



Q15 Mathematics

The price (per litre) of petrol increases by 52%. By what percent should its consumption be reduced such that the expenditure on it increases by 14% only?

A. 38%

B. 35%

C. 30%

D. 25%



Q16 Mathematics

If the median of a data is 24.12 less than its mode, then the median of the data exceeds its mean by _____. (Use the empirical formula to find the answer)

A. 16.08

B. 12.06

C. 6.03

D. 8.04



Q17 Mathematics

The total surface area of a cube having side 5 cm is:

A. 325 cm^2

B. 225 cm^2

C. 250 cm^2

D. 150 cm^2



Q18 Mathematics

In a triangle ABC if $\angle ABC = 90^\circ$ and $BA = BC$, then the angles of A and C respectively are:

A. $80^\circ, 70^\circ$

B. $80^\circ, 60^\circ$

C. $50^\circ, 40^\circ$

D. $45^\circ, 45^\circ$



Q19 Mathematics

The amount on a sum of ₹2,400 at 5% per annum compound interest, compounded annually, in 2 years will be:

A. ₹5,646

B. ₹4,646

C. ₹3,646

D. ₹2,646

**Q20** Mathematics

The cost of 4 pens and 3 notebooks is ₹150. The cost of 5 notebooks exceeds the cost of 6 pens by ₹41. What is the cost of 3 pens and 2 notebooks?

A. ₹110.50

B. ₹109.00

C. ₹104.00

D. ₹105.50

**Q21** Mathematics

A dealer buys two articles X and Y for ₹600 each. He marks each of them at the same price. He sells X by giving two successive discounts of 25% and 15% and still earns ₹216 as profit. If he sells Y at a single discount of 46%, then what is the profit percentage on Y?

A. 14%

B. 14.5%

C. 15%

D. 15.2%

**Q22** Mathematics

The heights of six students in a school are 160 cm, 175 cm, 142 cm, 136 cm, 148 cm, and 182 cm. Find the mean of their heights (in cm) (Rounded off to 2 decimal places).

A. 147.57

B. 152.55

C. 157.17

D. 160.47



Q23 Mathematics

The difference in the measures of two complementary angles is 24° . Find the measure of the greater angle.

- A. 33°
- B. 43°
- C. 55°
- D. 57°

**Q24** Mathematics

A bag contains ₹2, ₹5 and ₹10 coins in the ratio 5 : 7 : 8, amounting to a total of ₹1250. The number of ₹5 coins in the bag are:

- A. 70
- B. 84
- C. 78
- D. 91

**Q25** Mathematics

If a and b are the roots of the equation $x^2 + 3x - 4 = 0$, then the value of $\frac{1}{a} + \frac{1}{b} + ab$ is:

- A. $\frac{12}{5}$
- B. $-\frac{12}{5}$
- C. $\frac{13}{4}$
- D. $-\frac{13}{4}$

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

All 35 students of a class are standing in a straight row facing north. Ram is 17th from the right end, while Rakesh is 17th from the left end. Sonu is exactly between Ram and Rakesh. What is the position of Sonu from left end?

- A. 12th
- B. 3rd
- C. 18th
- D. 20th



Q27 General Intelligence and Reasoning

Amongst six friends A, L, V, P, Q and M, each has a different height. P is taller than only four other friends. V is taller than only one friend. Q is taller than M but shorter than A. A is not the tallest. Who is the shortest among all the friends?

A. Q

B. L

C. M



D. P

Q28 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word ABDUCENT is arranged in alphabetical order?

A. 2



B. 3

C. 5

D. 6

Q29 General Intelligence and Reasoning

When Rishabh started walking at dusk he was facing the sun. After some time he met his friend Sunil. After talking to him, Rishabh turned towards the right. After walking for some time he took a left turn from the next crossroad and finally turned towards his left. In which direction is Rishabh walking now? (All turns are 90 degree turns only)

A. East

B. West

C. North

D. South



Q30 General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. P is taller than only one friend. S is taller than only three friends. R is taller than P but shorter than Q. U is taller than Q. Who is the shortest among all the friends?

A. R

B. T



C. U

D. Q



Q31 General Intelligence and Reasoning

In a certain code language, 'ADOPT' is written as 'CGSUZ' and 'AGAIN' is written as 'CJENT'. How will 'BOOST' be written in that language?

A. DRSZX

B. DRSXX

C. DRSXZ



D. DRXZS

Q32 General Intelligence and Reasoning

If 1 is subtracted from each odd digit and 2 is added to each even digit in the number 2965413, what will be the average of the largest and smallest digits thus formed?

A. 8

B. 6

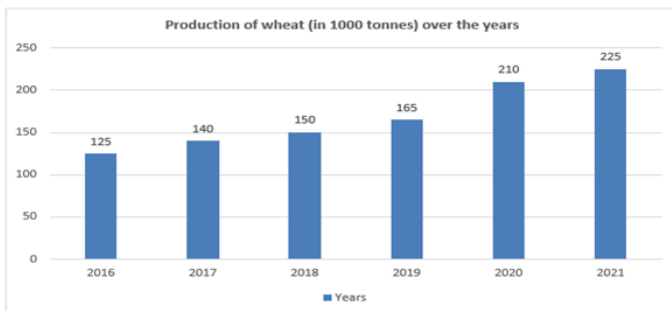
C. 4



D. 2

Q33 General Intelligence and Reasoning

The following bar chart shows the data of production of wheat in the duration of six years. Study the bar chart and answer the question based on it.



In which year there was maximum percentage increase in production as compared to the previous year?

A. 2018

B. 2019

C. 2020



D. 2021



Q34 General Intelligence and Reasoning

A, B, C, D and E live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 5.

B lives on an even numbered floor but not on floor number 4. Only two people live between A and E. D lives immediately below A. Who lives on floor number 5?

A. A

B. C



C. D

D. B

Q35 General Intelligence and Reasoning

If

@ means 'multiplication',

% means 'subtraction',

\$ means 'addition', and,

& means 'division',

then $28 \& 7 @ 8 \% 6 \$ 4 = ?$

A. 31

B. 30



C. 32

D. 33

Q36 General Intelligence and Reasoning

Starting from his house, Bheema walks 5 m towards the west, then turns left and walks 50 m, and then turns right and walks 30 m to reach his school. In which direction is the school from his house? (All turns are 90 degree turns only)

A. South-east

B. South-west



C. North-east

D. North



Q37 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the middle of the sides. D sits third to the left of E. D sits at one of the corners. H does not sit at any of the corners. G sits second to the right of H. H is not an immediate neighbour of D. Only three people sit between B and A. B is an immediate neighbour of F. B does not sit at any of the middle of the sides.

Who sits third to the left of G?

A. C



B. B

C. H

D. D

Q38 General Intelligence and Reasoning

If 1 is subtracted from each odd digit and 2 is added to each even digit in the number 6472311, what will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

A. 6



B. 7

C. 8

D. 9

Q39 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

19, 26, 40, 61, 89, ?

A. 125

B. 124



C. 130

D. 126



Q40 General Intelligence and Reasoning

In a certain code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	1	!	2	@	3	#	4	\$	5	%	6	^	7	&	8	*	9
Code	T	D	C	R	G	B	Y	H	N	J	P	L	Q	S	D	F	Z

Conditions:

- I. If the first element is an even number and the last is an odd number, the code for the first and last elements will be K.
- II. If both the second and third elements are even numbers, the codes for these two are to be interchanged.
- III. If the first element is a number and the last a symbol, the number code is to be used for the symbol also.

What will be the code for 6\$8^&3 ?

A. KHDLSG

B. PHDLSG

C. KHDLSK



D. GHDLSP

Q41 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. Some mountains are hills.
2. Some hills are rocks.
3. All rocks are black.

Conclusions:

- I. Some black are hills.
- II. All hills are mountains is a possibility.
- III. Some rocks are not mountains.

A. Only conclusion I is true

B. Only conclusion II is true

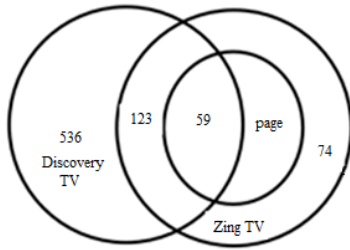
C. Only conclusion III is true

D. Only conclusion I and II are true



Q42 General Intelligence and Reasoning

Study the following Venn diagram and answer the question that follows. The diagram represents the favourite channels of kids.



The ratio of kids who like only Discovery TV to those who like all the three, is:

- A. 123/59
- B. 59/536
- C. 536/59
- D. 59/123

**Q43** General Intelligence and Reasoning

Each of the letters in the word 'CONFIRM' is arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter which is fourth from the left and the one which is second from the right in the new word thus formed?

- A. 1
- B. 2
- C. 3
- D. 4

**Q44** General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

4 : 6 :: 8 : 14 :: 16 : ?

- A. 20
- B. 22
- C. 30
- D. 18



Q45 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

44, 50, 45, 49, 46, 48, ?

A. 50

B. 46

C. 49

D. 47



Q46 General Intelligence and Reasoning

8 persons P, Q, R, S, T, U, V and W are seated around a square table facing the centre of the table in such a way that four of them sit at four corners of the table while the other four sit in the middle of each of the four sides. Out of the 8 persons, there are 3 females who are not an immediate neighbour to each other. U, who is a female, is the immediate neighbour of V and W. Q is the immediate neighbour of both S and V. R, a female, is second to the left of Q. V, a male, is 3rd to the left of T, who is a female. How many persons are seated between P and V when counted from the left of P?

A. One

B. Two

C. Three



D. Four

Q47 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

21UDA, 18BKH, 15IRO, 12PYV, ?

A. 9WFC



B. 7FCW

C. 7WFC

D. 9FCW

Q48 General Intelligence and Reasoning

Refer to the following number series and answer the question.

7 2 9 6 3 8 3 8 7 7 3 2 7 3 2 2 1 3 3 9 9 7 4 9 9 0 9

Find the sum of number of occurrences of 7s and number of occurrences of 9s in the given series.

A. 7

B. 11



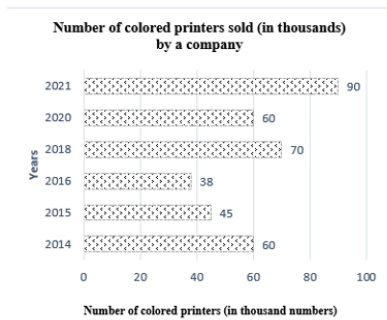
C. 14

D. 5



Q49 General Intelligence and Reasoning

The given bar chart shows number of color printers sold by a company in the years 2014, 2015, 2016, 2018, 2020 and 2021. Study the given bar chart and answer the question.



The number of coloured printers sold in 2015 is approximately what percentage of the number of coloured printers sold in 2021?

- A. 55%
- B. 42%
- C. 45%
- D. 50%

**Q50** General Intelligence and Reasoning

Q, W, E, R, T and Y live on seven different floors of the same building with one floor being vacant. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 7. T lives on the 7th floor, and W lives on the 1st floor. Only Y lives between R and W and there is no vacant floor between R and W. The 5th floor is occupied by E. Only Q lives between T and E. Which floor is vacant?

- A. 6
- B. 4
- C. 3
- D. 2

**Q51** General Intelligence and Reasoning

If 3 January 2006 is a Tuesday, then what will be the day of the week on 15 June 2010?

- A. Wednesday
- B. Thursday
- C. Tuesday
- D. Sunday



Q52 General Intelligence and Reasoning

PF 13 is related to MC 20 in a certain way. In the same way, LR 19 is related to IO 26. To which of the following is XJ 25 related following the same logic?

A. UG 32



B. GU 32

C. UG 33

D. VG 32

Q53 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. Some sports are cricket.
2. Some cricket are tennis.
3. All tennis are balls.

Conclusions:

- I. Some tennis are sports.
- II. Some balls are sports.
- III. Some balls are cricket.

A. Only conclusion I is true

B. Only conclusion II is true

C. Only conclusion III is true



D. Only conclusion I and II are true

Q54 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

198 : 18 :: 253 : 23 :: 44 : ?

A. 13

B. 4



C. 15

D. 5



Q55 General Intelligence and Reasoning

Given below is a statement followed by two possible underlying assumptions I and II. Read the information carefully and select the correct option.

Statement:

Although The fashion brand 'Pick2wear' failed miserably in country X, it will surely make huge profits in a country with a higher average age like country T.

Which of the following can be assumed by the given statement?

- I. The percentage of older people are more in country T as compared to country X.
- II. 'Pick2Wear' usually does not suit the dressing preferences of youngsters.

- A. Only I can be assumed
- B. Only II can be assumed
- C. Both I and II can be assumed
- D. Neither I nor II can be assumed



General Science

25 Questions • Answer Key

Q56 General Science

Which of the following salts is used in black and white photography?

- A. KBr
- B. AgBr
- C. $AgNO_3$
- D. NaBr



Q57 General Science

An object is placed in front of a concave mirror of focal length 20 cm, at a distance of 30 cm. Its image is formed at a distance of _____ and is _____.

- A. 12 cm, real
- B. 12 cm, virtual
- C. 60 cm, real
- D. 60 cm, virtual



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Q58 General Science

What are the reasons for decline in the number and species of wildlife?

- a. Demand for hides and meat
- b. Deforestation resulting in lack of food and space
- c. Keeping the animals in protected areas
- d. Making and supporting laws for conserving the habitats
- e. Natural calamities like floods and earthquakes

A. Only c

B. Only d

C. a, b and e



D. Only c and d

Q59 General Science

All the veins in the human circulatory system carry blood towards the heart. What is the difference between a pulmonary vein and other veins?

A. Pulmonary vein carries oxygenated blood



B. Blood flows with pressure in the pulmonary vein

C. Pulmonary vein has a small lumen

D. Pulmonary vein has no valves

Q60 General Science

If P, F and C represent the pole, principal focus and centre of curvature, respectively, of a concave mirror, then PC is equal to:

A. $\left(\frac{1}{4}\right)$ PF

B. $\left(\frac{1}{2}\right)$ PF

C. 2PF



D. 4PF



Q61 General Science

Two resistors, A of $10\ \Omega$ and B of $20\ \Omega$, are connected in series with a battery of 6 V. If V_1 and V_2 are the potential drops across A and B and I_1 and I_2 are the currents through them, respectively, then (V_1/V_2) and (I_1/I_2) are respectively _____.

A. $(\frac{1}{2})$ and $(\frac{1}{2})$

B. 2 and 1

C. $(\frac{1}{2})$ and 1



D. 2 and $(\frac{1}{2})$

Q62 General Science

The method of balancing a chemical equation is called:

A. molar method

B. equivalent method

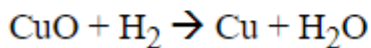
C. hit and trial method



D. chemical method

Q63 General Science

In the following chemical reaction, which chemical species is getting oxidised?



A. CuO

B. H_2



C. H_2O

D. Cu

Q64 General Science

Which cells in the xylem are responsible for storing food?

A. Tracheids

B. Parenchyma



C. Vessels

D. Xylem fibres



Q65 General Science

Select the incorrect statements from among the following.

- i. When Mendeléeiev started his work on the periodic table, 63 elements were known.
- ii. Mendeléeiev concentrated on the compounds formed by elements with oxygen and hydrogen.
- iii. Mendeléeiev examined the relationship between the atomic numbers of the elements.
- iv. Mendeléeiev examined the relationship between the physical and chemical properties of the elements.

A. iv

B. iii



C. ii

D. i

Q66 General Science

The angle of incidence for a ray of light incident on a glass slab along its normal, is:

A. 0°



B. 30°

C. 45°

D. 90°

Q67 General Science

All of the following statements about usage of contraceptive devices are true except one. Select the INCORRECT option.

A. They are practiced against natural reproductive events.

B. They are used to prevent or delay pregnancy.

C. They have no side effects.



D. They have significant role in checking uncontrolled growth of population.



Q68 General Science

Four wires of the same material are connected like beads of a garland. The equivalent resistance of the garland will:

- A. remain same
- B. become four times
- C. become one-fourth
- D. become double

Q69 General Science

A science book depicts magnetic field lines around two bar magnets marked A and B. In A, six lines enter into its south pole, and from B, three lines emerge from its north pole. The strength of A is _____ that of B.

- A. is the same as
- B. four times
- C. twice
- D. half

Q70 General Science

Metabolic wastes are excreted by aquatic plants via _____.

- A. diffusion
- B. osmosis
- C. active transport
- D. storing

Q71 General Science

During each breathing cycle, when air is taken in and thrown out, the lungs always contain some amount of air so that there is sufficient time for oxygen to be absorbed and carbon dioxide to be released. What is this amount of air called?

- A. Residual volume
- B. Pulmonary volume
- C. Alveolar volume
- D. Breathing volume



Q72 General Science

A true breeding tall pea plant with yellow seeds was crossed with a true breeding dwarf pea plant with green seeds. In the F1 generation, all the plants were tall. What conclusion can be drawn from this experiment?

- A. Parent plants were heterozygous.
- B. This shows independent assortment of genes.
- C. Tallness was dominant over dwarfness. ✓
- D. One parent plant was homozygous and the other was heterozygous.

Q73 General Science

From the organisms given below, select the top predator.

- A. Mouse
- B. Grasshopper
- C. Python
- D. Eagle ✓

Q74 General Science

Three resistors of $8\ \Omega$, $12\ \Omega$ and $24\ \Omega$ are connected in parallel. The resistance of the combination is:

- A. $4\ \Omega$ ✓
- B. $4.8\ \Omega$
- C. $8\ \Omega$
- D. $44\ \Omega$

Q75 General Science

An object is placed on the principal axis of a concave lens of focal length 15 cm, at a distance of 30 cm. Its image formed is at a distance of _____.

- A. 10 cm ✓
- B. 15 cm
- C. 20 cm
- D. 30 cm

Q76 General Science

Fleming's right-hand rule is used to find the direction of:

- A. electric field
- B. force
- C. potential
- D. induced current



Q77 General Science

Match the following:

matter	pH
i. human body	a. less than 5.6
ii. acid rain	b. less than 5.5
iii. mouth when tooth decay starts	c. 7 to 7.8

- A. i-a, ii-b, iii-c
- B. i-c, ii-b, iii-a
- C. i-c, ii-a, iii-b
- D. i-a, ii-c, iii-b



Q78 General Science

An element belongs to period 2 and group 2 the number of valence electrons in the atoms of this element is:

- A. 2
- B. 4
- C. 3
- D. 1



Q79 General Science

The sunflower plant grows best in a soil having a pH range of 6.2 to 6.7. If the soil in a garden has a pH of 5, which substance needs to be added to the soil in order to grow sunflower?

- A. Salt
- B. Lime
- C. Sand
- D. Compost

Q80 General Science

What is the total number of single bonds in cyclopentane?

- A. 5
- B. 10
- C. 12
- D. 15

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which god is worshipped during the Hindu festival, Chhath Puja?

- A. Lord Surya
- B. Lord Indra
- C. Lord Krishna
- D. Lord Ganesh

Q82 General Awareness and Current Affairs

Who among the following coined the term 'geography'?

- A. Eratosthenes
- B. Carl Ritter
- C. Ptolemy
- D. Al Idrisi



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Q83 General Awareness and Current Affairs

Which of the following teams won the Indian Super League title in March 2022?

- A. Hyderabad FC Football Club ✓
- B. Kerala Blasters Football Club
- C. Football Club Goa
- D. ATK Mohun Bagan Football Club

Q84 General Awareness and Current Affairs

What is Virgin Vegetation?

- A. Vegetation that is grown as a part of afforestation programme
- B. Plant community that has grown naturally without human aid and has been left undisturbed by humans for a long time ✓
- C. Plant community that has been grown by human aid
- D. Vegetation that is grown by humans

Q85 General Awareness and Current Affairs

What will be the value of elasticity of demand (e_D) if the demand curve has a shape of rectangular hyperbola?

- A. $|e_D| = 1$ ✓
- B. $|e_D| = 0$
- C. $|e_D| =$ Above 0 but less than 1
- D. $|e_D| =$ Always remains above 1

Q86 General Awareness and Current Affairs

Article 343(1) of the Constitution of India declares Hindi in _____ script as the official language of India.

- A. Indus
- B. Brahmi
- C. Devanagari ✓
- D. Kharosthi

Q87 General Awareness and Current Affairs

Which of the following types of government is the closest to the common people?

- A. Central Government
- B. Local Government
- C. Police Administration
- D. State Government



Q88 General Awareness and Current Affairs

What is the name of the helpline launched in May 2021, to provide psycho-social support for children affected during the COVID-19 Pandemic launched by NCPCR?

- A. Samvedna
- B. Sanyukti
- C. Aarambh
- D. Sukti



Q89 General Awareness and Current Affairs

Which of following statements is correct regarding the upper house of the Parliament of India?

- A. It is dissolved after every 3 years
- B. It is dissolved after every 5 years
- C. It is dissolved after every 6 years
- D. It is never dissolved



Q90 General Awareness and Current Affairs

ICC Women's International World Cup Cricket 2025 will be hosted by which of the following countries?

- A. India
- B. England
- C. Australia
- D. West Indies



Q91 General Awareness and Current Affairs

Which of the following is NOT an AGMARK qualified product?

- A. Vegetables
- B. Spices
- C. Honey
- D. Gold jewellery



Q92 General Awareness and Current Affairs

_____ and UNICEF India signed a Statement of Intent (SoI) on the Sustainable Development Goals (SDGs) with a focus on children in April 2022.

- A. Central Vigilance Commission
- B. Ministry of Home Affairs
- C. National Commission for Women
- D. NITI Aayog



Q93 General Awareness and Current Affairs

Which of the following is an example of the tertiary sector of employment?

- A. Farming
- B. Production of cotton cloth
- C. Teaching
- D. Forestry



Q94 General Awareness and Current Affairs

Who among the following was one of the two recipient of the Shanti Swarup Bhatnagar Award 2021 in 'Medical Science category'?

- A. Kanishka Biswas
- B. Arun Kumar Yadav
- C. Rohit Srivastava
- D. Amit Singh



Q95 General Awareness and Current Affairs

The Government of India Act, 1919, which introduced several reforms, was passed on the basis of which of the following reports/reforms?

- A. Morley-Minto Reforms
- B. Montague-Chelmsford Reforms
- C. Morley-Chelmsford Reforms
- D. Electorate Reforms



Q96 General Awareness and Current Affairs

The Hamsa Sampradaya is a prominent sect in which the followers mainly worship Lord _____.

- A. Shiva
- B. Indra
- C. Krishna and Radha
- D. Ram and Sita



Q97 General Awareness and Current Affairs

Locally known as _____ in India, the fruit of 'Emblica officinalis' is used in the manufacture of Chyavanprash.

- A. mahua
- B. amla
- C. aphim
- D. neem



Q98 General Awareness and Current Affairs

In January 2022, the Ministry of Environment, Forest and Climate Change announced the 'Action Plan for Introduction of _____ in India' whereby the extinct species is to be reintroduced in the country.

- A. Pink-headed duck
- B. Himalayan quail
- C. Cheetah
- D. Sumatran rhinoceros



Q99 General Awareness and Current Affairs

Article 15 of the Indian Constitution relates to the _____.

- A. Right to Education
- B. Right to Equality
- C. Right to Freedom
- D. Right against Exploitation



Q100 General Awareness and Current Affairs

Project _____, developed by DBT – National Brain Research Centre, Haryana, is a unique brain initiative for managing brain disorders.

- A. PRASAD
- B. SWADESH
- C. UDAAN
- D. AMRUT



Mathematics

25 Questions · Answer Key

Q1 Mathematics

A train crosses a telegraph post and a bridge of length 300 metres in 10 seconds and 20 seconds, respectively. Find the speed of the train.

- A. 69.5 km/h
- B. 75 km/h
- C. 89 km/h
- D. 108 km/h



Q2 Mathematics

The marked price of a cooker is same at four shops I, II, III and IV. Shop I allows two successive discounts of 20% and 15%, shop II allows successive discounts of 18% and 17%, shop III allows successive discounts of 25% and 10% and shop IV allows successive discounts of 15%, 15%, and 5% on the marked price of the cooker. Which shop is selling the cooker at the lowest price?

- A. I
- B. II
- C. III
- D. IV



Q3 Mathematics

Simplify the given expression.

$$\frac{3 - 5x^2}{1 - x^3} + \frac{1}{1 - x} - \frac{5x + 4}{1 + x + x^2}$$

- A. $\frac{x}{1 - x^3}$
- B. $\frac{2x}{1 - x^3}$
- C. $\frac{x^2}{1 - x^3}$
- D. $\frac{2x^2}{1 - x^3}$



Q4 Mathematics

A certain sum amounts to ₹98,494 at the rate of 15% per annum in 2 years, interest compounded 8-monthly. What will be the amount payable (in ₹) on the same sum at the same rate and in the same time, if the interest is compounded yearly?

A. 96,785

B. 96,578

C. 97,685

D. 97,865



Q5 Mathematics

A quadrilateral whose sides are equal and all angles between the sides are 90° is called a:

A. trapezium

B. rectangle

C. rhombus

D. square



Q6 Mathematics

A trader gains 25% by selling an article after two successive discounts of 25% and 10% on its marked price. If the cost price of the article is increased by 30%, then what single discount should he now give on the same marked price to get the same profit percentage as earlier?

A. 12.25%

B. 12.5%

C. 10.5%

D. 10%



Q7 Mathematics

A cistern has three pipes A, B and C. A and B alone can completely fill the cistern in 4 hours and 3 hours, respectively, and C can empty the completely filled cistern in 2 hours. If all the three pipes are opened simultaneously in the empty cistern, then the cistern will get completely full in:

A. 10 hours

B. 12 hours

C. 14 hours

D. 16 hours



Q8 Mathematics

Find the volume of a cube whose edge is 8 cm.

A. 521 cm^3

B. 264 cm^3

C. 512 cm^3 ✓

D. 256 cm^3

Q9 Mathematics

What is the median of the following distribution?

Class	100-150	150-200	200-250	250-300	300-350
Frequency	22	18	25	15	20

A. 210

B. 220 ✓

C. 225

D. 240

Q10 Mathematics

The value of $\left(\frac{x^a}{x^b}\right)^c \times \left(\frac{x^b}{x^c}\right)^a \times \left(\frac{x^c}{x^a}\right)^b$ is:

A. 0

B. 1 ✓

C. 2

D. 3

Q11 Mathematics

P spends 36% of his income on food items and 25% of the remaining amount on clothes, medical and conveyance. He saves half of the remaining amount every month. If he saves ₹1,80,000 every year, then find his monthly income.

A. ₹7,50,000

B. ₹6,50,040

C. ₹54,170

D. ₹62,500 ✓



Q12 Mathematics

ABCD is a trapezium in which $BC \parallel AD$ and $AC = CD$. If $\angle ABC = 98^\circ$ and $\angle BAC = 32^\circ$, then what is the measure of $\angle ACD$?

A. 65°

B. 70°

C. 75°

D. 80°

**Q13 Mathematics**

Rajani's father is three times older than Rajani and Rajani is twice as old as her sister Lavanya. Two years from now the sum of the given three person ages will be 60 years. Find the present age of Rajani.

A. 12 years



B. 8 years

C. 36 years

D. 13 years

Q14 Mathematics

In the given data, X is the size of a shirt and F denotes the sale per day. Which sized shirt is in most demand?

X	24	26	28	30	34	36	38	40	42
F	45	67	120	46	76	53	41	22	33

A. 42

B. 34

C. 40

D. 28

**Q15 Mathematics**

What is the smallest natural number that should be added to 1225 such that a remainder of 3 is left when the resulting number is divided by each of the numbers 12, 18, 21 and 28?

A. 35

B. 38



C. 41

D. 43



Q16 Mathematics

$$\frac{(\operatorname{cosec} \theta - \sin \theta)(\sec \theta - \cos \theta)(\tan \theta + \cot \theta)}{\cos \theta (\sec \theta - \tan \theta)^2 (\sec \theta + \tan \theta)} = \frac{1}{1-k}, 0^\circ < \theta < 90^\circ, \text{ then } k = ?$$

A. $\sin \theta$



B. $\cos \theta$

C. $\sec \theta$

D. $\cot \theta$

Q17 Mathematics

The volume of a cylinder having diameter 14 cm and height 5 cm is:

(Use $\pi = \frac{22}{7}$)

A. 990 cm^3

B. 880 cm^3

C. 770 cm^3



D. 660 cm^3

Q18 Mathematics

Which of the following is the least composite number?

A. 4



B. 3

C. 2

D. 1



Q19 Mathematics

Express $0.9\overline{87} - 0.7\overline{56}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{88}{165}$

B. $\frac{219}{495}$

C. $\frac{164}{495}$

D. $\frac{229}{990}$ ✓

Q20 Mathematics

The roots of the quadratic equation $x^2 - 4x + 3 = 0$ are:

A. 1 and 3 ✓

B. 1 and -3

C. -1 and 3

D. -1 and -3

Q21 Mathematics

The common root of the quadratic equations $2x^2 - 5x - 3 = 0$ and $x^2 + x - 12 = 0$ is:

A. 2

B. $-\frac{1}{2}$

C. -4

D. 3 ✓



Q22 Mathematics

Two pipes A and B can fill a tank in 21 hours and 18 hours, respectively. If both the pipes are opened simultaneously, then the time taken to fill the tank is:

A. $11\frac{27}{39}$ hours

B. $10\frac{27}{39}$ hours

C. $9\frac{27}{39}$ hours



D. $8\frac{27}{39}$ hours

Q23 Mathematics

Sujata buys 9 apples and 8 mangoes for ₹276. When the cost of an apple is decreased by 10% and that of a mango remains the same, then the cost of 5 apples and 10 mangoes is ₹210. What is the original cost of 4 apples and 3 mangoes?

A. ₹108

B. ₹116



C. ₹120

D. ₹123

Q24 Mathematics

Simplify the given expression.

$$\left(\frac{8}{125}\right)^{\frac{2}{3}} \times \left(\frac{27}{64}\right)^{-\frac{2}{3}} \div \left(\frac{5}{4}\right)^{-2}$$

A. $\frac{2}{3}$

B. $\frac{3}{5}$

C. $\frac{4}{9}$



D. $\frac{3}{8}$



Q25 Mathematics

The income of Raman is ₹45,000. He saves 12.5% of his income. If his income increases by 18% and expenditure increases by 20%, then his savings will:

A. increase by ₹225



B. decrease by ₹220

C. increase by ₹250

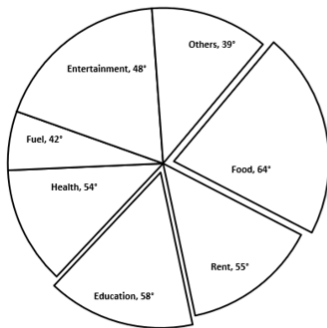
D. decrease by ₹215

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

The given circle graph shows the monthly budget of a middle-class family in the form of central angle. Study the circle graph and answer the question.



If the amount spent on food and education during a month was ₹15,000, then what was the total approximate amount spent in that month?

A. ₹30,500

B. ₹44,250



C. ₹45,000

D. ₹48,000

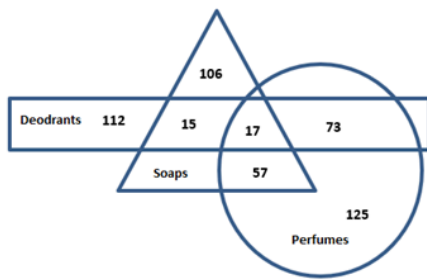


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Q27 General Intelligence and Reasoning

Study the following diagram and answer the question given below. The rectangle represents deodorants, the triangle represents Soaps, and the circle represents Perfumes.



How many perfumes are deodorants but not soaps?

- A. 112
- B. 15
- C. 17
- D. 73

**Q28** General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2, and so on till the topmost floor is numbered 6.

F lives on an even numbered floor but not on floor number 4. Only two people live between F and B. A lives immediately below E. E lives on an even numbered floor. Neither A nor D does not live on the lowermost floor. Who lives on floor number 4?

- A. D
- B. E
- C. C
- D. A

**Q29** General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(left) 221 293 320 423 426 (right)

(Example: 246 – first digit = 2, second digit = 4, third digit = 6)

NOTE – All operations to be done from left to right.

What will be the resultant if the second digit of the largest number is added to the first digit of the smallest number?

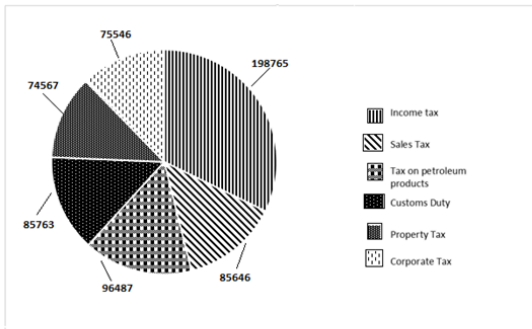
- A. 5
- B. 4
- C. 11
- D. 7



Q30 General Intelligence and Reasoning

Study the given pie-chart and answer the question that follows.

The graph presents the income of the government (in ₹ crore) through various sources.



Through which source does the government receive near about 15% of the total income?

A. Petroleum products



B. Sales tax

c. Customs duty

D. Corporate tax

Q31 General Intelligence and Reasoning

Which two numbers should be interchanged to make the following equation correct?

$$8 + 4 - (7 \times 5 - 6) \div 3 = 3.75$$

A. 8 and 5

B. 4 and 7

C. 3 and 4



D. 8 and 4



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Q32 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. Some teachers are professors.
2. Some researchers are teachers.
3. All professors are researchers.

Conclusions:

- I. Some teachers are researchers.
- II. Some researchers are professors.
- III. Some professors are teachers.

A. Conclusions I and II follow

B. Conclusions I and III follow

C. Conclusions II and III follow

D. Conclusions I, II and III follow



Q33 General Intelligence and Reasoning

Six friends Richa, Shobhna, Urmila, Swarna, Purnima, and Kavya, are sitting on a bench in the park. They all are facing south. Only four persons are sitting between Purnima and Richa. Swarna is sitting third to the left of Purnima. Richa and Swarna are immediate neighbour of Kavya. Purnima and Shobhna are immediate neighbours of Urmila. Who sits fourth to the left of Urmila?

A. Kavya

B. Shobhna

C. Swarna

D. Richa



Q34 General Intelligence and Reasoning

Given below is a decision followed by two statements I and II. Read the information carefully and select the correct option.

Decision:

The management of an international school P has requested all students and their parents to consider carpooling for travelling to school and minimise individual vehicles.

Statements:

I. Since most students use individual vehicles, traffic has been an increasing problem since the last few months.

II. The locality in which school P is located has reported three instances of car theft around midnight in the last four months.

- A. Statement I strengthens the decision but statement II is neutral. ☒
- B. Statement I weakens the decision but statement II strengthens the decision.
- C. Both statements I and II weaken the decision.
- D. Statement I is neutral but statement II strengthens the decision.

Q35 General Intelligence and Reasoning

Each of P, Q, R, S and T has an exam on a different day of a week, starting from Monday and ending on Friday of the same week.

Q has the exam on Thursday. Only one person has the exam between R and S. R has the exam on the day immediately before P. Who has the exam on Tuesday?

- A. S
- B. R
- C. P ☒
- D. T

Q36 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the middle of the sides. B sits third to the left of H. B sits at one of the corners. G does not sit at any of the corners. C sits second to the right of G. G is not an immediate neighbour of B. Only three people sit between D and E. D is an immediate neighbour of F. D does not sit at any of the middle of the sides.

Who sits second to the left of A?

- A. H
- B. D ☒
- C. F
- D. E



Q37 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$2.34 + 6.01 - (3.86 \div 1.91) + 2.01 \times 4.02 = ?$$

A. 14



B. 22

C. 86

D. 54

Q38 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question that follows.

(Left) H T Z C T & T * % 7 & Y % 6 U K & 2 R T 7 9 Y S 3 5 E * S & D 9 # 6 * (Right)

If all the numbers are dropped/deleted from the series, which of the following will be fourth to the left of sixth from the right?

A. T



B. Y

C. S

D. E

Q39 General Intelligence and Reasoning

Raghav starts from Point A and drives 25 km towards the north. He then takes a right turn, drives 19 km, turns right and drives 40 km. He then takes a right turn and drives 30 km. He takes a final right turn, drives 15 km and stops at Point P. How far and towards which direction should he drive in order to reach Point A from Point P in a straight line? (All turns are 90 degree turns only)

A. 7 km towards the north

B. 11 km towards the east



C. 15 km towards the west

D. 13 km towards the east



Q40 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

DO _ D _ OLDBOLD _ OL _

A. LCAO

B. LCAD



C. DCAD

D. LCOD

Q41 General Intelligence and Reasoning

Four friends K, L, M and N are playing on the playground. L is standing towards the east of K and is towards the north of M. M is standing towards the west of N's house. In which direction is N standing from K?

A. North-east

B. South-west

C. North-west

D. South-east



Q42 General Intelligence and Reasoning

In the given question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $Q = R \geq T > S < U = V$

Conclusions: I. $T \geq Q$

II. $T < V$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Neither conclusion I nor II is true



Q43 General Intelligence and Reasoning

In a certain code language, 'SOMEWHAT' is written as 'NRDLGVSZ' and 'SPECTRUM' is written as 'ORBDQSLT'. How will 'SITUATED' be written in that language?

A. HRTSZSCD

B. RHSTZSDC

C. HRTSSZCD



D. HTVUUBEF

Q44 General Intelligence and Reasoning

A certain number of people are sitting in a straight row, facing north. B is fourth to the left of G; F is fourth to the right of C and second to the left of K, who is fifth to the right of A. D is not an immediate neighbour of either K or B. There are only three persons between J and A. J and K are sitting at extreme ends. G is second to the right of C. If no other person is sitting in the row, What is the total number of persons seated?

A. Six

B. Seven

C. Eight

D. Ten



Q45 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

17, 19, 23, 29, 37, ?

A. 44

B. 45

C. 47



D. 48



Q46 General Intelligence and Reasoning

Refer to the following letter and symbol series and answer the question that follows.

(Left) & \$ T & J \$ X G ^ K € U % & Z Y # S @ * D X ¥ F o (Right)

How many such symbols are there in the series each of which is immediately preceded by a letter and immediately followed by a symbol?

A. None

B. 1

C. 2



D. 3

Q47 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

FLM : AGH :: MLK : HGF

A. RUG : MPB



B. FIN : ACJ

C. MAP : HWL

D. TED : PZX

Q48 General Intelligence and Reasoning

In a certain code language, 'I like holidays' is written as 'sf vg tu', 'summer holidays started' is written as 'nj tu mk' and 'I hate summer' is written as 'sf io nj'. What is the code for the word 'summer' in that language?

A. Io

B. vg

C. nj



D. tu



Q49 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 12 – Operations on 12 such as adding/subtracting/multiplying etc. to 12 can be performed. Breaking down 12 into 1 and 2 and then performing mathematical operations on 1 and 2 is not allowed)

(15, 360, 12)

(12, 120, 5)

A. (12, 4, 16)

B. (14, 84, 3)

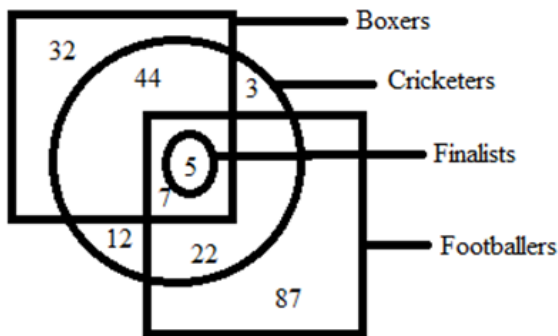


C. (13, 42, 3)

D. (15, 20, 30)

Q50 General Intelligence and Reasoning

Study the Venn Diagram given below and answer the question that follows.



How many cricketers are neither boxers nor footballers?

A. 20

B. 3

C. 15



D. 12



Q51 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) J * D 1 J 9 8 # Y W N P & 3 @ N L 2 E & H (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. 0

B. 1



C. 2

D. 3

Q52 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

1296, 6, 216, 36, 36, ?, 6

A. 48

B. 96

C. 144

D. 216



Q53 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully and decide which of the conclusions logically follow(s) from the statement(s).

Statements:

$T > R \geq A > C = F \leq I < L$

Conclusions:

I. $C < L$

II. $R > I$

A. Only conclusion I follows



B. Either conclusion I or II follows

C. Only conclusion II follows

D. Both conclusions I and II follow



Q54 General Intelligence and Reasoning

If each of the digits in the number 7058153 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. None



B. One

C. Two

D. Three

Q55 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

72 : 90 :: 110 : 132 :: 156 : ?

A. 180

B. 182



C. 190

D. 192

General Science

25 Questions • Answer Key

Q56 General Science

The values of potential drops across, and corresponding currents in, a resistor are given in the following table. If the resistor obeys Ohm's law, then the values of X and Y are respectively:

V (in volts)	0.8	1.6	X	3.2	4.0	4.8	5.6	6.4	7.2	8.0
I (in amperes)	0.2	0.4	0.6	0.8	1.0	Y	1.4	1.6	1.8	2.0

A. 1.2 and 0.3



B. 0.3 and 1.2

C. 1.1 and 0.3

D. 0.3 and 1.1



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Q57 General Science

A ray of light is incident on a convex mirror (pole P) of radius of curvature 12 cm, parallel to its principal axis. After reflection, it appears to come from a point Q on its principal axis. Following New Cartesian Sign Convention, PQ = _____.

A. 12 cm

B. -12 cm

C. 6 cm



D. -6 cm

Q58 General Science

Consider the following statements about magnetic field of a Bar Magnet

(a) It has magnitudes and directions both.

(b) Magnetic field lines are closed curves.

Which of the above statements is/are correct?

A. Only (a)

B. Only (b)

C. Both (a) and (b)



D. Neither (a) nor (b)

Q59 General Science

The kidney of a healthy adult produces 180 L of filtrate daily, but a person throws out only 1 L or 1.5 L of urine. The amount of filtrate reabsorbed depends on which factor/ factors?

A. Amount of excess water and amount of dissolved waste to be excreted



B. Amount of excess water

C. Amount of dissolved waste to be excreted

D. No effect of these factors



Q60 General Science

Which of the following optical phenomena can explain the visibility of the sun, two minutes prior to actual sunrise?

- A. Scattering of light
- B. Atmospheric refraction
- C. Dispersion of light
- D. Total Internal reflection



Q61 General Science

Three wires, A, B and C, of the same length and the same thickness have resistances of $0.5\ \Omega$, $0.2\ \Omega$ and $1.0\ \Omega$, respectively. Their resistivities are _____.

- A. equal
- B. in the ratio of 2 : 5 : 10
- C. in the ratio of 5 : 2 : 10
- D. in the ratio of 10 : 5 : 2



Q62 General Science

For a ray of light undergoing refraction through a triangular glass prism, which of the following statements is/are always correct?

- (a) Angle of incidence is the angle between the incident ray and normal at the point of incidence.
- (b) Angle of incidence is equal to angle of emergence.
- (c) Angle of deviation is the angle between incident ray and emergent ray.

- A. Only (a)
- B. Only (b)
- C. Both (a) and (c)
- D. Both (b) and (c)



Q63 General Science

Compound X is used in glass and soap industry. Ten molecules of water of crystallisation are present in this compound. The pH value of its solution is higher than 7. Identify compound X.

- A. Baking soda
- B. Washing soda
- C. Sodium hydroxide
- D. Bleaching powder



Q64 General Science

Which of the following cellular components are known as the protein factories of a cell?

- A. Mitochondria
- B. Chloroplasts
- C. Ribosomes
- D. Golgi bodies



Q65 General Science

How many oxygen atoms are present in one molecule of ozone?

- A. 4
- B. 3
- C. 2
- D. 1



Q66 General Science

Which of the following devices does NOT use an electric motor?

Electric fan, Electric mixer, Galvanometer, Computer

- A. Electric fan
- B. Galvanometer
- C. Computer
- D. Electric mixer



Q67 General Science

Which of the following statements is **INCORRECT** regarding the process of excretion in plants?

- A. Waste products may be stored in leaves that fall off.
- B. Waste products are stored in cellular vacuoles.
- C. Waste product of photosynthesis is stored as starch. ✓
- D. Waste products may be stored as resins and gums in old xylem.

Q68 General Science

Which of the following statements is **INCORRECT** with regard to forests?

- A. They provide variety of products
- B. They do not conserve soil ✓
- C. They conserve water
- D. They sustain huge diversity of flora and fauna

Q69 General Science

Chlorine, bromine and iodine make a Dobereiner's triad. The average of atomic masses of chlorine and Iodine would be close to _____.

- A. 94
- B. 131.25
- C. 79.9 ✓
- D. 162.5

Q70 General Science

Which of the following types of asexual reproduction is shown by the bread mould *Rhizopus*?

- A. Spore formation ✓
- B. Budding
- C. Fission
- D. Regeneration

Q71 General Science

Name the compound precipitated when the solutions of lead(II) nitrate and potassium iodide are mixed:

- A. Potassium oxide
- B. Lead oxide
- C. Lead iodide
- D. Potassium sulphate



Q72 General Science

Which of the following is NOT a use of baking soda?

- (i) to make drinking water free from germs
- (ii) in soda-acid fire extinguishers
- (iii) an ingredient in antacids

- A. only ii
- B. only iii
- C. only i
- D. ii and iii



Q73 General Science

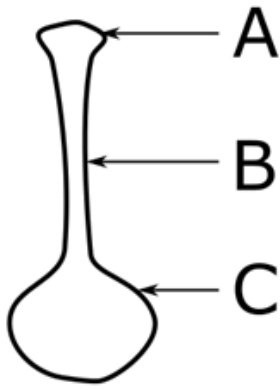
Corrosion is a type of:

- A. oxidation reaction
- B. decomposition reaction
- C. displacement reaction
- D. double displacement reaction



Q74 General Science

Identify the correct label for the following.



A. A – Anther; B – Filament; C – Ovary

B. A – Anther; B – Style; C – Ovary

C. A – Stigma; B – Style; C – Ovary



D. A – Stigma; B – Style; C – Sepal

Q75 General Science

The earth crust has only ____ carbon in the form of minerals.

A. 0.3%

B. 21%

C. 0.02%



D. 7.8%

Q76 General Science

The total number of isomers of butane and pentane, respectively, are:

A. 2, 3



B. 3, 4

C. 2, 4

D. 3, 3



Q77 General Science

The triad of group 2 metals consists of which of the following elements?

- A. F, Cl, I
- B. S, N, O
- C. C, Ca, Cu
- D. Ca, Sr, Ba



Q78 General Science

What is/are the balloon like structure(s) present in lungs, where exchange of gases take(s) place, called?

- A. Trachea
- B. Alveoli
- C. Bronchi
- D. Cilia



Q79 General Science

Three resistors of $2\ \Omega$, $3\ \Omega$ and $6\ \Omega$ are connected in series. The resistance of the combination is:

- A. $11\ \Omega$
- B. $8\ \Omega$
- C. $5\ \Omega$
- D. $1\ \Omega$



Q80 General Science

The S.I unit of focal length is:

- A. metre
- B. centimetre
- C. millimetre
- D. decimetre



Q81 General Awareness and Current Affairs

'Hind Swaraj' the title of the first definitive writing of which freedom fighter is still generating critical interest around the world?

A. Mahatma Gandhi



B. Jawaharlal Nehru

C. Dadabhai Naoroji

D. Lala Lajpat Rai

Q82 General Awareness and Current Affairs

The Lok Sabha passed the Family Courts' Amendment Bill in _____.

A. January 2022

B. September 2021

C. January 2021

D. July 2022

**Q83** General Awareness and Current Affairs

The temples at Khajuraho were built during which dynasty?

A. Gupta Dynasty

B. Chandella dynasty



C. Lodhi dynasty

D. Ghazni Dynasty



Q84 General Awareness and Current Affairs

A/an _____ is a draft of a proposed legislative law.

- A. Writ
- B. Bill
- C. Article
- D. Budget

Q85 General Awareness and Current Affairs

In September 2021 which state government among the following organized rural sports events in 75 of its districts ?

- A. Madhya Pradesh
- B. Uttar Pradesh
- C. Rajasthan
- D. Karnataka

Q86 General Awareness and Current Affairs

The total liability of the monetary authority of the country (Reserve Bank of India) is called the _____.

- A. Credit Reserve Ratio
- B. Narrow and Broad Money
- C. Base Money
- D. Currency Deposit Reserve

Q87 General Awareness and Current Affairs

What is the name of the new Water Management and Policy Centre that was inaugurated by the Principal Scientific Adviser to the Government of India, Prof. K. VijayRaghavan in March 2022?

- A. AquaMAP
- B. WaterMAP
- C. HydroMAP
- D. WetMAP



Q88 General Awareness and Current Affairs

Which of the following sectors was given maximum emphasis in the Second Five Year Plan?

- A. Community services
- B. Energy
- C. Industry
- D. Agriculture



Q89 General Awareness and Current Affairs

Which of the following measures is/are likely to be adopted by RBI to combat inflation?

- (A) Increase CRR.
- (B) Increase Repo Rate.

- A. Only A
- B. Only B
- C. Both A and B
- D. Neither A nor B



Q90 General Awareness and Current Affairs

India's border with which country runs 4,096.70 km (2,545.57 mi)?

- A. Bangladesh
- B. China
- C. Pakistan
- D. Nepal



Q91 General Awareness and Current Affairs

The measure of responsiveness of the demand for Tea towards the change in the price of Coffee in the market is an example of _____.

- A. Indirect Demand
- B. Direct Demand
- C. Cross Elasticity of Demand
- D. Composite Demand



Q92 General Awareness and Current Affairs

Which Article of the Constitution of India was amended in 2002 and a clause 'k' was inserted that said "who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years."?

A. Article 44 A

B. Article 51 A



C. Article 55B

D. Article 57B

Q93 General Awareness and Current Affairs

Transparency International has released the Corruption Perceptions Index (CPI) 2021. What is the rank of India in this index?

A. 83rd

B. 84th

C. 85th



D. 86th

Q94 General Awareness and Current Affairs

Which of the following universities won the Maulana Abul Kalam Azad (MAKA) Trophy 2021?

A. Chaudhary Devi Lal University

B. Panjab University



C. Guru Jambheshwar University of Science and Technology

D. Kurukshetra University



Q95 General Awareness and Current Affairs

The river _____ is a part of the Brahmaputra River System.

- A. Ramganga
- B. Lohit
- C. Kosi
- D. Gomti



Q96 General Awareness and Current Affairs

Which of the following languages was declared a classical language in the year 2014?

- A. Malayalam
- B. Odia
- C. Kannada
- D. Telugu



Q97 General Awareness and Current Affairs

When there are two houses of the legislature like India, it is called a _____ legislature.

- A. Supreme
- B. Unicameral
- C. Subordinate
- D. Bicameral



Q98 General Awareness and Current Affairs

The Nabakalebara festival is observed at the Jagannath Temple, Odisha. In this festival, new idols are made from neem logs and are replaced during the _____.

- A. Paryushana
- B. Maun Agiyaras
- C. Dasveh Patshah
- D. Adhik Masa



Q99 General Awareness and Current Affairs

With how many countries does India share its land boundaries?

A. 6

B. 7



C. 8

D. 12

Q100 General Awareness and Current Affairs

The BrahMos supersonic cruise missile, with increased indigenous content and improved performance, was successfully test-fired from the Integrated Test Range in _____ off the coast of Odisha at 1030 hours on 20 January 2022.

A. Chandipur



B. Puri

C. Paradip

D. Gopalpur-on-sea



Mathematics

25 Questions • Answer Key

Q1 Mathematics

At what rate per annum of simple interest will a sum of ₹7,500 become ₹9,250 in 7 years?

A. $6\frac{1}{3}\%$

B. $5\frac{1}{3}\%$

C. $4\frac{1}{3}\%$

D. $3\frac{1}{3}\%$ ✓

Q2 Mathematics

If α and β , where $\beta > \alpha$, are the roots of the equation $8x^2 + 22x - 21 = 0$, then what is the value of $(2\alpha + 3\beta)$?

A. $-\frac{21}{2}$

B. $\frac{21}{4}$

C. $-\frac{19}{4}$ ✓

D. $\frac{37}{2}$

Q3 Mathematics

The value of $(\sin A + \operatorname{cosec} A)^2 + (\cos A + \sec A)^2$ is:

A. $5 + \sec A + \operatorname{cosec} A$

B. $5 - \operatorname{cosec}^2 A + \sec^2 A$

C. $5 + \operatorname{cosec}^2 A - \sec^2 A$

D. $5 + \operatorname{cosec}^2 A + \sec^2 A$ ✓



Q4 Mathematics

The angles opposite to equal sides of a triangle are:

- A. equal
- B. unequal
- C. supplementary
- D. complementary

Q5 Mathematics

Nandan had some marbles. When he distributed the marbles equally among 15 children, he found that 2 marbles were left. Had he distributed the marbles equally among 24 children and 32 children, he still would have had 11 and 19 marbles, respectively, left with him. But when he distributed them equally among 31 children, no marble was left. The number of marbles that Nandan initially had may lie between:

- A. 2350 and 2360
- B. 2360 and 2370
- C. 2370 and 2380
- D. 2380 and 2390

Q6 Mathematics

A solid metallic sphere of radius 12 cm is melted and recast into 27 identical spheres. What is the ratio of the surface area of the original sphere to the total surface area of 6 smaller spheres so formed?

- A. 3 : 1
- B. 3 : 2
- C. 9 : 4
- D. 9 : 8

Q7 Mathematics

A straight angle is equal to

- A. 100°
- B. 90°
- C. 180°
- D. 0°



Q8 Mathematics

Express $4.5\overline{67}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $4\frac{63}{110}$

B. $4\frac{283}{495}$

C. $4\frac{94}{165}$

D. $4\frac{281}{495}$ ✓

Q9 Mathematics

A train crosses a pole in 80 seconds. If the speed of the train is 36 km/h, then the length of the train is:

A. 1200 metres

B. 1000 metres

C. 800 metres ✓

D. 600 metres

Q10 Mathematics

The sum of the ages of 6 children born at intervals of 2 years each is 42 years. What is the age of the eldest child?

A. 12 years ✓

B. 15 years

C. 16 years

D. 19 years

Q11 Mathematics

If $a = 50$, $b = 20$, find the value of $a^3 + b^3$.

A. 1,33,000 ✓

B. 1,75,000

C. 2,03,000

D. 1,56,000



Q12 Mathematics

The sides of a rectangular field are 77 m and 50 m long. Its area is equal to the area of a circular field. What is the perimeter (in m) of the circular field? (Take $\pi = \frac{22}{7}$)

A. 110

B. 165

C. 220



D. 330

Q13 Mathematics

The third proportional to 18 and 72 is:

A. 588

B. 488

C. 388

D. 288

**Q14** Mathematics

Convert 25 grams to kilograms, expressing the answer as a fraction.

A. $\frac{1}{400}$ kgB. $\frac{1}{4}$ kgC. $\frac{1}{40}$ kgD. $\frac{1}{4000}$ kg**Q15** Mathematics

Let x be the greatest number which, when divides 7072, 8505 and 9925, the remainders are 22, 45 and 55, respectively. What is the sum of the digits of x ?

A. 5

B. 6



C. 7

D. 8



Q16 Mathematics

A man covers a certain distance at a speed of 75 km/h in 8 hours. To cover the same distance in 6 hours, his speed needs to be:

- A. 300 km/h
- B. 200 km/h
- C. 150 km/h
- D. 100 km/h

**Q17** Mathematics

Sampark Kranti Express left Delhi for Chennai at 14:30 hours, travelling at a speed of 75 km/h, while Rajdhani Express left Delhi for Chennai on the same day at 16:30 hours, travelling at a speed of 90 km/h, travelling on the same route. How far away from Delhi will the two trains meet?

- A. 950 km
- B. 900 km
- C. 860 km
- D. 820 km

**Q18** Mathematics

The ratio of incomes of Seema and Darshan is 7 : 5. They save ₹12,000 and ₹9,000, respectively. If the ratio of their expenditures is 17 : 12, then what is the total expenditure (in ₹) of Seema and Darshan?

- A. 75,000
- B. 81,000
- C. 87,000
- D. 93,000

**Q19** Mathematics

The mode and median of a data is 23.6 and 24, respectively. What is the mean of the data? (Use empirical formula.)

- A. 23.2
- B. 23.6
- C. 24.2
- D. 24.8



Q20 Mathematics

The roots of the quadratic equation $x^2 - \frac{11x}{2} + 6 = 0$ are

- A. $4/3$ and $3/2$
- B. 4 and $3/2$ ✓
- C. 2 and $3/2$
- D. 2 and $4/3$

Q21 Mathematics

A shopkeeper offers the following schemes on toys of the same marked price.

- (A) Successive discounts of 12% and 15% on any number of toys bought.
- (B) Successive discounts of 15%, 10% and 2% on any number of toys bought.
- (C) 40% discount on the first 3 toys and 15% discount on each toy thereon.
- (D) 2 toys free of cost on buying 10 toys.

A customer wants to buy 10 toys. Which of the above schemes is most beneficial to her?

- A. (A) ✓
- B. (B)
- C. (C)
- D. (D)

Q22 Mathematics

If $P = \frac{x^4 - 8x}{2x^2 + 5x - 3} \times \frac{2x - 1}{x^2 + 2x + 4} \times \frac{x^2 - 9}{x^2 - 2x}$, then $(P^2 - 1)$ is equal to:

- A. $x^2 + 6x + 8$
- B. $x^2 - 6x + 10$
- C. $x^2 + 6x + 10$
- D. $x^2 - 6x + 8$ ✓



Q23 Mathematics

The value of $\left[89 - \left(\frac{336}{301}\right) \times \left\{68 - \left(50 \div 3 + \frac{7}{6}\right)\right\} + 67\right]$ is:

A. 120

B. 110

C. 100



D. 90

Q24 Mathematics

The average marks of three batches of 25, 31 and 41 students is 20, 26 and 56, respectively. Find the average marks of all the students (rounded off to two places of decimal).

A. 35.45

B. 35.78

C. 36.92

D. 37.13

**Q25 Mathematics**

During a sale $66\frac{2}{3}\%$ of the goods are sold at 26% profit, 25% of the remaining goods are sold at 20% profit and the still remaining goods are sold at a loss of 40%. If there is an overall profit of $x\%$, then what is the value of x ?

A. 8

B. 8.5

C. 9



D. 9.5

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

D & C N E ^ & G ^ Y % % @ G Y & I & * H K Z

How many vowels are there that are immediately followed by a symbol?

A. None

B. One

C. Two



D. Three



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Q27 General Intelligence and Reasoning

In a certain code language, 'CLIMATE' is written as 'DUZNHMD' and 'COMPLEX' is written as 'YDMQNND'. How will 'DISPLAY' be written in that language?

A. ZBMQTJE

B. EJTQMBZ

C. ZZMQTHE



D. ZZMOTHE

Q28 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) S \$ 3 & H P W 8 # J * M 2 F A 2 \$ Y 1 V (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. 0

B. 1



C. 2

D. 3

Q29 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 6, the floor above it is numbered 5, and so on till the topmost floor is numbered 1.

B lives on an odd numbered floor but not on floor number 3. Neither D nor E lives on the lowermost floor. A lives on an odd numbered floor and is immediately above D. C lives on floor number 5. Who lives on floor number 2?

A. D

B. E



C. B

D. F



Q30 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $Q \leq S \leq C < F > T \geq H > M$

A. $Q > H$

B. $T > M$



C. $S \geq F$

D. $C = H$

Q31 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$11 : 132 :: 12 : 156 :: 13 : ?$

A. 180

B. 182



C. 190

D. 196

Q32 General Intelligence and Reasoning

Seven friends Rekha, Bharti, Shilpi, Jai, Tarun, Ravi, and Nausheen have their houses on seven different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 7. Five people live between the floors where Jai and Rekha live. There are two floors between Tarun's and Ravi's house. Tarun lives on one of the floors below Ravi's floor. Ravi's house is not at the top floor. Nausheen's house is just above Tarun's house. Only two people live between Nausheen's and Jai's house. Only two people are above Bharti's house. Who among the following lives on floor number 4?

A. Bharti

B. Tarun

C. Nausheen



D. Jai



Q33 General Intelligence and Reasoning

Pole P is to the north of pole R. Pole Q is to the east of pole R and north of pole S. What is the position of pole R with respect to pole S?

- A. North
- B. South
- C. South-west
- D. North-west



Q34 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. B is taller than only two other friends. C is shorter than only one friend. E is shorter than B but taller than F. A is shorter than D. Who is the second shortest among all the friends?

- A. B
- B. E
- C. F
- D. D



Q35 General Intelligence and Reasoning

Refer to the following number-symbol series and answer the question that follows.

> 3 ^ 1 3 & > 9 3 8 4 ! ^ 3 5 4 1 * 2 9 8 > * # 9 ! 9 6

How many such numbers are there that are immediately preceded by a symbol and immediately followed by a symbol?

- A. 2
- B. 3
- C. 5
- D. 6



Q36 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. All greens are reds.
2. Some reds are browns.
3. All greys are browns.

Conclusions:

- I. Some greys are greens.
- II. All browns are reds is a possibility.
- III. Some browns are greens.

A. Only conclusion I is true

B. Only conclusion II is true



C. Only conclusion III is true

D. Only conclusion I and II are true

Q37 General Intelligence and Reasoning

If

$\times$ means 'division'

$-$ means 'addition'

$\div$ means 'subtraction' and

$+$ means 'multiplication',

then what will be the value of the expression $17 \div 17 + 21 \times 7 - 13 = ?$

A. -23

B. 23

C. 21

D. -21



Q38 General Intelligence and Reasoning

If we add 5 to each of the following numbers and then write the digits in each number in reverse order and then arrange the numbers in ascending order, the position of how many numbers will NOT change?

224, 637, 816, 471, 303

A. Zero

B. One



C. Two

D. Three

Q39 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

UPR: YTV

LZB: PDF

A. BHU: CJS

B. MKN: QOR



C. MSO: NPA

D. TGH : XII

Q40 General Intelligence and Reasoning

The following table shows the marks scored by A, B, C and D in four subjects i.e., Mathematics, Hindi, English and Science. Marks given are out of 100. Study the table and answer the question.

Subject / Student	A	B	C	D
Mathematics	90	85	83	78
Hindi	86	78	74	82
English	75	74	70	74
Science	92	88	64	70

What is the ratio of 'the sum of the marks scored by A in Hindi and B in English' to 'the sum of the marks scored by C in English and D in Science'?

A. 8 : 7



B. 5 : 6

C. 5 : 7

D. 7 : 6



Q41 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

The most popular OTT platform (providing TV and film content over the internet) in country C - 'StreamOn' has recently signed a contract with five of the major film producers to release their movies in theatres and on 'StreamOn' together and on the same date from January 2023 onwards.

Which of the following can be concluded from the given information?

I. The number of tickets sold by theatres will decrease to some extent in 2023.

II. Each of the five film producers release at least one movie each year.

- A. Only I can be concluded from the given information. ✓
- B. Only II can be concluded from the given information.
- C. Both I and II can be concluded from the given information.
- D. Neither I nor II can be concluded from the given information.

Q42 General Intelligence and Reasoning

Seven people, A, B, C, D, E, F and G, are sitting in a straight row, facing north. Only three people sit between G and F. Only two people sit to the left of G. B is not an immediate neighbour of F. B sits second to the right of D. C sits to the immediate right of E. Who sits at the extreme left end of the row?

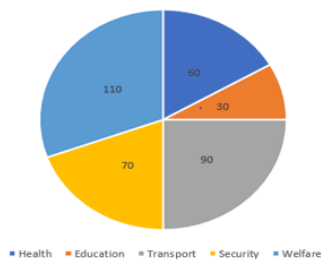
- A. D
- B. C
- C. G
- D. A ✓



Q43 General Intelligence and Reasoning

The following pie chart shows funds spent by the government on various public activities. All the values are given in crores. Study the pie chart and answer the question.

Distribution of government funds



What is the sum of the 'difference between the funds spent on security and education' and the 'funds spent on health' (in crores)?

A. 80

B. 90

C. 100



D. 120

Q44 General Intelligence and Reasoning

Select the combination of letters that when sequentially placed from left to right in the same sequence in the blanks of the given series, will complete the series.

S L _ _ G S _ _ N G _ _ A N G

A. A L N A S L

B. A N L A S L



C. L A N A L S

D. A L A N L S

Q45 General Intelligence and Reasoning

Sheetal steps out of her house and walks 160 m towards the north. She takes a left turn and walks 60 m. She takes a left turn again and walks 120 m. She takes another left turn and walks 130 m. Finally, she takes right turn and walks 40 m to reach a café. How far and in which direction is the café from Sheetal's house? (All turns are 90 degree turns only)

A. 70 m, East



B. 70 m, West

C. 60 m, East

D. 60 m, West



Q46 General Intelligence and Reasoning

If '+' means $\div$, '-' means '+', 'x' means '-' and ' $\div$ ' means 'x', then what will be the value of the following expression?

$$[\{(19 \times 12) - (2 \div 4)\}] + (2 - 3) \div 2$$

A. 8

B. 4

C. 12

D. 6



Q47 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

53, 58, 51, 56, 49, 54, 47, 52, 45, 50, 43, 48, ?

A. 43

B. 55

C. 41



D. 53

Q48 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

17 : 26 :: 5 : 14 :: 22 : ?

A. 37

B. 35

C. 33

D. 31



Q49 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. S is seventh to the right of L. K is third to the right of J. L is third to the right of K. If no other person is sitting in the row, what is the total number of persons seated?

A. 14



B. 15

C. 16

D. 17

Q50 General Intelligence and Reasoning

In a certain code language, 'COUNT' is written as 'ESAVD' and 'FIBRE' is written as 'HMHZO'. How will 'GIANT' be written in that language?

A. PMJKR

B. IDGBY

C. IMGVD



D. KMRPD

Q51 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word BACKFIRE is arranged in the reverse alphabetical order?

A. Zero



B. Three

C. Four

D. Five

Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

30, 35, 40, 43, 46, 51, ?

A. 57

B. 55

C. 56

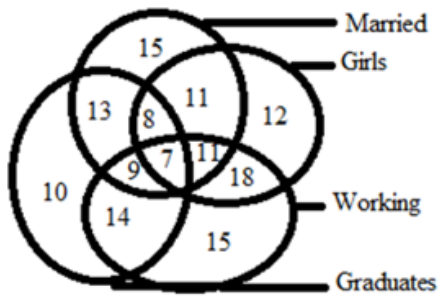


D. 58



Q53 General Intelligence and Reasoning

Study the given Venn diagram and answer the question that follows.



How many married girls are graduates but NOT working?

A. 9

B. 11

C. 8



D. 7

Q54 General Intelligence and Reasoning

A, B, C, D, E, F, G and H were sitting around a square table, facing the centre. Some of them were sitting at the corners, while some were sitting at the exact centre of the sides. Only A was sitting between G and D. C was sitting fourth to the left of G. Only E was sitting between B and C. H was sitting to the immediate left of D. B was sitting second to the right of G. D is sitting at one of the corners. Who was sitting third to the right of D?

A. F



B. C

C. B

D. E



Q55 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

All paintings are arts

Some walls are doors

Some paintings are windows

Conclusions:

(I) Some arts are walls

(II) Some arts are windows

(III) Some paintings are doors

A. Only conclusion I follows

B. Only conclusion II follows



C. Only conclusion III follows

D. None of the conclusions follow

General Science

25 Questions • Answer Key

Q56 General Science

Complete the given reaction.



A. Cl_2 (g)

B. H_2 (g)

C. Br_2 (g)



D. CO_2 (g)

Q57 General Science

Which of the following is the correct statement for the parallel combination of $3\ \Omega$, $2\ \Omega$ and $6\ \Omega$ resistors?

A. Current passing through each resistor is equal.

B. Value of resistance increases.

C. Potential difference across each resistor is equal.



D. Current passing through $6\ \Omega$ resistor is maximum



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Q58 General Science

Match the following:

Functional Group	Name of group
i. COOH	a. ester
ii. R-CO-R	b. ketone
iii. COOR	c. carboxylic acid

A. i-a, ii-b, iii-c

B. i-c, ii-b, iii-a

C. i-c, ii-a, iii-b

D. i-a, ii-c, iii-b

Q59 General Science

The refractive indices of mediums 1, 2 and 3 are 1.31, 1.36 and 1.44, respectively. If the speed of light in the mediums are v_1 , v_2 and v_3 , respectively, which of the following relations between them is correct?

A. $v_1 > v_2 > v_3$

B. $v_2 > v_3 > v_1$

C. $v_3 > v_1 > v_2$

D. $v_1 = v_2 = v_3$

Q60 General Science

Which of the following group of organisms are involved in the breakdown of dead and decaying organisms?

A. Consumers

B. Producers

C. Decomposers

D. Scavengers



Q61 General Science

Magnetic field inside a solenoid is:

- A. stronger at the middle
- B. uniform
- C. weaker at the middle
- D. zero

Q62 General Science

A ray of white light is incident on a refracting surface AB of a glass prism and emerges out of the other refracting surface AC. Consider the following statements:

- (a) The angle of refraction at surface AB is the same for different colours of white light.
- (b) The angle of refraction at the surface AC is different for different colours.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b)
- D. Neither (a) nor (b)

Q63 General Science

The presence of which of the following does NOT let the air passage in the respiratory system of humans collapse when there is less air in it?

- A. Ligaments
- B. Rings of cartilage
- C. Tendons
- D. Muscles

Q64 General Science

Cigarette smoking is harmful to our health because _____.

- A. it weakens the chest muscles
- B. it damages the cilia in the upper respiratory tract
- C. it reduces the oxygen-carrying capacity of RBCs
- D. causes oedema in lungs



Q65 General Science

A wire of length L and resistance R is reformed so that its length increases by 50% with no change in its volume. The resistance of the new wire is:

A. $\left(\frac{4}{9}\right) R$

B. $\left(\frac{9}{4}\right) R$ ✓

C. $\left(\frac{3}{2}\right) R$

D. $\left(\frac{2}{3}\right) R$

Q66 General Science

What is the chemical name of Plaster of Paris?

A. Calcium acetate

B. Calcium carbonate

C. Calcium sulphate dihydrate

D. Calcium sulphate hemihydrate ✓

Q67 General Science

A ray of light is incident on a concave mirror of radius of curvature 10 cm, parallel to its principal axis. After reflection, it passes through a point on the axis at a distance of _____ from the mirror.

A. 5 cm ✓

B. 7.5 cm

C. 10 cm

D. 12.5 cm

Q68 General Science

Dobereiner arranged the three elements in a triad in order of:

A. increase in their atomic masses ✓

B. decrease in their atomic masses

C. increase in their atomic numbers

D. decrease in their atomic numbers



Q69 General Science

When magnesium is burnt in the presence of air, the product formed is:

- A. magnesium sulphate
- B. magnesium chloride
- C. magnesium carbonate
- D. magnesium oxide



Q70 General Science

An object of size 4.0 cm is placed in front of a convex mirror of focal length 8 cm, at a distance of 24 cm. The image formed is _____ and its height is _____.

- A. inverted, 1.0 cm
- B. erect, 1.0 cm
- C. inverted, 2.0 cm
- D. erect, 2.0 cm



Q71 General Science

Which of the following is NOT a component of xylem?

- A. Tracheid
- B. Vessel
- C. Companion cell
- D. Parenchyma



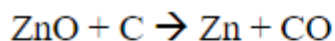
Q72 General Science

Which of the following plants DOES NOT reproduce by vegetative propagation?

- A. Grape
- B. Rose
- C. Mango
- D. Sugarcane



Q73 General Science



In the given reaction, which statement is INCORRECT?

A. ZnO acts as an oxidising agent

B. ZnO is oxidised to Zn



C. C acts as a reducing agent

D. C is oxidised to CO

Q74 General Science

Three resistors of $10\ \Omega$, $15\ \Omega$ and $30\ \Omega$ are connected in series. The resistance of the combination is:

A. $5\ \Omega$

B. $25\ \Omega$

C. $45\ \Omega$

D. $55\ \Omega$



Q75 General Science

In a science book, two solenoids, P and Q, of the same average radius and the same length are shown. The number of field lines drawn inside P is thrice of that drawn inside Q. If the current in the two solenoids is the same, the number of turns in solenoid P is _____ times the number of turns in solenoid Q.

A. $\frac{1}{9}$

B. $\frac{1}{3}$

C. 3

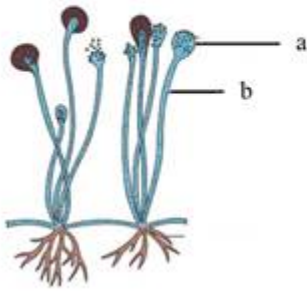


D. 9



Q76 General Science

Identify the vegetative part and the reproductive part in the following diagram of Rhizopus.



- A. Both a and b are vegetative parts
- B. a is the vegetative part, whereas b is the reproductive part
- C. Both a and b are reproductive parts
- D. a is the reproductive part, whereas b is the vegetative part



Q77 General Science

Match the following:

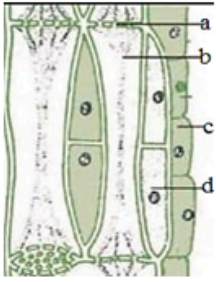
1. Total number of elements found	a. 94
2. Naturally available elements	b. 24
3. Elements found through laboratory processes	c. 118

- A. 1-a, 2-b, 3-c
- B. 1-c, 2-a, 3-b
- C. 1-c, 2-b, 3-a
- D. 1-a, 2-c, 3-b



Q78 General Science

The diagram below shows a section of phloem tissue in plants. Which labelling shows the part with perforated walls that helps in transportation?



A. a

B. b



C. c

D. d

Q79 General Science HINDI - no English version saved

निम्नलिखित में से कौन सी जल संभर प्रबंधन (water shed management) की एक हानि है?

A. जल संभर समुदाय की आय में वृद्धि होती है

B. सूखे और बाढ़ का खतरा कम होता है

C. अनुप्रवाही बांधों और जलाशयों के जीवनकाल को बढ़ाता है

D. इसके अनुरक्षण की लागत बहुत अधिक होती है



Q80 General Science

Match the following:

Natural source	Acid
i. Lemon	a. Methanoic acid
ii. Nettle sting	b. Citric acid
iii. Tomato	c. Oxalic acid

A. i-a, ii-b, iii-c

B. i-c, ii-b, iii-a

C. i-c, ii-a, iii-b

D. i-b, ii-a, iii-c



Q81 General Awareness and Current Affairs

Which of the following is NOT true about indifference curves between two goods?

- A. They are downward sloping.
- B. They are convex to the origin.
- C. Higher IC means higher satisfaction levels.
- D. They may intersect each other.



Q82 General Awareness and Current Affairs

In 1928, Vallabhbhai Patel led the peasant movement in _____, a taluka in Gujarat, against enhancement of land revenue.

- A. Palsana
- B. Bardoli
- C. Chorasi
- D. Kamrej



Q83 General Awareness and Current Affairs

The Industrial Revolution in Britain gave a stiff competition to the handicraft industries in India due to _____.

- A. no raw material available for handicraft
- B. low cost and better quality product produced by machines
- C. lack of skills of handicraft industry
- D. expensive factors of production



Q84 General Awareness and Current Affairs

As on March 2022, Pradhan Mantri Jan Dhan Account holder gets an accidental insurance cover of _____.

- A. ₹50,000 to ₹1 lakh
- B. ₹1 lakh to ₹2 lakh
- C. ₹5 lakh
- D. ₹25,000 to ₹50,000



Q85 General Awareness and Current Affairs

What will be the increase in consumption if income increases by ₹500 (assume $MPC = 0.5$)?

- A. ₹50
- B. ₹250
- C. ₹500
- D. ₹750



Q86 General Awareness and Current Affairs

What was the role of Sreejesh PR in Indian men's hockey team during the Tokyo Olympics held in the year 2021?

- A. Goalkeeper
- B. Defender
- C. Midfielder
- D. Forward



Q87 General Awareness and Current Affairs

The Central Institute of Indian Languages (CIIL) was set up at _____ in 1969.

- A. Mysore (Mysuru)
- B. Mangalore (Mangaluru)
- C. Trichur (Thrissur)
- D. Cochin (Kochi)



Q88 General Awareness and Current Affairs

National Backward Classes Finance & Development Corporation (NBCFDC) is a Government of India undertaking under the aegis of Ministry of _____.

- A. Tribal Affairs
- B. Micro, Small and Medium Enterprises
- C. Rural Development
- D. Social Justice and Empowerment



Q89 General Awareness and Current Affairs

Which Indian physicist shared the Boltzmann Medal for the year 2022 with American scientist John Hopfield?

- A. Radha Balakrishnan
- B. Dhiraj Bora
- C. Deepak Dhar
- D. Archana Bhattacharyya



Q90 General Awareness and Current Affairs

Who is regarded as the father of local self-government in India?

- A. Lord Wellesley
- B. Lord Rippon
- C. Lord Robert Clive
- D. Lord Warren Hasting



Q91 General Awareness and Current Affairs

The Criminal Procedure (Identification) Bill, 2022, that was passed by the Parliament was placed by which of the following ministries?

- A. Ministry of Social Justice and Empowerment
- B. Ministry of Defence
- C. Ministry of Home Affairs
- D. Ministry of Education



Q92 General Awareness and Current Affairs

Which committee proposed that the local government be granted constitutional recognition in 1989?

- A. PK Thungon Committee
- B. GVK Rao Committee
- C. LM Singhvi Committee
- D. Ashok Mehta Committee



Q93 General Awareness and Current Affairs

The 15th edition of the Indian Premier League (IPL) was / will be played in the year _____.

A. 2021

B. 2022



C. 2020

D. 2023

Q94 General Awareness and Current Affairs

The Ballary-Chitradurga-Chikmagalur-Tumkur belt located in Karnataka is a rich source of which ore?

A. Iron ore



B. Manganese ore

C. Titanium ore

D. Copper ore

Q95 General Awareness and Current Affairs

In which of the following states is Pankuni Festival celebrated?

A. Odisha

B. West Bengal

C. Kerala



D. Assam

Q96 General Awareness and Current Affairs

In the reference of local winds in India, the 'Loo' can be best described as _____.

A. moist and cool winds

B. dry and hot winds



C. humid and hot winds

D. cool and humid winds



World TB Day is celebrated on which date?

- A. 2nd March
- B. 12th March
- C. 24th March ☒
- D. 28th March

ऋग्वेद के स्तोत्रों (Hymns) को _____ के रूप में भी जाना जाता है।

- A. कर्मकांडों
- B. ज्ञान
- C. सूक्त ☒
- D. रुद्र

Which of the following is INCORRECTLY paired?

- A. Lignite – Low grade brown coal
- B. Bituminous coal – Most popular coal in commercial use
- C. Metallurgical coal – Used for smelting iron in blast furnaces
- D. Anthracite – Lowest grade of hard coal ☒



How many Fundamental Duties were added to the Indian Constitution through the 42nd Amendment Act of 1976 ?

A. 11

B. 5

C. 3

D. 10



Mathematics

25 Questions · Answer Key

Q1 Mathematics

The sides of a triangle are 32 cm, 60 cm, and 68 cm. What is its area (in cm^2)?

- A. 1088
- B. 1020
- C. 990
- D. 960



Q2 Mathematics

The least number that is exactly divisible by 24, 88 and 136 is:

- A. 4488
- B. 5445
- C. 3894
- D. 6433



Q3 Mathematics

D and E are the midpoints of sides AB and AC of a triangle ABC, respectively, and $BC = 6$ cm. If $DE \parallel BC$, then the length of DE is:

- A. 2.5 cm
- B. 3 cm
- C. 5 cm
- D. 6 cm



Q4 Mathematics

Find the number whose one third part exceeds the one fifth part by 6.

- A. 35
- B. 45
- C. 50
- D. 40



Q5 Mathematics

In two triangles DEF and PQR, if $DE = QR$, $EF = PR$ and $FD = PQ$, then:

- A. $\triangle DEF \cong \triangle PQR$
- B. $\triangle FED \cong \triangle PRQ$ ✓
- C. $\triangle EDF \cong \triangle RPQ$
- D. $\triangle PQR \cong \triangle EFD$

Q6 Mathematics

A sum of ₹ x amounts to ₹50,578 in $2\frac{1}{2}$ years at 12% p.a., interest compounded 10-monthly. What is the value of x ?

- A. 36,000
- B. 38,000 ✓
- C. 40,000
- D. 42,000

Q7 Mathematics

A shopkeeper lists the price of a fan at 22% above its cost price and offers a 15% discount on its list price. If he earns a profit of ₹111, then what is the list price (in ₹) of the fan?

- A. 3,500
- B. 3,660 ✓
- C. 3,680
- D. 4,200

Q8 Mathematics

The value of $45 - 5 \times [2 + 3 \times \{2 - 2(3 - 5) \times 3\} \div 7]$ is:

- A. 1
- B. 5 ✓
- C. 10
- D. 35



Q9 Mathematics

The value of $(1 + \tan 20^\circ + \sec 20^\circ)(1 + \cot 20^\circ - \operatorname{cosec} 20^\circ)$ is:

A. 2



B. 1

C. 0

D. -1

Q10 Mathematics

A father told his son, "At the time of your birth I was as old as you are at present." If the father's present age is 40 years, then how old was the son 5 years ago?

A. 14 years

B. 15 years



C. 16 years

D. 18 years

Q11 Mathematics

The ratio between the third proportional of 20 and 50 and the mean proportional of 9 and 16 is:

A. 25: 2

B. 2: 25

C. 125: 12



D. 12: 125

Q12 Mathematics

A bus covers a distance of 160 km in $3\frac{1}{4}$ hr with one stop of 10 min and one more stop of 5 min on the way. Find the average speed of the bus.

A. $51\frac{1}{3}$ km/h

B. $52\frac{1}{3}$ km/h

C. $53\frac{1}{3}$ km/h



D. $50\frac{1}{3}$ km/h



Q13 Mathematics

For certain data, the mode is 24.6 and mean is 20.1. What is the median of that data?

A. 23.5

B. 22.2

C. 21.6



D. 24.1

Q14 Mathematics

If the mixed recurring decimal $0.23\overline{45}$ is expressed as a fraction in its lowest terms, then the denominator exceeds the numerator by:

A. 421



B. 512

C. 375

D. 627

Q15 Mathematics

A conference is being organised by an educational institute, where the participants will be educators of different subjects. The number of participants in physics, chemistry and mathematics are 112, 144 and 192, respectively. In each room an equal number of participants are to be seated, and all participants in a room should be educators of the same subject. What is the minimum number of rooms required during the event?

A. 23

B. 28



C. 32

D. 35

Q16 Mathematics

Arvind bought an article for ₹ x . He sold it to Biru at a loss of 15%. Biru spent ₹126 on its transportation and sold it to Minu at a profit of 25%. If Minu bought it for ₹1475, then what is the value of ₹ x ?

A. ₹1,160

B. ₹1,240



C. ₹1,280

D. ₹1,320



Q17 Mathematics

A can complete a piece of work in 12 days and B can complete it in 20 days. If they work on alternate days, starting with B on first day, then in how many days will the work be finished?

A. 15

B. $15\frac{1}{5}$ C. $15\frac{2}{3}$ D. $15\frac{4}{5}$ **Q18** Mathematics

The ratio between the radius of the base and the height of a cylinder is 3 : 4. If its volume is 38808 cm^3 then, using $\pi = \frac{22}{7}$, find the radius of the cylinder.

A. 21 cm



B. 14 cm

C. 28 cm

D. 35 cm

Q19 Mathematics

Salaries of A and B were in the ratio 3 : 4. After the salary of each of A and B is increased by ₹3,000, the new ratio becomes 18 : 23. What is A's salary after the increase?

A. ₹18,000



B. ₹12,000

C. ₹23,000

D. ₹21,000

Q20 Mathematics

The area of a rectangle increases by 2 m^2 , if its length is increased by 4 m and breadth is decreased by 2 m. If the length is decreased by 3 m and breadth is increased by 5 m, then its area increases by 23 m^2 . What is the perimeter of the original rectangle (in m)?

A. 42

B. 44



C. 48

D. 52



Q21 Mathematics

A bus travels two-fifth of the distance at a speed of 50 km/h and the remaining distance at a speed of 60 km/h. What is the average speed of the bus for the whole journey?

A. $57\frac{2}{9}$ km/h

B. $56\frac{8}{9}$ km/h

C. $55\frac{5}{9}$ km/h



D. $54\frac{7}{9}$ km/h

Q22 Mathematics

A and B can do a work alone in 30 days and 40 days, respectively. If they worked together and got ₹2,800 for doing the work, then the share of A will be:

A. ₹1,500

B. ₹1,400

C. ₹1,200

D. ₹1,600

**Q23 Mathematics**

If the equation $2x^2 + kx + 3 = 0$, $k > 0$, has real and equal roots, then the value of k satisfies the equation:

A. $k^2 - \sqrt{6} k - 12 = 0$



B. $k^2 + \sqrt{6} k - 12 = 0$

C. $k^2 - \sqrt{3} k - 6 = 0$

D. $k^2 + \sqrt{3} k - 6 = 0$

Q24 Mathematics

If $\left(\frac{512}{125}\right)^3 \times \left(\frac{512}{125}\right)^k = \left(\frac{8}{5}\right)^{15}$, then k is:

A. -2

B. -1

C. 2



D. 3



Q25 Mathematics

The roots of the equation $x^2 - 5x + 6 = 0$ are:

A. $-2, 3$

B. $2, -3$

C. $-2, -3$

D. $2, 3$

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

If all the numbers given below are arranged in descending order, the position of how many numbers will remain unchanged?

295, 654, 653, 234, 345, 245, 634

A. 1



B. 2

C. 3

D. 4

Q27 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$16 \div 6 + 285 \times 3 + 73 - 630 \times 3 + 18 = ?$

A. 96

B. 110

C. 120



D. 84

Q28 General Intelligence and Reasoning

In a certain code language, 'ORDER' is written as 'PTGIW' and 'BRAND' is written as 'CTDRI'. How will 'SHAPE' be written in that language?

A. DOIFJ

B. TJDTJ



C. TJNCM

D. DPRNJ



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Q29 General Intelligence and Reasoning

In a certain code language, 'I went home' is written as 'wrf ftg thy', 'you go home' is written as 'nui kjl thy' and 'I like you' is written as 'wrf wsc nui'. What is the code for the word 'like' in that language?

A. wsc



B. nui

C. wrf

D. thy

Q30 General Intelligence and Reasoning

83 persons are sitting in a row. Aru is sitting at the 27th position from the left side of the row and Pihu is sitting at the 41st position from the right side of the row. Ana is sitting exactly in the middle of Aru and Pihu. What is Ana's position from the left?

A. 33

B. 34

C. 35



D. 37

Q31 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. All pots are jugs.
2. Some pans are pots.
3. Some pots are woks.

Conclusions:

- I-Some jugs are pans.
II-Some woks are jugs.

A. Only conclusion I follows.

B. Only conclusion II follows.

C. Both conclusions I and II follow.



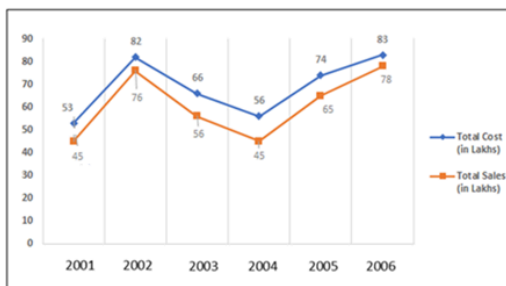
D. Neither conclusion I nor II follows.



Q32 General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The graph presents total cost and total sales values (in lakh) of a firm over six years.



In which of the years given below did the firm record highest loss percentage?

A. 2003

B. 2004

C. 2005

D. 2006

Q33 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. A sits third to the right of C. Only four people sit between A and B. D sits second to the left of B. Only one person sits between B and F. E sits to the immediate right of F. If no other person is sitting in the row, what is the total number of persons seated?

A. 10

B. 12

C. 14

D. 11

Q34 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$\sqrt{1025} + 98 \div 14 \times 4 - \sqrt{170} = ?$$

A. 70

B. 60

C. 27

D. 47



Q35 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. B is taller than only three other friends. A is taller than E. D is taller than only one friend. C is taller than D but shorter than E. Who is the third shortest among all the friends?

A. C



B. F

C. E

D. B

Q36 General Intelligence and Reasoning

Select the correct conclusion that can be drawn from the given statements.

Statements:

1. $D \geq S$

2. $X < W$

3. $S = J$

4. $W > Y$

5. $X > D$

6. $Y \leq O$

A. $D \geq J$



B. $D = O$

C. $O > S$

D. $Y = J$

Q37 General Intelligence and Reasoning

If 10 February 2002 is a Sunday, then what will be the day of the week on 17 March 2008?

A. Friday

B. Saturday

C. Sunday

D. Monday

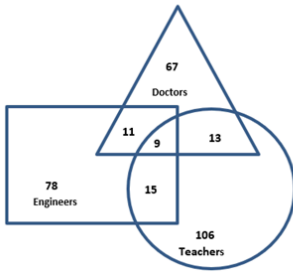


Q38 General Intelligence and Reasoning

Study the given diagram carefully and answer the questions. The numbers in different sections indicate the number of persons.

In the figure given below, the square represents Engineers, the triangle represents Doctors, and the circle represents Teachers.

How many engineers are there who are also teachers but not doctors?



A. 11

B. 106

C. 15



D. 78

Q39 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

22 : 14 :: 14 : 10 :: 34 : ?

A. 26

B. 24

C. 22

D. 20



Q40 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

The recent outbreak of the contagious virus G across country X had kept the nation worrying for months. However, the medicines used for yellow fever have been found to be effective in minimising the severity of the symptoms of virus G. Which of the following can be concluded from the given information?

- I. If a patient of virus G is given double the dose of the said medicine, they can be treated completely.
- II. The symptoms caused by virus G and those caused by yellow fever are exactly the same.

- A. Only I can be concluded from the given information.
- B. Only II can be concluded from the given information.
- C. Both I and II can be concluded from the given information.
- D. Neither I nor II can be concluded from the given information. ✓

Q41 General Intelligence and Reasoning

Six friends U, V, W, X, Y, and Z are sitting in a circular arrangement and all are facing outside the circle. W is sitting to the immediate left of X and is second to the right of Y. X is sitting to the immediate left of Z. V is not an immediate neighbour of W. Who among the following is sitting to the immediate left of U?

- A. Y ✓
- B. Z
- C. V
- D. W

Q42 General Intelligence and Reasoning

Seven boxes C, D, E, F, G, H and I are kept one over the other but not necessarily in the same order. Only one box is kept between H and F in the same order. I is kept immediately above G. Only one box is kept between I and D. E is kept at one of the positions below D. H is kept immediately below D. How many boxes are kept between H and G?

- A. 1 ✓
- B. 2
- C. 3
- D. 4



Q43 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. Some reds are green.
2. All greens are yellow.
3. All yellows are pink.

Conclusions:

- I. Some reds are yellow.
- II. Some yellows are red.
- III. All greens are pink.

- A. Conclusions I and II follow
- B. Conclusions I and III follow
- C. Conclusions II and III follow
- D. Conclusions I, II and III follow ✓

Q44 General Intelligence and Reasoning

One morning Abhay started walking from his home. He walked 500 m toward the south and then turned to the right. After walking 300 m he turned to the left and walked 500 m. In which direction is he from his house now? (All turns are 90 degree turns only)

- A. North
- B. South
- C. South-west ✓
- D. North-east

Q45 General Intelligence and Reasoning

Six people K, L, M, N, O and P are sitting around a circular table facing the center. Only two people are sitting between N and P. K and M are immediate neighbours of P. L and O are immediate neighbours of N. N is sitting at second place to the right of K. M is sitting to the immediate left of P and immediate right of L. Who is sitting third to the right of O?

- A. L
- B. N
- C. M ✓
- D. K



Q46 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

YZA : BAZ

MOP : NLK

A. JOB : QLX

B. TNE : GMW

C. TOP : HLK

D. HPE : SKV



Q47 General Intelligence and Reasoning

Study the following number arrangement and answer the question given below. All numbers given below are 2 digit numbers.

74 45 76 56 52 54 36 28 43 78 25 59 48 36 85 86 94 87

What will be 70% of the mean score of the numbers in this above series?

A. 57.50

B. 52.36

C. 44.80

D. 41.30



Q48 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

110, 114, 106, 122, 90, ?

A. 127

B. 136

C. 154

D. 168



Q49 General Intelligence and Reasoning

Select the combination of letters and numbers that when sequentially placed from left to right in the same sequence in the blanks of the given series, will complete the series.

4 _ _ E 6 7 F _ _ 9 H I

A. 5DG8



B. 4EH8

C. D5H9

D. E4G9

Q50 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

64, 32, 128, 64, 256, ?

A. 128



B. 192

C. 224

D. 284

Q51 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) C 2 A 5 8 P ^ # 9 3 J 8 C % K P X R 3 5 4 \$ % & R % (Right)

If all the numbers are dropped from the series, which of the following will be fifth from the left?

A. P

B. #



C. C

D. \$



Q52 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$$40 : 45 :: 68 : 77 :: 104 : ?$$

A. 115

B. 117



C. 119

D. 121

Q53 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and also 'x' and '÷' are interchanged?

$$25 - 18 \times 2 + 4 \div 7 = ?$$

A. 2

B. 3

C. 4

D. 6



Q54 General Intelligence and Reasoning

Sushma started walking towards the south. After 40 metres she turned right and walked for 15 metres. From there she turned right again and walked for 50 metres. Then she again turned to her right and walked for 15 meters. At last she followed the path which was an angle of 45° towards her left. In which direction is she walking now? (All turns unless specified are 90 degree turns only)

A. North-east

B. South-west

C. North-west



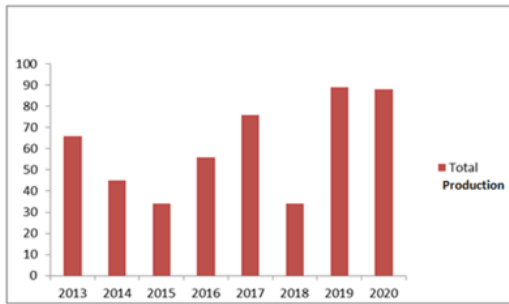
D. South-east



Q55 General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The graph presents the total production of a company (in lakh tonnes) over the given years.



In which year did the company record maximum percentage increase in production as compared to the previous year?

- A. 2014
- B. 2016
- C. 2018
- D. 2019



General Science

25 Questions • Answer Key

Q56 General Science

Out of 118 elements in the Modern Periodic Table, there are _____ naturally occurring elements.

- A. 89
- B. 91
- C. 94
- D. 108



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Q57 General Science

How can paper waste be minimised?

- I. By discarding
- II. By recycling
- III. By reusing
- IV. By burning

A. Only I and II

B. Only II and III



C. Only III and IV

D. Only I and IV

Q58 General Science

SI unit of resistivity is

A. Ohm

B. Ohm/metre

C. Ohm-metre



D. Metre

Q59 General Science

A science book depicts magnetic field lines around two bar magnets marked A and B. From A, five lines emerge from its north pole, and in B, ten lines enter into its south pole. The strength of A is _____ that of B.

A. twice

B. half



C. four times

D. equal to



Q60 General Science

An object is placed at a distance of 26 cm in front of a concave mirror of focal length 12 cm, on its principal axis. Its image is formed at:

- A. 24 cm
- B. a point beyond 26 cm
- C. a point between 12 cm and 24 cm
- D. a point behind the mirror

Q61 General Science

Two identical resistors are connected in parallel to a 12 V battery. The total power dissipated in the circuit is 6 W. The current in each resistor is:

- A. 0.25 A
- B. 0.5 A
- C. 1.0 A
- D. 2.0 A

Q62 General Science

The values of potential drops across, and corresponding currents in, a resistor are given in the following table. If the resistor obeys Ohm's law, then the values of X and Y are respectively:

V (in volts)	0.8	1.6	X	3.2	4.0	4.8	5.6	6.4	7.2	8.0
I (in amperes)	0.2	0.4	0.6	0.8	1.0	Y	1.4	1.6	1.8	2.0

- A. 1.2 and 2.4
- B. 2.4 and 1.2
- C. 2.2 and 1.1
- D. 1.1 and 2.2

Q63 General Science

The modern periodic classification was given by:

- A. J W Dobereiner
- B. John Newlands
- C. D I Mendeleev
- D. Henry Moseley



Q64 General Science

Which of the following is produced as a waste product during photosynthesis?

- A. Carbon dioxide
- B. Urea
- C. Oxygen
- D. Nitrogen



Q65 General Science

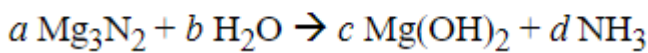
In human beings, which of the following parts of the alimentary canal excretes waste material?

- A. Large intestine
- B. Appendix
- C. Anus
- D. Small intestine



Q66 General Science

What will be the value of a , b , c , and d , respectively?



- A. 1, 3, 2 and 6
- B. 2, 3, 1 and 6
- C. 1, 6, 3 and 2
- D. 1, 4, 3 and 2



Q67 General Science

An object is placed in front of a concave mirror at a point between its focus F and centre of curvature C . The image is formed at a point _____ and is _____.

- A. between F and C , diminished
- B. between F and C , enlarged
- C. beyond C , diminished
- D. beyond C , enlarged



Q68 General Science

A precipitation reaction is one in which:

- A. water soluble salt is formed
- B. a precipitate is formed
- C. a homogeneous mixture of all the products in aqueous solution is formed
- D. a homogeneous mixture of all the reactants in aqueous solution is formed

Q69 General Science

When silver nitrate solution is added to sodium chloride solution:

- A. silver will deposit on the surface of the reaction vessel
- B. a white precipitate of sodium nitrate is obtained
- C. no reaction occurs
- D. a white precipitate of silver chloride is formed

Q70 General Science

What is the information source for making proteins in organisms?

- A. DNA
- B. Chromosomes
- C. Ribosomes
- D. Nucleus

Q71 General Science

Consider the following statements:

- (a) Light from the sun near the horizon passes thicker layers of air and larger distance in the earth's atmosphere before reaching our eyes.
- (b) Near the horizon, most of the blue light and light of shorter wavelengths are scattered away by the particles, and the light that reaches our eyes is of longer wavelengths.

Which of the above statements help(s) us to understand the red colour of the sun at sunrise and sunset?

- A. Neither (a) nor (b)
- B. Both (a) and (b)
- C. Only (a)
- D. Only (b)



Q72 General Science

Consider the below statements and identify the correct answer.

Statement-I: During indigestion the stomach produces too much acid, and this causes pain and irritation.

Statement-II: To get rid of this pain, people use bases called antacids like magnesium hydroxide

- A. Both the statements are true. ✓
- B. Both the statements are false.
- c. Statement-I is true, and statement-II is false.
- D. Statement-II is true, and statement-I is false.

Q73 General Science

The waste products gums and resins are stored in which part of the plant?

- A. Leaves
- B. Fruits
- c. Old Xylem ✓
- D. Cellular Vacuole

Q74 General Science

Who is referred to as the 'Father of Genetics'?

- A. Charles Robert Darwin
- B. James Watson
- C. Robert Hooke
- D. Gregor Johann Mendel ✓

Q75 General Science

Which part of the nephron collects the initial filtrate from blood?

- A. Collection duct
- B. Glomerulus
- C. Renal vein
- D. Bowman's capsule ✓



Q76 General Science

Which of the following statements is correct?

- A. Methane has four carbon atoms.
- B. Ethanol has three carbon atoms.
- C. Acetic acid has two carbon atoms. ✓
- D. Chloroform has three carbon atoms.

Q77 General Science

Which of the following statements is NOT true?

- A. Sodium carbonate is used in making cake. ✓
- B. Sodium hydrogencarbonate is an ingredient in antacids
- C. Sodium carbonate can be used as a cleaning agent for domestic purposes
- D. sodium hydrogencarbonate is used for making baking powder

Q78 General Science

Today, we need to use our resources judiciously and work towards sustainability of these resources. Select the option that is NOT a reason for this.

- A. Resources are unlimited ✓
- B. There is great demand due to increase in population
- C. It takes millions of years to replenish them
- D. We have to preserve them for our future generations

Q79 General Science

Consider three points P, Q and S at distances r , $2r$ and $3r$ from a straight conductor carrying current I .

Which of the following relations is true about the magnitude of the magnetic fields B_P , B_Q and B_S at points P, Q and S, respectively?

- A. $B_P = B_Q = B_S$
- B. $B_P > B_Q > B_S$ ✓
- C. $B_Q > B_S > B_P$
- D. $B_S > B_P > B_Q$



Q80 General Science

A beam of white light passes through a glass prism and a spectrum is obtained. Which of the following colour components bends the most?

Green, Red, Indigo, Blue

- A. Green
- B. Red
- C. Indigo
- D. Blue

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which one of the following was the first Micro-finance initiative in India?

- A. SEWA Bank
- B. Bandhan Bank
- C. Equitas Small Finance Bank
- D. Fincare Small Finance Bank



Q82 General Awareness and Current Affairs

What is long-run production function?

- A. In this production function, all the factors of production are variable.
- B. In this production function, one factor of production is variable and all others are fixed.
- C. It is the sum total of explicit and implicit costs.
- D. In this production, only two factors of production are fixed.



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Q83 General Awareness and Current Affairs

The main objective of which of the following financial institutions is to provide funds to enable sustainable irrigation practices for the rural infrastructure of India?

A. NABARD



B. BRAC

C. FINCA

D. BHARAT

Q84 General Awareness and Current Affairs

The Industrial Policy Resolution of 1956 classified industries in India into _____ categories based on ownership.

A. five

B. two

C. three



D. four

Q85 General Awareness and Current Affairs

Surendranath Banerjee and Ananda Mohan Bose formed the Indian Association in the year _____.

A. 1876



B. 1896

C. 1906

D. 1916

Q86 General Awareness and Current Affairs

The largest population of the greater one-horned Rhino is found in state of India.

A. Kerala

B. Tamil Nadu

C. Sikkim

D. Assam



Q87 General Awareness and Current Affairs

Article 18 of the Indian Constitution deals with which of the following rights?

- A. Abolition of untouchability
- B. Equality before law
- C. Right to education
- D. Abolition of titles



Q88 General Awareness and Current Affairs

In March 2022, which state government launched a new Sports Policy 2022-27?

- A. Haryana
- B. Punjab
- C. Gujarat
- D. Himachal Pradesh



Q89 General Awareness and Current Affairs

In February 2022, researchers from which institute created a biodegradable nanoparticle that can be used as an alternative to chemical-based insecticides to protect crops from bacterial and fungal diseases?

- A. Indian Institute of Technology, Kanpur
- B. Indian Institute of Science, Bengaluru
- C. Birla Institute of Technology & Science, Pilani
- D. National Institute of Technology, Rourkela



Q90 General Awareness and Current Affairs

What is the role of the Subordinate Court?

- A. To consider cases of civil and criminal nature ✓
- B. To consider appeals on decisions given by lower courts
- C. To issue writs for restoring Fundamental Rights
- D. To move cases from any court to itself

Q91 General Awareness and Current Affairs

Which of the following statements about the Prohibition of Child Marriage (Amendment) Bill 2021 is INCORRECT?

- A. It was introduced in the Rajya Sabha by Smriti Irani, Union Minister for Women and Child Development. ✓
- B. It proposes to define a 'child' as 'a male or female who has not completed twenty-one years of age'.
- C. It will apply to all communities/religions in the country.
- D. It seeks to amend the Prohibition of Child Marriage Act, 2006.

Q92 General Awareness and Current Affairs

According to National Statistical Office (NSO) data as of 2021, India's average literacy rate is _____.

- A. 70.10%
- B. 72.23%
- C. 75.60%
- D. 77.70% ✓

Q93 General Awareness and Current Affairs

The one-horned rhinoceros is found in the swampy and marshy lands of _____.

- A. Assam and West Bengal ✓
- B. Gujarat and Rajasthan
- C. Kerala and Karnataka
- D. Himachal and Madhya Pradesh



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Q94 General Awareness and Current Affairs

How many languages are declared as classical languages by the Government of India as of March 2022?

- A. five
- B. six
- C. seven
- D. eight



Q95 General Awareness and Current Affairs

Which of the following festivals is mainly celebrated in the state of Manipur?

- A. Halda
- B. Gandhalepana Yatra
- C. Lai Haraoba
- D. Losar



Q96 General Awareness and Current Affairs

Which of the following statements about India is INCORRECT?

- A. The Indian mainland extends between latitudes $8^{\circ} 4'$ and $37^{\circ} 6'$ north, longitudes $68^{\circ} 7'$ and $97^{\circ} 25'$ east.
- B. Indian Standard Time is 5 hours and 30 minutes ahead of Greenwich Mean Time.
- C. India lies entirely in the southern hemisphere.
- D. India is surrounded by the Bay of Bengal in the east, the Arabian Sea in the west, and the Indian Ocean to the south.



Q97 General Awareness and Current Affairs

In July 2022, who among the following became the youngest Indian to hit 100 sixes in international cricket?

- A. Rishabh Pant
- B. Dinesh Karthik
- C. Hanuma Vihari
- D. Suryakumar Yadav



Q98 General Awareness and Current Affairs

The green hydrogen and green ammonia policy launched in February 2022 aimed at boosting the domestic production of green hydrogen to _____ tonnes by 2030 and making India an export hub for the clean fuel.

- A. 1 million
- B. 3 million
- C. 5 million
- D. 10 million



Q99 General Awareness and Current Affairs

The Hijri Year (Islamic Year) consistently falls about _____ days short of the Solar Year.

- A. 11 days
- B. 2 days
- C. 29 days
- D. 30 days



Q100 General Awareness and Current Affairs

Which of the following statements is INCORRECT?

- A. Gram Panchayat is chaired by the Gram Pradhan or Sarpanch or Mukhia.
- B. Panchyat Samiti is the grass root institution of the Panchayati Raj System.
- C. Zilla Parishad is the apex body of Panchayati Raj System.
- D. Members of the Gram Panchayat are elected by a secret ballot.



Mathematics

25 Questions · Answer Key

Q1 Mathematics

How much will a sum of ₹16,000 become after one year if the interest is compounded half-yearly at 20% per annum compound interest?

A. ₹19,200

B. ₹19,360



C. ₹19,480

D. ₹19,720

Q2 Mathematics

What is the mode of the following data?

66, 69, 83, 69, 84, 74, 71, 83, 69, 84, 73, 83, 69, 71, 84, 74, 83, 66, 74, 71, 83, 66, 90, 90

A. 74

B. 83



C. 84

D. 90

Q3 Mathematics

A two-digit number is equal to 7 times the sum of its digits. The number obtained by interchanging the digits is 18 less than the original number. The product of the digits of the number is:

A. 8



B. 12

C. 10

D. 18

Q4 Mathematics

If $\left(\frac{3}{7}\right)^8 \times \left(\frac{3}{7}\right)^{-14} = \left(\frac{3}{7}\right)^{3p-3}$, then the value of p is:

A. -2

B. -1



C. 0

D. 1



Q5 Mathematics

A and B can do a work in 18 days, B and C can do the same work in 15 days, while A and C can do the work in 12 days. The time taken by them to complete the work by working together is:

A. $11\frac{27}{37}$ days

B. $10\frac{27}{37}$ days

C. $9\frac{27}{37}$ days



D. $8\frac{27}{37}$ days

Q6 Mathematics

The fourth proportional to 15, 10 and 12 is:

A. 10

B. 12

C. 8



D. 6

Q7 Mathematics

A pipe can fill a tank in 15 hours. Another pipe can empty the filled tank in 24 hours. If both the pipes are opened simultaneously, then the time in which the tank will be filled is:

A. 70 hours

B. 60 hours

C. 50 hours

D. 40 hours

**Q8 Mathematics**

In quadrilateral ABCD, AB = 17 cm, BC = 8 cm, CD = 9 cm, AD = 12 cm, and AC = 15 cm. What is the area (in cm^2) of the quadrilateral?

A. 110

B. 114



C. 140

D. 144



Q9 Mathematics

3 men and 2 women can complete a piece of work in 8 days, while 2 men and 3 women can complete the same work in 10 days. In how many days can 2 men and 1 women complete the same work?

A. 15

B. 13.5

C. 13

D. 12.5 ☒**Q10 Mathematics**

Express $7.8\overline{964}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $7\frac{166}{185}$ B. $7\frac{4478}{4995}$ ☒C. $7\frac{996}{1111}$ D. $7\frac{8956}{9999}$ **Q11 Mathematics**

If α and β are the roots of $x^2 - 5x + 3 = 0$, then a quadratic equation whose roots are α^2 and β^2 is:

A. $x^2 - 19x + 9 = 0$ ☒B. $x^2 + 19x - 9 = 0$ C. $x^2 + 19x + 9 = 0$ D. $x^2 - 19x - 9 = 0$ **Q12 Mathematics**

Find the value of $\frac{183 \times 183 \times 183 - 73 \times 73 \times 73}{183 \times 183 + 183 \times 73 + 73 \times 73}$.

A. 256

B. 136

C. 210

D. 110 ☒

Q13 Mathematics

A man sold an article for ₹405 by first giving a $d\%$ discount on its marked price, and then another discount having the same nominal value (in ₹). If the marked price of the article is ₹540, then what is the value of d ?

A. 10.5

B. 12

C. 12.5 ☒

D. 15

Q14 Mathematics

Let $P = \left(\frac{1}{x} - \frac{1}{y}\right) [(x+y)^2 - xy] + \left(\frac{1}{x} + \frac{1}{y}\right) [(x-y)^2 + xy]$ and $Q = \frac{y}{x}$, then $P \div Q$ is equal to:

A. $2y$ ☒B. $2x$ C. $\frac{x}{y}$ D. $\frac{y}{x}$ **Q15** Mathematics

The number of sides of a regular polygon whose sum of all interior angles is 2700° is:

A. 18

B. 17 ☒

C. 16

D. 15

Q16 Mathematics

Last year, Ganga's monthly salary was ₹12,000 and Saraswathi's monthly salary was ₹10,000. This year, Ganga's monthly salary is ₹14,400 while Saraswathi's monthly salary is ₹12,500. If the percentage increase in Saraswathi's monthly salary this year over her monthly salary last year is denoted by $x\%$, and the percentage increase in Ganga's monthly salary this year over her monthly salary last year is denoted by $y\%$, then what is the value of $\left(\frac{x-y}{y} \times 100\right)\%$?

A. 20%

B. 24%

C. 25% ☒

D. 22%



Q17 Mathematics

An article is sold for ₹303.60 after offering three successive discounts of 25%, 8% and $x\%$ on its marked price of ₹500. If the same article is sold after giving a single discount of $(33 + x)\%$, then its selling price (in ₹) will be:

A. 275



B. 280

C. 285

D. 300

Q18 Mathematics

The value of $\frac{(\sin 70^\circ - 2 \sin^3 70^\circ)}{(2 \cos^3 70^\circ - \cos 70^\circ)}$ is:

A. $\cot 70^\circ$

B. $\operatorname{cosec} 70^\circ$

C. $\sec 70^\circ$

D. $\tan 70^\circ$

**Q19** Mathematics

For certain data, the mode is 6 more than the mean and its median is 13. What is the mode of that data?

A. 14

B. 17



C. 15

D. 11

Q20 Mathematics

In finding the HCF of two numbers by division method, the quotients are 1, 5 and 2, respectively, and the last divisor is 15. What is the LCM of the two numbers?

A. 3045

B. 2115

C. 2130

D. 2145



Q21 Mathematics

If 2 and -3 are the roots of a quadratic equation, then the equation is:

A. $x^2 - x + 6 = 0$

B. $x^2 - x - 6 = 0$

C. $x^2 + x + 6 = 0$

D. $x^2 + x - 6 = 0$ ✓

Q22 Mathematics

A person spent ₹273 on buying a total of 50 pens and pencils. If the cost of each pen is ₹6 and that of each pencil is ₹5, then how many pens did he buy?

A. 23 ✓

B. 27

C. 25

D. 21

Q23 Mathematics

The total count of prime numbers less than 50 is:

A. 17

B. 15 ✓

C. 14

D. 13

Q24 Mathematics

Triangle ABC is similar to triangle PQR with $\frac{BC}{QR} = \frac{1}{5}$. $\frac{\text{Area (triangle PQR)}}{\text{Area (triangle ABC)}}$ is:

A. 25 ✓

B. 5

C. $1/25$

D. $1/5$



Q25 Mathematics

If the radius of the base of a right circular cylinder is decreased by 20% and its height is increased by 125%, then what is the percentage increase in its volume?

A. 36%

B. 44%

C. 60%

D. 65%

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

375, 250, 186, 159, 151, ?

A. 145

B. 146

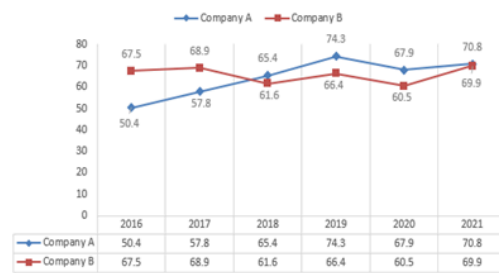
C. 150

D. 148

Q27 General Intelligence and Reasoning

Study the following graph carefully and answer the question.

Profit percentage on investment earned by company A and company B producing mobiles over the years.



If the amount of profit earned on investment by Company A in 2021, was ₹24.60 lakh, what was the total investment?

A. ₹34,47,576.92

B. ₹34,75,576.78

C. ₹34,74,576.27

D. ₹34,54,776.49



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Q28 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(13, 8, 40)

(21, 16, 80)

A. 11, 5, 30

B. 15, 20, 50

C. 19, 14, 70



D. 17, 10, 60

Q29 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

F15UN, L19AT, R23GJZ, X27MF, ?

A. D31SL



B. S31LD

C. D13SL

D. S13DL

Q30 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

45, 61, 86, 122, ?

A. 171



B. 186

C. 172

D. 174



Q31 General Intelligence and Reasoning

Refer to the following letter, number and symbol series and answer the question.

(Left) 4 T 6 S 2 A D & C E 2 4 + & 7 6 U 5 H U K 8 E W @ E A & P (Right)

If all the letters are dropped from the series, which of the following will be tenth from the left?

A. &

B. 6

C. +

D. 7



Q32 General Intelligence and Reasoning

If $\times$ means $\div$, $-$ means $\times$, $\div$ means $+$ and $+$ means $-$, what will come in place of the question mark (?) in the following equation?

$$(12 - 17 \div 21) \times 15 + 9 = ?$$

A. 6

B. 13

C. 17

D. 18



Q33 General Intelligence and Reasoning

Reena and Meena are walking together. From the park they started walking towards the south. After walking for 50 metres they turned to their left and walked for 30 metres. After this they turned to the right and walked for 50 metres. Which direction is Reena facing now? (All turns are 90 degree turns only)

A. East

B. West

C. North

D. South



Q34 General Intelligence and Reasoning

Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. B is kept third from the bottom. Only one box is kept between B and C. Only three boxes are kept between A and E. A is kept at one of the positions above E. F is kept immediately below D. How many boxes are kept between G and B?

A. 1

B. 2

C. 3



D. 4

Q35 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

Five of the biggest MNCs in country X have announced their hiring plan of the next eight years under which they plan to hire three times the number of MBA graduates than the usual number of MBA graduates hired every year.

Which of the following can be concluded from the given information?

I: All colleges offering MBA courses will double their fees from the next academic year.

II. The number of applicants in MBA courses in country X will increase to some extent in the coming few years.

A. Only I can be concluded from the given information.

B. Only II can be concluded from the given information.



C. Both I and II can be concluded from the given information.

D. Neither I nor II can be concluded from the given information.

Q36 General Intelligence and Reasoning

When Rajesh reached the toy shop he noted that he lost his brother Anoop in the market. He walked for 60 m to the east and then turned right and went 10 m. He then turned right again and walked for 10 m to look for his brother at the ice cream shop but his brother was not there. He then turned towards the north and walked for 10 m before he saw his brother in the street. In which direction is the toy shop from Rajesh's present position? (All turns are 90 degree turns only)

A. East

B. West



C. North

D. South



Q37 General Intelligence and Reasoning

If 2 is subtracted from each odd digit and 1 is added to each even digit in the number 83752964, what will be the sum of the digits which are third from the left and second from the right in the new number thus formed?

A. 12



B. 8

C. 16

D. 6

Q38 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

3 : 12 :: 5 : 30 :: 9 : ?

A. 88

B. 90



C. 81

D. 99

Q39 General Intelligence and Reasoning

On their anniversary Mr. and Mrs. Singh received five gift boxes. They numbered these boxes from one to five as and when they received them. In the evening they opened a box and found a pair of rings in it. They found a dinner set in an even numbered box. The first box sent by Mr. Singh's sister contained a photo collage and the box which was received as the last box contained a wind chime. They found a beautiful dress in an even numbered box. In which box did they receive a pair of rings?

A. 1

B. 3



C. 5

D. Either 3 or 5



Q40 General Intelligence and Reasoning

Participating in a race of 32 athletes, Mayank gained 12th rank from the top. What is his position from the bottom?

A. 22

B. 20

C. 21



D. 23

Q41 General Intelligence and Reasoning

15 PK is related to 225 SQ in a certain way. In the same way, 16 TQ is related to 256 WW. To which of the following is 14 OK related following the same logic?

A. 56 RQ

B. 198 RQ

C. 196 RQ



D. 196 RR

Q42 General Intelligence and Reasoning

B, C, D, E, F, G, H and I are eight nurses sitting in a straight row, facing north. G sits to the immediate right of D. Only B sits to the left of H. D sits second to the right of C. G sits second to the left of I. E and G are immediate neighbours. C and F are immediate neighbours. Who sits at the fourth position from the left end?

A. D

B. F



C. G

D. C

Q43 General Intelligence and Reasoning

Seven people, A, B, C, D, E, F and G, are sitting in a straight row, facing north. Only three people sit between A and F. Only two people sit to the left of A. G is not an immediate neighbour of F. G sits second to the right of C. B sits to the immediate right of D. Who sits at the extreme left end of the row?

A. G

B. B

C. E



D. A



Q44 General Intelligence and Reasoning

Refer to the following number, symbol series and answer the question.

7 4 & @ 3 4 % @ \$ 4 @ 3 4 % 4 \$ 5 * @ 4 3 4 5 * 3

How many symbols are there that are immediately followed by a number?

A. Eleven

B. Nine

C. Seven



D. Ten

Q45 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. All cats are dogs.
2. Some dogs are birds.
3. All bears are birds.

Conclusions:

- I. Some bears are cats.
- II. All birds are dogs is a possibility.
- III. Some birds are cats.

A. Only conclusion I is true

B. Only conclusion II is true



C. Only conclusion III is true

D. Only conclusion I and II are true

Q46 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(left) 724 893 720 525 492 (right)

(Example: 246 – first digit = 2, second digit = 4, third digit = 6)

NOTE – All operations to be done from left to right.

What will be the resultant if the third digit of the largest number is added to the first digit of the smallest number?

A. 7



B. 9

C. 8

D. 10



Q47 General Intelligence and Reasoning

If each of the digits in the number 6287451 is arranged in ascending order from left to right, then the position of how many digits will remain unchanged as compared to that in the original number?

A. One



B. Two

C. Three

D. Four

Q48 General Intelligence and Reasoning

Read the given statements and conclusions carefully and decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. $M = L \geq G$

2. $O > G$

3. $I = O > Q$

Conclusions:

I. $L > O$

II. $M > Q$

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor conclusion II follows



D. Both conclusions I and II follow



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Q49 General Intelligence and Reasoning

In a certain code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	2	\$	7	@	4	#	9	&	1	!	3	*
Code	T	D	C	R	G	B	Y	H	N	J	P	L

Conditions:

I. If the first element is a symbol and the last a number, the codes for these two (the first and the last elements) are to be interchanged.

II. If the first element is an odd number and the last an even number, the first and last elements are to be coded as ©.

III. If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for !927\$3 ?

A. **PYYCDJ**

B. **JYGCDP**

C. **JGGCDP**

D. **PYTCDJ**



Q50 General Intelligence and Reasoning

Study the given table and answer the question that follows.

The table presents the total number of employees as well as the number of employees who left various departments of a company over a period of four years.

Departments	2001		2002		2003		2004	
	Total Employees	Employees left	Total Employees	Employees left	Total Employees	Employees left	Total Employees	Employees left
Sales	110	19	121	20	245	38	222	40
Production	245	37	224	45	432	50	345	38
HR	43	8	45	11	45	24	34	17
Marketing	423	65	423	92	511	80	500	99
Finance	44	4	45	9	45	30	56	22

In which year have more than 20% employees left the company in all the departments taken together?

A. **2003**

B. **2004**

C. **2002**

D. **2001**



Q51 General Intelligence and Reasoning

Study the given Venn diagram and answer the question that follows.

The given Venn diagram presents the number of students taking various subjects in a college.



How many students are studying Physics but NOT studying Mathematics?

A. 230

B. 247

C. 252

D. 271

Q52 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $A \geq C > D = B \leq F > G$

A. $D > G$

B. $A > D$

C. $C = G$

D. $A \leq F$



Q53 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	3	5	&	@	?	7	<	#	2	%	!	4	/	6
Code	J	K	R	T	U	P	W	Y	M	V	C	X	D	S

Conditions:

- (i) If the first element is a symbol and the third a number, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last an even number, the first and the last elements are to be coded as Ø.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will ' / 5 2 < @ ' be coded?

A. MRDWU

B. TKMWD

C. DKMWT

D. MKDWT

**Q54** General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) R 5 \$ 3 9 G C P \$ E 2 # 8 @ M # 1 D Z 4 Q & (Right)

If all symbols are dropped from the series, which of the following will be fifth from the right?

A. D

B. 1

C. Z

D. M



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Q55 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. Some toys are pianos.
2. Some pianos are white.
3. All white are guitars.

Conclusions:

- I. Some white are toys.
- II. Some guitars are toys.
- III. Some guitars are pianos.

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Only conclusion III is true ✓
- D. Only conclusion I and II are true

General Science

25 Questions • Answer Key

Q56 General Science

Substances that can be broken down by biological process are called:

- A. non-biodegradable substances
- B. biodegradable substances ✓
- C. chemical substances
- D. toxic substances

Q57 General Science

A fuse works on the principle of:

- A. Light produced electric current
- B. Heat produced by electric current ✓
- C. Magnetic effect produced current
- D. Heat absorbed by electric current



Q58 General Science

Which of the following enzymes breaks down starch into simple sugar?

A. Amylase



B. Trypsin

C. Pepsin

D. Lipase

Q59 General Science

In solar panel, energy conversion is from _____ to _____.

A. Heat, light

B. Electrical, light

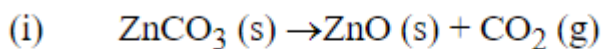
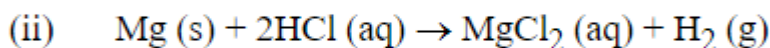
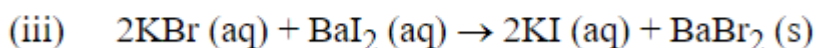
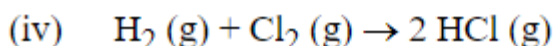
C. Electrical, magnetic

D. Solar, electrical



Q60 General Science

Which of the following is a combination reaction?



A. (i)

B. (ii)

C. (iii)

D. (iv)



Q61 General Science

According to Ohm's law:

- A. $V \propto \frac{1}{I}$ at constant pressure
- B. $V \propto I$ at constant position
- C. $V \propto \frac{1}{I}$ at constant temperature
- D. $V \propto I$ at constant temperature



Q62 General Science

HIV is transmitted through _____.

- A. transfusion of contaminated blood
- B. consumption of food kept in open
- C. drinking polluted water
- D. working in soil without gloves on



Q63 General Science

Which of the following is considered a medicinal plant?

- A. Neem
- B. Teak Plant
- C. Sal
- D. Deodar



Q64 General Science

Which gas is evolved during the burning of natural gas (CH_4)?

- A. N_2
- B. CO_2
- C. H_2
- D. NH_3



Q65 General Science

An object is placed at a distance of 30 cm in front of a concave mirror of focal length 15 cm, on its principal axis. Its image is formed at:

- A. 15 cm
- B. a point between 15 cm and 30 cm
- C. 30 cm
- D. a point beyond 30 cm



Q66 General Science

The total number of electrons present in a valence shell of carbon atoms is:

- A. 2
- B. 3
- C. 4
- D. 5



Q67 General Science

Which of the following is NOT a metalloid?

- A. Silicon
- B. Arsenic
- C. Antimony
- D. Selenium



Q68 General Science

Milk appears white in the surrounding of white light because the particles in milk are _____ than the wavelength of different colours in white light that falls on it, and all colours of white light are scattered by _____ amount(s).

- A. smaller, different
- B. larger, different
- C. smaller, about the same
- D. larger, about the same



Q69 General Science

An element X has total of 16 proton and 16 neutrons. It belongs to _____.

- A. 2nd Period and 3rd Group
- B. 4th Period and 13th Group
- C. 3rd Period and 16th Group
- D. 3rd Period and 2nd Group



Q70 General Science

Magnetic fields produced by a current carrying conductor are:

- A. semi-circular in shape
- B. parallel to each other
- C. intersecting lines
- D. concentric circles



Q71 General Science

Neha is suffering from hyper acidity. Which of the following compounds can be given for relief from it?

- A. NaCl
- B. Mg(OH)₂
- C. NaOH
- D. C₆H₁₂O₆



Q72 General Science

An object is placed at a distance of 12 cm in front of a concave mirror. Its image is formed at a distance at 18 cm on the same side. The focal length of the mirror is:

- A. 7.2 cm
- B. -7.2 cm
- C. 36 cm
- D. -36 cm



Q73 General Science

Consider the following statements about magnetic fields:

- (a) The relative strength of a magnetic field is shown by the degree of closeness of lines.
- (b) Magnetic field lines have magnitudes only and no directions.

Which of the above statements is/are correct?

A. Only (a)



B. Only (b)

C. Both (a) and (b)

D. Neither (a) nor (b)

Q74 General Science

Atmospheric pressure and the rate of transpiration are _____.

A. inversely proportional



B. directly proportional

C. equal

D. They are not related

Q75 General Science

Match the following:

Soda	Chemical formula
i. caustic soda	a. NaHCO_3
ii. baking soda	b. Na_2CO_3
iii. washing soda	c. NaOH

A. i-a, ii-b, iii-c

B. i-c, ii-b, iii-a

C. i-c, ii-a, iii-b



D. i-a, ii-c, iii-b



Q76 General Science

An object is placed on the principal axis of a convex lens of focal length 15 cm, at a distance of 40 cm. The magnification produced by the lens is _____ and the image is _____.

A. less than 1, inverted



B. less than 1, erect

C. more than 1, inverted

D. more than 1, erect

Q77 General Science

Buccal cavity is a part of the human _____ system.

A. excretory

B. respiratory

C. circulatory

D. digestive



Q78 General Science

Which of the following DOES NOT make an individual susceptible to HIV infection?

A. Sharing syringes while taking intravenous injection of drugs

B. Repeated blood transfusions

C. Being born to an HIV-positive mother

D. Sharing toilet with an HIV patient



Q79 General Science

$3Fe + 4H_2O \rightarrow Fe_3O_4 + 4H_2$ find the total number of atoms in products.

A. 08

B. 15



C. 10

D. 04



Q80 General Science

The presence of which of the following is a distinctive feature of complex plants that has made their survival in terrestrial environment possible?

- A. Meristematic tissue
- B. Vascular tissue
- C. Parenchyma tissue
- D. Sclerenchyma tissue

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The _____ covers a wide range of activities from commerce, administration, transport, and financial and real estate activities, to business and personal services, education, health and social work.

- A. tertiary sector
- B. secondary sector
- C. primary sector
- D. mixed sector

Q82 General Awareness and Current Affairs

Which of the following schemes of the Government of India supports students belonging to minority communities clearing prelims conducted by UPSC/SSC, State Public Service Commission (PSC), etc?

- A. Nai Udaan
- B. Nai Manzil
- C. Naya Savera
- D. Maulana Azad National Fellowship

Q83 General Awareness and Current Affairs

The aviation sector in India was inaugurated with the introduction of Tata Airlines in _____.

- A. 1935
- B. 1932
- C. 1939
- D. 1936



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Q84 General Awareness and Current Affairs

In February 2022, which former Indian footballer passed away at the age of 71?

- A. Arun Ghosh
- B. Subhas Bhowmick
- C. Surajit Sengupta ✓
- D. Sukhwinder Singh

Q85 General Awareness and Current Affairs

"The State shall provide free and compulsory education to all children of the age of six to fourteen years in such a manner as the State may, by law, determine" has been added to the Indian Constitution under _____.

- A. Article 19A
- B. Article 21A ✓
- C. Article 27B
- D. Article 42B

Q86 General Awareness and Current Affairs

Which of the following is a non-conventional source of energy?

- A. Coal
- B. Natural gas
- C. Solar energy ✓
- D. Crude oil

Q87 General Awareness and Current Affairs

Which of the following languages belongs to the Classical Language category?

- A. Pali
- B. Sanskrit ✓
- C. Hindi
- D. Prakrit



Q88 General Awareness and Current Affairs

According to Hinduism, which deity symbolises as the preserver and protector of the world?

A. God Vishnu



B. God Shiva

C. Goddess Sarasvati

D. Goddess Lakshmi

Q89 General Awareness and Current Affairs

Which of the following statements related to the river Godavari is INCORRECT?

A. It rises from the slopes of the Western Ghats.

B. It drains into the Bay of Bengal.

C. Its drainage basin covers Andhra Pradesh and some other states.

D. The Ghatprabha is one of its many tributaries.



Q90 General Awareness and Current Affairs

Who among the following launched the Digital Dashboard for District Ganga Committees Performance Monitoring System in April 2022?

A. Raj Nath Singh

B. Gajendra Singh Shekhawat



C. Nitin Jairam Gadkari

D. Piyush Goyal

Q91 General Awareness and Current Affairs

In which year did the Indian state of Rajasthan get India's first Panchayati Raj system?

A. 1947

B. 1952

C. 1959



D. 1961



Q92 General Awareness and Current Affairs

The Ministry of Education approved a new scheme 'New India Literacy Programme' in February 2022 to cover all the features of _____ education.

- A. elementary
- B. pre-primary
- C. adult
- D. special



Q93 General Awareness and Current Affairs

Who among the following gives a speech on Republic Day at Rajpath?

- A. The President of India
- B. The Vice-President of India
- C. The Prime Minister of India
- D. The Lieutenant Governor of Delhi



Q94 General Awareness and Current Affairs

Who among the following founded the Ahmedabad Textile Labour Association (*Majoor Mahajan Sangh*), India's oldest union of textile workers, in 1920?

- A. Indumati Chamamlal
- B. Anasuya Sarabhai
- C. Hansa Jivraj Mehta
- D. Poornima Arvind Pakvasa



Q95 General Awareness and Current Affairs

Which of the following terms correctly represents public goods?

- A. Rivalrous goods
- B. Non-excludable
- C. ecosystem services
- D. Government-owned goods



Q96 General Awareness and Current Affairs

What is the name of a kit developed by Tata Medical and Diagnostics in 2021 to detect the omicron virus?

- A. OmiKit
- B. OmiFinder
- C. OmiSure
- D. OmiCheck



Q97 General Awareness and Current Affairs

Who among the following broke a 30-year-old national record in the men's 5000 m when he clocked 13:25:65 at the Sound Running Track Meet in San Juan Capistrano, USA in 2022?

- A. Rahamatulla Molla
- B. Ayyasamy Dharun
- C. Siddhanth Thingalaya
- D. Avinash Sable



Q98 General Awareness and Current Affairs

As per Economic Survey Report 2022, _____ emerged as the leading state with ₹1,02,866 crore FDI inflow in 2021-22.

- A. Gujarat
- B. Tamil Nadu
- C. Karnataka
- D. Uttar Pradesh



Q99 General Awareness and Current Affairs

The _____ Amendment to the Constitution of India envisaged the Gram Sabha as the foundation of the Panchayat Raj System.

A. 71st

B. 73rd



C. 79th

D. 76th

Q100 General Awareness and Current Affairs

Which of the following is a soft dehydrate naturally occurring mineral composed of calcium sulphate dihydrate widely used to manufacture wallboards that are used to cover walls and ceilings?

A. Dolomite

B. Limestone

C. Gypsum



D. Barytes



Mathematics

25 Questions · Answer Key

Q1 Mathematics

If ₹2,400 is to be distributed between A and B in the ratio of 7: 5, then the share of B is:

A. ₹1,900

B. ₹1,600

C. ₹1,300

D. ₹1,000



Q2 Mathematics

A sum of ₹5,800 is invested at 6% per annum simple interest. How much will the sum become after 4 years?

A. ₹9,192

B. ₹8,192

C. ₹7,192

D. ₹6,192



Q3 Mathematics

Express $0.3\overline{59}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{178}{495}$ B. $\frac{179}{495}$ C. $\frac{359}{990}$ D. $\frac{119}{330}$ 

Q4 Mathematics

Two positive numbers differ by 3422. When the greater number is divided by the smaller number, the quotient is 4 and the remainder is 290. What is the HCF of the greater of the two given numbers and 4292?

A. 58



B. 74

C. 116

D. 148

Q5 Mathematics

The sum of the age of A and twice the age of B is 42 years. When two times the age of A is added to three times the age of B, the result is 69 years. The sum of the ages (in years) of A and B is:

A. 27



B. 29

C. 30

D. 31

Q6 Mathematics

The curved surface area of a cylinder having radius 15 cm and height 32 cm is:

A. $1060 \pi \text{ cm}^2$

B. $960 \pi \text{ cm}^2$



C. $860 \pi \text{ cm}^2$

D. $760 \pi \text{ cm}^2$

Q7 Mathematics

If one root of the equation $4x^2 - 2x + k - 4 = 0$ is reciprocal of the other, the value of k is:

A. -8

B. 8



C. -4

D. 4



Q8 Mathematics

$8 : 4 :: 3.2 : x$ and $3 : 6 :: 6 : y$. What is the ratio of x to y ?

A. $2 : 15$



B. $4 : 9$

C. $1 : 3$

D. $3 : 8$

Q9 Mathematics

What is the mode of the following data?

43, 41, 46, 48, 43, 50, 54, 41, 48, 54, 46, 43, 48, 50, 46, 48, 50, 54

A. 46

B. 48



C. 50

D. 54

Q10 Mathematics

A train overtakes two persons who are walking at 15 m/s and 35 m/s, respectively, in the same direction as that of the train in 20 seconds and 40 seconds, respectively. The length of the train is:

A. 1000 m

B. 900 m

C. 800 m



D. 700 m

Q11 Mathematics

Which of the following is a quadratic equation whose roots are 7 and 12?

A. $x^2 - 19x + 84 = 0$



B. $x^2 - 14x + 84 = 0$

C. $x^2 - 19x + 34 = 0$

D. $2x^2 - 19x + 84 = 0$



Q12 Mathematics

The total expenditure of Krishna in a year is ₹4,20,000. If his salary per month is ₹45,000, then find his average savings per month.

A. ₹10,000



B. ₹12,000

C. ₹14,000

D. ₹16,000

Q13 Mathematics

A can do a piece of work in 12 days, B can do the same work in 15 days. C can do the same work in 9 days. The time taken by them to finish the same work if they work together is:

A. $5\frac{39}{47}$ days

B. $4\frac{39}{47}$ days

C. $3\frac{39}{47}$ days



D. $2\frac{39}{47}$ days

Q14 Mathematics

If the angles $(3x - 5)^\circ$ and 80° form a pair of supplementary angles, then the value of x is:

A. 90°

B. 50°

C. 45°

D. 35°

**Q15** Mathematics

The value of

$$5^3 - 9^2 + (12 \div 4)^2 - 32 + 8 \times 0 =$$

A. 21



B. -15

C. 25

D. 61



Q16 Mathematics

The circumference of the base of a solid right circular cylinder is 136.4 cm and its height is 50 cm. What is the volume (in cm^3) of the cylinder? (Take $\pi = \frac{22}{7}$).

A. 10571

B. 31713

C. 63426

D. 73997 **Q17** Mathematics

The list price of an article is ₹1,200 and a discount of 15% is offered on the list price. What additional discount per cent on the already discounted price must be offered to a customer to bring the net selling price to ₹887.40?

A. 11.5%

B. 12%

C. 12.5%

D. 13% **Q18** Mathematics

A person can complete a journey in 14 hours. He covers the first one-third of the distance at the rate of 40 km/h and the remaining distance at the rate of 60 km/h. What is the total distance of his journey?

A. 360 km

B. 480 km

C. 540 km

D. 720 km **Q19** Mathematics

The value of $2 + [2 + 2 \div \{2 + 2 \div (2 + \frac{1}{3})\}]$ is:

A. $\frac{37}{10}$ B. $\frac{67}{10}$ C. $\frac{57}{10}$ D. $\frac{47}{10}$ 

Q20 Mathematics

Gopal went to a bank to withdraw ₹4,000. He asked the cashier to give the cash in ₹50 and ₹100 notes only. Gopal got 50 notes in all. How many ₹50 notes did he receive?

A. 32

B. 30

C. 24

D. 20

**Q21** Mathematics

An article is sold at a profit of 28%. If the cost price is increased by ₹50 and the selling price is reduced by ₹18, then the profit would be 11.6%. What is the original cost price (in ₹) of the article?

A. 350

B. 400

C. 450

D. 480

**Q22** Mathematics

The value of $\left[\frac{\cos 40^\circ}{1 + \sin 40^\circ} \right] + \left[\frac{1 + \sin 40^\circ}{\cos 40^\circ} \right]$ is:

A. $2 \tan 40^\circ$ B. $2 \cot 40^\circ$ C. $2 \operatorname{cosec} 40^\circ$ D. $2 \sec 40^\circ$ **Q23** Mathematics

Three children are making cards for people at an old age home. They take 12 min, 18 min and 20 min respectively to complete a card. If they start making the cards at the same time, after how many minutes, will they again start a new card together?

A. 180 min

B. 140 min

C. 130 min

D. 110 min



Q24 Mathematics

Six years ago, the average age of L and M was 39 years and the average of the present ages of L, M and N is 54 years. What will be the age of N 5 years from now?

A. 97 years

B. 92 years

C. 77 years ☒

D. 72 years

Q25 Mathematics

A hollow spherical shell is made of a metal of density 6 g/cm^3 . Its internal and external radii are 8 cm and 9 cm, respectively. What is the weight (in kg) of the shell (take $\pi = \frac{22}{7}$)?

A. 4.546

B. 5.456 ☒

C. 6.642

D. 6.462

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

A school has four sections i.e. A, B, C, D in Class IX. The result of annual exams and half yearly exams for the students of these four sections is given in the following table. Study the table carefully and answer the question that follows.

Result	No. of Students			
	Section A	Section B	Section C	Section D
Students failed in both exams	27	25	23	26
Students failed in half-yearly but passed in annual exams	17	15	18	19
Students passed in half-yearly but failed in annual exams	6	8	9	7
Students passed in both exams	62	57	60	59

A student is declared pass if he passes in at least one of the two examinations (half-yearly/ annual). Which section has the maximum pass percentage?

A. Section A

B. Section B

C. Section C ☒

D. Section D



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Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

33, 36, 42, 51, 63, ?

A. 79

B. 78



C. 80

D. 75

Q28 General Intelligence and Reasoning

Each of P, Q, R, S, T, U and V has an exam on a different day of a week, starting from Monday and ending on Sunday of the same week.

S has the exam on Thursday. Only one person has the exam between S and V. Q has the exam on the day immediately before V but not on a Monday. Only two people have exams between Q and U. P's exam is on one of the days before T but on one of the days after R. Who among the following has the exam on Monday?

A. T

B. R



C. P

D. Q

Q29 General Intelligence and Reasoning

In the given letter-cluster triads, the letter-clusters in a particular triad are related following a certain logic. Study the given triads carefully and from the given options, select the triad that follows the same logic.

(ACE : BDF : CEG)

(SUW : TVX : UWY)

A. (ACF : BDE : CFH)

B. (SUW : TVX : YAC)

C. (QRS : TUV : WXY)

D. (KMO : LNP : MOQ)



Q30 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

1 : 10 :: 3 : 18 :: 9 : ?

A. 79

B. 42

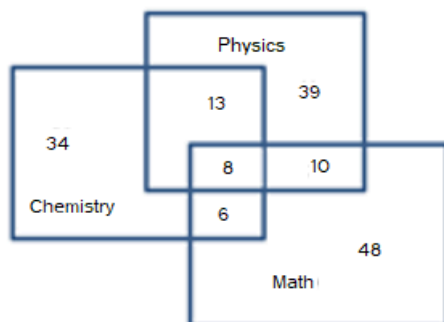


C. 54

D. 71

Q31 General Intelligence and Reasoning

The diagram given below represents those students who study Physics, Chemistry and Math. Find the number of students who study Physics and Chemistry but not Math.



A. 8

B. 6

C. 13



D. 10



Q32 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

Few melons are bananas

No banana is a cherry

All cherries are litchis

Conclusions:

(I) Some litchis are not bananas

(II) All bananas are melons

(III) All litchis are cherries

A. Only conclusion I follows



B. Only conclusion II follows

C. Only conclusion I and III follows

D. None of the conclusions follow

Q33 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$17 \div 5 + 216 \times 3 + 33 - 930 \times 3 + 28 = ?$$

A. 232

B. 246

C. 222

D. 262

**Q34** General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

D & C N E ^ & G ^ Y % % @ G Y & I & * H K Z

How many consonants are there that are immediately preceded by a symbol?

A. Six

B. Eight

C. Four

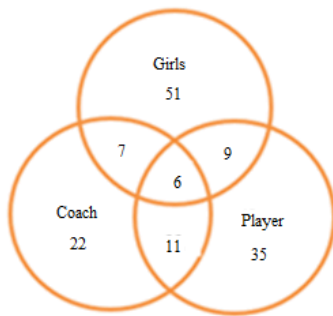
D. Five



Q35 General Intelligence and Reasoning

Study the given diagram carefully and answer the questions. The numbers in different sections indicate the number of persons.

In the following Venn diagram, how many girls are there who are players but not coaches?



A. 7

B. 6

C. 9



D. 11

Q36 General Intelligence and Reasoning

Gulshan drove his car for 77 km towards north, then he turned left and drove for 109 km. Again, he turned left and drove yet another 77 km. Again, he turned left, drove his car 127 km and stopped. What is the shortest distance between the starting point and the stopping point?

(All turns are 90 degree turns only)

A. 154 km

B. 127 km

C. 18 km



D. 109 Km

Q37 General Intelligence and Reasoning

Seven people are sitting in a straight row all facing towards north. E is not an immediate neighbour of M and N. N is also not an immediate neighbour of M. M is sitting 4th to the right of L. I is sitting on extreme right end of the row. N is sitting fourth to the left of B. P is sitting third to the left of M and second to the right of N. Who is sitting at extreme left end?

A. P

B. E

C. N



D. I



Q38 General Intelligence and Reasoning

Select the term from among the given options that can replace the question mark (?) in the following series.

A3J5R, E6K6S, I9L7T, O12M8U, ?, A18O10W

A. U15N9V



B. U15N9A

C. U15N10A

D. P15N9A

Q39 General Intelligence and Reasoning

Refer to the following number-symbol series and answer the question that follows.

1 * 2 9 8 4 ! ^ 3 5 4 # 9 ! \$ 3 ^ 1 3 & 9 6 8 \$ * \$ 9 3

How many such symbols are there that are immediately preceded by a number and immediately followed by a number?

A. 2

B. 3

C. 4



D. 6

Q40 General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

D & C N ^ E G ^ Y T % @ G R I & * H K & Z S P * ^

How many consonants are there that are immediately preceded by a consonant and immediately followed by symbol?

A. Four

B. Two

C. Six

D. Three



Q41 General Intelligence and Reasoning

Amongst six friends G, H, I, J, K and L, each has a different height. G is taller than only two other friends. I is shorter than only one friend. K is shorter than G but taller than J. H is shorter than L. Who is the shortest among all the friends?

A. K

B. J



C. L

D. G



Q42 General Intelligence and Reasoning

In a code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	2	\$	7	@	4	#	9	&	1	!	3	*
Code	T	D	C	R	G	B	Y	H	N	J	P	L

Conditions:

- If the first element is a symbol and the last, a number, the codes for these two (the first and the last elements) are to be interchanged.
- If the first element is an odd number and the last, an even number, the first and last elements are to be coded as ©.
- If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for @4#3*9 ?

A. RGBPLY

B. YGBPLR

C. RGCPLY

D. YGCPLR

Q43 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

4 : 20 :: 15 : 240 :: 19 : ?

A. 380

B. 390

C. 391

D. 388

Q44 General Intelligence and Reasoning

Pole E is to the east of pole R. Pole G is to the west of pole R and north of pole A. Pole T is to the south of pole A. What is the position of pole R with respect to pole A?

A. North

B. North-east

C. North-west

D. South-east



Q45 General Intelligence and Reasoning

Given below is a statement followed by two possible underlying assumptions I and II. Read the information carefully and select the correct option.

Statement:

As per reports by International recruiters, around 25% of the candidates are rejected just on the basis of insufficient data in their CVs or due to the format of the CVs auto-created by some websites.

Which of the following can be assumed from the given statement?

- I. CVs manually created by job seekers have more chances of being viewed / selected than auto created CVs.
- II. No criteria other than insufficient information and formatting results in rejection of CVs.

A. Only I can be assumed



B. Only II can be assumed

C. Both I and II can be assumed

D. Neither I nor II can be assumed

Q46 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$4.99 \div .99 - 4.01 \times 2 + 3.59 = ?$$

A. 5

B. 3

C. 2

D. 1



Q47 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 577 534 249 842 718 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

If 2 is added to the second digit of every number, in how many numbers will the second digit be exactly divided by the first digit of that number?

A. 1

B. 2



C. 3

D. 4



Q48 General Intelligence and Reasoning

Each of D, E, F, G, H, I and J has a football match to participate on a different day of a week, starting from Monday to Sunday of the same week. E has a match on the day immediately after I. G has a match immediately after H. J has a match immediately after E, but not on Sunday. D has a match on Wednesday. Who among the following has a match on Sunday?

A. H

B. F

C. G

D. E

Q49 General Intelligence and Reasoning

In a certain code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	*	1	&	2	>	3	^	4	%	5	\$	11	#	6	@	7	!	8
Code	Q	A	Z	X	S	W	E	D	C	V	F	R	T	G	B	N	H	Y

Conditions:

- I. If the first element is an odd number and the last also is an odd number, the code for the first element will be P and for the last element will be K.
- II. If the last two elements are numbers the codes for these two are to be interchanged.
- III. If the first two elements are symbols, both these elements will be coded as UU.

What will be the code for 3\$7%68 ?

A. PFNCGK

B. WFNCYG

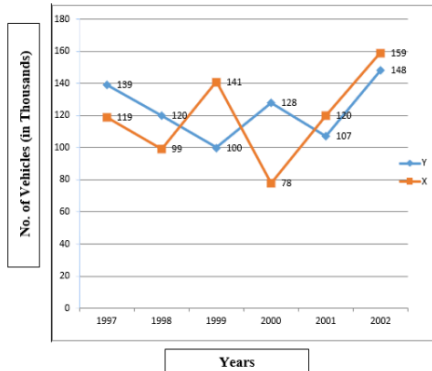
C. WFNCGY

D. WUNCYG



Q50 General Intelligence and Reasoning

The number of vehicles caught for speeding in different years in two cities X and Y are shown in the following graph. Study the graph and answer the question.



Which city has more total number of vehicles which are caught speeding between the years 1998 – 2001? In which year, the difference in the number of vehicles caught between the two cities is maximum?

- A. X, 2000
- B. X, 1999
- C. Y, 1999
- D. Y, 2000



Q51 General Intelligence and Reasoning

Seven people, A, B, C, D, E, F and G, are sitting in a straight row, facing north. Only three people sit between B and D. Only two people sit to the left of B. F is not an immediate neighbour of D. F sits second to the right of G. A sits to the immediate right of E. Who sits at the extreme left end of the row?

- A. G
- B. B
- C. C
- D. D



Q52 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

5, 12, ?, 96, 285, 852

- A. 56
- B. 48
- C. 33
- D. 27



Q53 General Intelligence and Reasoning

Five boxes A, B, C, D and E are kept one over the other but not necessarily in the same order. A is kept third from the bottom. Only one box is kept between A and B. There are only three boxes between D and B. C is placed immediately above B. How many boxes are placed between A and D?

A. 0

B. 1



C. 2

D. 3

Q54 General Intelligence and Reasoning

Amongst six friends B, I, H, J, O and U, each has a different height. H is taller than only four other friends. O is taller than only one friend. B is taller than U but shorter than J. J is not the tallest. Who is the shortest among all the friends?

A. H

B. I

C. U



D. B

Q55 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$7.98 - (6.064 + 6.003 \div 6.003) + 2.003 - 1.02 = ?$$

A. 8

B. 12

C. 2



D. 22

General Science

25 Questions • Answer Key

Q56 General Science

If the current passing through a heater is tripled by keeping resistance and time of the current flow unaltered, then the heat produced is:

A. Tripled

B. Becomes six times

C. Becomes nine times



D. Doubled



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Q57 General Science

The amount of carbon dioxide in the atmosphere is:

- A. 21%
- B. 0.03 %
- C. 71%
- D. 0.3%



Q58 General Science

What will be the next homologous member of compound CH_3OH ?

- A. $\text{C}_3\text{H}_5\text{OH}$
- B. $\text{C}_3\text{H}_7\text{OH}$
- C. $\text{C}_2\text{H}_3\text{OH}$
- D. $\text{C}_2\text{H}_5\text{OH}$



Q59 General Science

Which of the following has the fastest breathing rate?

- A. Elephant
- B. Human
- C. Pigeon
- D. Fish



Q60 General Science

Why do we measure the presence of starch in the experiments of photosynthesis?

- A. Starch is formed as a result of photosynthesis
- B. Glucose formed is converted into starch
- C. Starch is soluble in water
- D. Glucose is insoluble in water



Q61 General Science

What is the product of UV radiations acting on oxygen molecules at higher levels of the atmosphere?

- A. Carbon dioxide
- B. Chlorofluorocarbons
- C. Ozone
- D. Water



Q62 General Science

Which Indian River that starts from Gangotri is polluted largely by human activities and industries?

- A. Brahmaputra
- B. Krishna
- C. Cauvery
- D. Ganga



Q63 General Science

When a coil carrying a current is placed in a magnetic field, a force is produced on it. This is the working principle of:

- A. generator
- B. cooler
- C. motor
- D. turbine



Q64 General Science

Consider the following statements about a commercial motor:

- (a) It uses an electromagnet in place of a permanent magnet.
- (b) It uses a soft-iron core.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b)
- D. Neither (a) nor (b)



Q65 General Science

Consider the below statements and identify the correct answer.

Statement I: The reaction between an acid and a base to form salt and water is known as a neutralisation reaction.

Statement II: A neutralisation reaction can be written as: $\text{Acid} + \text{Base} \rightarrow \text{Salt} + \text{Water}$

- A. Statement I is correct, and Statement II is incorrect.
- B. Statement II is correct, and Statement I is incorrect.
- C. Both statements are correct. ✓
- D. Both statements are incorrect.

Q66 General Science

Plants use a completely different process for excretion as compared to animals. Which of the following processes is NOT followed by plants for excretion?

- A. Excess water thrown out by transpiration
- B. Store waste products in Vacuoles
- C. Excrete some waste into the soil
- D. Filter toxic substances through the leaves ✓

Q67 General Science

The focus of a convex mirror is at a distance of 30 cm from its pole. Its centre of curvature will be at a distance of _____ from the focus.

- A. 15 cm
- B. 30 cm ✓
- C. 45 cm
- D. 60 cm

Q68 General Science

Washing soda is used in the manufacture of which of the following compounds?

- A. Blue vitriol
- B. Green vitriol
- C. Bleaching powder
- D. Borax ✓



Q69 General Science

A ray of light in air is incident at an angle of 30° on the surface of water in a jar. The ray is refracted in the water at an angle of _____ and _____ in the plane of the incident ray.

- A. more than 30° , lies
- B. more than 30° , does not lie
- C. less than 30° , lies
- D. less than 30° , does not lie



Q70 General Science

How do contraceptive pills help in birth control?

- A. By preventing release of eggs from the ovary
- B. By killing the zygote
- C. By blocking sperm production
- D. By inhibiting menstruation



Q71 General Science

Two identical bulbs are connected in parallel to a battery of 4 V. If the current in the circuit is 0.2 A, the power dissipated by the battery is:

- A. 0.05 W
- B. 0.8 W
- C. 10 W
- D. 20 W



Q72 General Science

A bulb draws a current of 5 A when connected to a battery of 12 V. The power of the bulb is:

- A. 0.41 W
- B. 1.2 W
- C. 2.4 W
- D. 60 W



Q73 General Science

Match the following characteristics in Modern Periodic Table:

i. smallest atom	a. cesium
ii. metalloid	b. Fluorine
iii. most metallic natural element	c. silicone
iv. most electronegative	d. iodine
v. least electronegative	e. lithium

A. i-a, ii-b, iii-c, iv-d, v-e

B. i-a, ii-d, iii-b, iv-e, v-c

C. i-e, ii-c, iii-a, iv-b, v-d



D. i-e, ii-c, iii-a, iv-d, v-b

Q74 General Science

A ray of light is incident on a concave mirror (pole P) of radius of curvature 8 cm, parallel to its principal axis. After reflection, it passes through a point Q on its principal axis. Following New Cartesian Sign Convention, PQ = _____.

A. 4 cm

B. -4 cm



C. 8 cm

D. -8 cm

Q75 General Science

What would be the colour of the sky as viewed by an astronaut at the International Space Station?

A. Red

B. Black



C. Blue

D. White



Q76 General Science

Complete the double displacement reaction.

$2\text{NaOH} + \text{CuSO}_4 \rightarrow \text{X} + \text{Na}_2\text{SO}_4$, here X will be _____.

- A. CaCl_2
- B. $\text{Cu}(\text{OH})_2$ ✓
- C. $\text{Ca}(\text{OH})_2$
- D. CuCl_2

Q77 General Science

Mendeleev's Periodic Law could not explain the position of _____ in the periodic table.

- A. Isotopes ✓
- B. Isotones
- C. Isobars
- D. Isodiaphers

Q78 General Science

There is an aqueous solution X, whose pH is 2.6. It represents that the solution is:

- A. strongly acidic in nature ✓
- B. strongly basic in nature
- C. neutral in nature
- D. weakly basic in nature

Q79 General Science

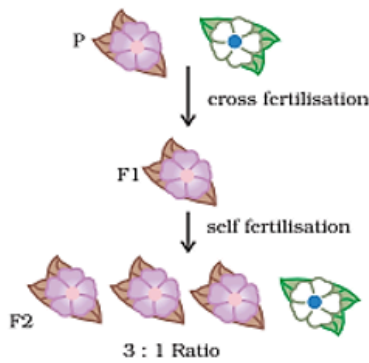
Which of the following is NOT a part of the human excretory system?

- A. Ureters
- B. Urinary bladder
- C. Bronchioles ✓
- D. Urethra



Q80 General Science

The image below shows a cross between two plants up to F₂ generation. Some conclusions that can be drawn from this cross are stated below. Which option gives the INCORRECT conclusion?



- A. Only red colour is dominant.
- B. Both red and green are dominant though less number of green are produced. ✓
- C. Green is recessive.
- D. Traits are inherited but not expressed.

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In February 2022, the Ministry of Women and Child Development, Government of India extended the PM Cares for Children Scheme till _____.

- A. 28 February 2022 ✓
- B. 31 March 2022
- C. 30 June 2022
- D. 31 December 2022

Q82 General Awareness and Current Affairs

For excellence in the field of medical services, which of the following awards is given?

- A. Dhanvantari Award ✓
- B. Borlaug Award
- C. Shanti Swarup Bhatnagar Award
- D. Daly Memorial Award



निम्न में से कौन-सा भूतापीय ऊर्जा का स्रोत नहीं है?

- A. बायोमास (Biomass) ✓
- B. लावास्तर (Lava flows)
- C. उष्णोत्स (Geysers)
- D. वाष्पमुख (Fumaroles)

In which stage of production does the marginal product curve become negative?

- A. Stage 1
- B. Stage 2
- C. Stage 3 ✓
- D. Stage 4

The then Indonesian President _____ was the first chief guest to grace Republic Day of India in 1950.

- A. Suharto
- B. B.J. Habibie
- C. Abdurrahman Wahid
- D. Sukarno ✓

India's first fisheries business incubator was inaugurated by the Union Minister of Fisheries, Animal Husbandry and Dairying in _____.

- A. Noida
- B. Rohtak
- C. Gurugram ✓
- D. Karnal



Q87 General Awareness and Current Affairs

The 'Stree Manoraksha' project aimed at extending mental health training to 6000 OSC (One Stop Centre) functionaries across India was launched by _____ in March 2022.

- A. Smriti Zubin Irani ✓
- B. Narendra Modi
- C. Amit Shah
- D. Dr. Mansukh Mandaviya

Q88 General Awareness and Current Affairs

Under which Article of the Indian Constitution is the annual financial statement prepared?

- A. Article 112 ✓
- B. Article 130
- C. Article 140
- D. Article 101

Q89 General Awareness and Current Affairs

The drug Diclofenac is one of the prime reasons for wiping out most of the _____ population in India.

- A. blackbuck
- B. one- horned rhinoceros
- C. vulture ✓
- D. sparrow

Q90 General Awareness and Current Affairs

Which of the following is the world's largest basaltic impact crater lake found in India?

- A. Loktak Lake
- B. Wular Lake
- C. Pulicat Lake
- D. Lonar Lake ✓



Q91 General Awareness and Current Affairs

Which of the following banks was the organiser of the global hackathon, HARBINGER 2021 - Innovation for Transformation, with the theme 'Smarter Digital Payments'?

A. HSBC Bank

B. HDFC Bank

C. Reserve Bank of India



D. State Bank of India

Q92 General Awareness and Current Affairs

During which period were the Khilafat movement and Non-Cooperation movement organised to oppose British rule in India?

A. 1943-1947

B. 1931-1933

C. 1850-1857

D. 1919-1922



Q93 General Awareness and Current Affairs

Which constitutional authority established under Article 148 of the Constitution of India, has the power to audit the receipts and expenditure of the Central and the Governments of each State and Union Territory?

A. Finance Commission of India

B. Attorney General of India

C. Comptroller and Auditor General of India



D. Advocate General of the India

Q94 General Awareness and Current Affairs

Which of the following teams won the Tata Indian Premier League (IPL) 2022?

A. Gujarat Titans (GT)



B. Rajasthan Royals (RR)

C. Kolkata Knight Riders (KKR)

D. Chennai Super Kings (CSK)



Q95 General Awareness and Current Affairs

As per Article 51A (d) of the Constitution of India, _____.

- A. a citizen of the country must defend the country and render national service when called upon to do so ✓
- B. every adult is entitled to be registered as a voter at an election
- C. the State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India
- D. untouchability is abolished and its practice in any form is forbidden

Q96 General Awareness and Current Affairs

Which of the following is a classical Dravidian language?

- A. Odia
- B. Tamil ✓
- C. Gujarati
- D. Bengali

Q97 General Awareness and Current Affairs

The Eleventh Schedule to the Constitution of India lists _____ subjects.

- A. 26
- B. 21
- C. 23
- D. 29 ✓

Q98 General Awareness and Current Affairs

Which of the following Veda is also called the "Book of Song," "Veda of Chants" or even "Yoga of Song"?

- A. Rig Veda
- B. Yajur Veda
- C. Sama Veda ✓
- D. Atharva Veda

Q99 General Awareness and Current Affairs

How many petroleum products were kept outside the purview of GST as on 31st December 2021?

A. 12

B. 3

C. 5



D. 9

Q100 General Awareness and Current Affairs

In which of the following countries was the Men's T-20 ICC World Cup -2021 staged?

A. India -Bangladesh

B. Oman- UAE



C. Sri Lanka-Maldives

D. South Africa-Namibia



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The average of 10 observations is 46. It was realised later that an observation was misread as 42 in place of 142. Find the correct average.

A. 56



B. 65

C. 54

D. 45

Q2 Mathematics

The value of $(\operatorname{cosec} A + \cot A)(1 - \cos A)$ is:

A. $\sin A$ B. $\cos A$ C. $\tan A$ D. $\cot A$

Q3 Mathematics

The areas of three adjacent faces of a solid cuboid are 66 cm^2 , 108 cm^2 and 198 cm^2 . What is the volume (in cm^3) of the cuboid?

A. 594

B. 891

C. 1188



D. 1782

Q4 Mathematics

Two numbers are in the ratio 7: 5. If their sum is 360, then the difference between them is:

A. 90

B. 80

C. 70

D. 60



Q5 Mathematics

Three chairs and two tables cost ₹7,000 and five chairs and three tables cost ₹11,000. What is the cost of four chairs and two tables?

A. ₹6,000

B. ₹8,000



C. ₹9,000

D. ₹9,600

Q6 Mathematics

If $\left(\frac{12}{7}\right)^5 \times \left(\frac{7}{12}\right)^8 \times \left(\frac{12}{7}\right)^{16} = \left(\frac{7}{12}\right)^{2m+10}$, then $m =$

A. $\frac{23}{2}$

B. $-\frac{23}{2}$



C. $\frac{19}{2}$

D. -1

Q7 Mathematics

When x is added to each of 11, 14, 31 and 38, then the numbers so obtained, in this order, are in proportion. Then, if $3x : y :: y : (8x - 5)$, and $y > 0$, what is the value of y ?

A. 12

B. 15

C. 16

D. 18

**Q8 Mathematics**

If α, β ($\alpha > \beta$) are the roots of the quadratic equation $x^2 - 10x + 16 = 0$, then the value of $\alpha^4 - \beta^4$ is:

A. -5080

B. -4080

C. 5080

D. 4080



Q9 Mathematics

By selling an article at $\frac{7}{12}$ of its actual selling price, Manav incurs a loss of 16%. If he sells it at 80% of its actual selling price, then the profit percentage is:

A. 14.5%

B. 14.8%

C. 15.2%



D. 15.5%

Q10 Mathematics

Two parallel lines intersect at:

A. one point

B. two points

C. three points

D. no point



Q11 Mathematics

The volume of a cylinder having height 21 cm and radius 10 cm is:

(Use $\pi = \frac{22}{7}$)

A. 9900 cm³

B. 8800 cm³

C. 7700 cm³

D. 6600 cm³



Q12 Mathematics

The value of $\frac{(9.8 \times 9.8 - 5.8 \times 5.8)}{2 \times (7.8)}$ is:

A. 6

B. 5

C. 4



D. 3



Q13 Mathematics

The ratio of the present ages of P and Q is 5: 8. After 5 years, Q's age will be 45 years. Six years ago, the age of P was:

- A. 34 years
- B. 29 years
- C. 24 years
- D. 19 years

**Q14** Mathematics

A can complete a piece of work in 35 days. B is 30% less efficient than A. C is 25% more efficient than B. B and C work together for 10 days. A alone will complete the remaining work in:

- A. 18 days
- B. $18\frac{1}{2}$ days
- C. $19\frac{1}{4}$ days
- D. 20 days

**Q15** Mathematics

If the mean of the following data is 18, then the value of X is:

x_i	10	15	20	25
f_i	5	X	7	8

- A. 9
- B. 10
- C. 11
- D. 13

**Q16** Mathematics

The diagonals of a rhombus shaped field are 96 m and 110 m long. What is the perimeter (in m) of the field?

- A. 288
- B. 292
- C. 296
- D. 300



Q17 Mathematics

When 1833, 2482 and 3190 are divided by the greatest number x , the remainder in each case is y . What is the value of $(3x - 14y)$?

A. 121



B. 123

C. 131

D. 133

Q18 Mathematics

Rajesh has 180 litres of Oil A and 220 litres of Oil B. He fills a number of identical containers with the two types of oil in a manner that each container has only one type of oil, and all containers are completely filled. What can be the maximum volume (in litres) of each container that Rajesh uses, so that all the oil that Rajesh has, of both the types, can be poured into these containers?

A. 20



B. 40

C. 60

D. 80

Q19 Mathematics

Find the nature of the roots of $2x^2 + 4 - 10x = 0$.

A. No real roots

B. Real and equal roots

C. Real and distinct roots



D. Imaginary roots

Q20 Mathematics

A shopkeeper mixes 30 kg wheat costing ₹13.65 per kg with 20 kg wheat costing ₹18.15 per kg. At what rate per kg should he sell the mixed variety of wheat to earn 30% profit (correct to the nearest rupee)?

A. ₹15

B. ₹17

C. ₹18

D. ₹20



Q21 Mathematics

The value of $20 + \frac{24}{7} \times \{(1 \div 2) + (2 \div 3)\}$ is:

A. 28

B. 32

C. 34

D. 24

**Q22** Mathematics

Two mini trains of length 80 m and 120 m, respectively, are moving on parallel tracks in opposite directions at 30 m/s and 20 m/s respectively. The time taken (in seconds) by both the mini trains to cross each other is:

A. 10

B. 8

C. 6

D. 4

**Q23** Mathematics

Train A running at a speed of 63 km/h takes 21 seconds to completely cross train B running at 45 km/h in the opposite direction. The length of train B is 2.5 times the length of train A. Train B crosses a bridge completely in 76 seconds. The length of the bridge (in m) is:

A. 480

B. 500

C. 660

D. 880

**Q24** Mathematics

Three times the present age of P exceeds the present age of Q by 25 years. After 10 years, twice the age of Q will be 18 years less than thrice the age of P. The present age of Q is (in years):

A. 16

B. 17

C. 19

D. 21



Q25 Mathematics

If a discount of 10% is given on the marked price of a book, the bookseller gains 20%. If the discount is increased to 12.5%, then what is the gain percent of the bookseller?

A. $18\frac{2}{3}\%$

B. $17\frac{2}{3}\%$

C. $16\frac{2}{3}\%$ ✓

D. $15\frac{2}{3}\%$

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

IGE : QOM :: YWU : GEC

A. PNM : UTS

B. PQR : MLK

C. NLJ : VTR ✓

D. ONL : XWU



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Q27 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. Some men are gentle.
2. Some gentle are lovers.
3. All lovers are committed.

Conclusions:

- I. No committed is lover.
- II. Some gentle are committed.
- III. Some committed are men.

A. Only conclusions I follows

B. Only conclusions II follows



C. Conclusions II and III follow

D. Conclusions I and II follow

Q28 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '×' means '+', and '÷' means '×', what will come in place of the question mark (?) in the following equation?

$$30 - 7 \div 2 + 15 \times 3 = ?$$

A. 35

B. 38

C. 39



D. 42

Q29 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a circular table facing the centre. H is second to the left of E and third to the right of C. F is third to the right of B, who is an immediate neighbour of D. E is third to the left of C. A is second to the left of B and second to the right of G. Who among the following is an immediate neighbour of C and G (both)?

A. D

B. F



C. H

D. A



Q30 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully and decide which of the conclusions logically follow(s) from the statement(s).

Statement:

$$M \leq A \geq K \geq C \geq E < R$$

Conclusions:

I. $E < A$

II. $A = E$

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Either conclusion I or II follows
- D. Neither conclusion I nor II follows

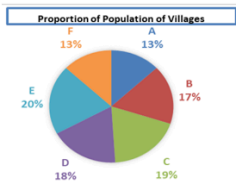
Q31 General Intelligence and Reasoning

Study the following pie-chart and the table and answer the question based on them.

Table : Percentage of population below poverty line in six villages in 2021

Village	Percentage of population below poverty line
A	30%
B	34%
C	32%
D	28%
E	27%
F	36%

Pie Chart: Proportion of population of villages in 2021



If the population of village D in 2021 is 70,200, then what will be the population of village F below poverty line in that year?

- A. 19,656
- B. 18,252
- C. 17,560
- D. 16,254



Q32 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) and complete the given alpha-numeric series?

Y35, T55, P80, M115, ?

A. K170



B. L170

C. K160

D. K150

Q33 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

In 2021, the government of country M regulated the fishing industry by announcing that each fisherman can take their boat for fishing only once a day.

Which of the following can be concluded from the given information?

I. The sale of fishing boats in country M will double in the coming years.

II. Fishermen with bigger boats will benefit more from this regulation as compared to those who have smaller boats.

A. Only I can be concluded from the given information.

B. Only II can be concluded from the given information.



C. Both I and II can be concluded from the given information.

D. Neither I nor II can be concluded from the given information.

Q34 General Intelligence and Reasoning

Which of the following two numbers should be interchanged to make the following equation correct?

$$35 \times 13 \div 7 + 9 - 14 = 44$$

A. 35 and 14

B. 13 and 7

C. 9 and 13



D. 7 and 9



Q35 General Intelligence and Reasoning

In this question, a group of numbers is coded using letters/symbols as per the table given below, and the conditions that follow. The correct combination of codes following the conditions is your answer.

Number/Digit	3	2	1	6	5	4	9	8	7
Code	@	A	#	S	\$	F	%	G	&

Conditions:

1. If the first as well as the last digit is odd, both are to be coded as =.
2. If the first as well as the last digit is even, their codes are to be swapped.

What will be the code for 8546372?

A. ASFS&@G

B. GSFS@&A

C. GSF@S&A

D. ASFS@&G

**Q36** General Intelligence and Reasoning

Deepak rode his bicycle in the north direction from a point A to reach point B, then turned left and rode 3 km to reach point C and again turned left and rode 4 km to reach point D. He found himself 3 km west of his starting point. How far did he ride from point A to point B?

(All turns are 90 degree turns only)

A. 10 kms

B. 7 kms

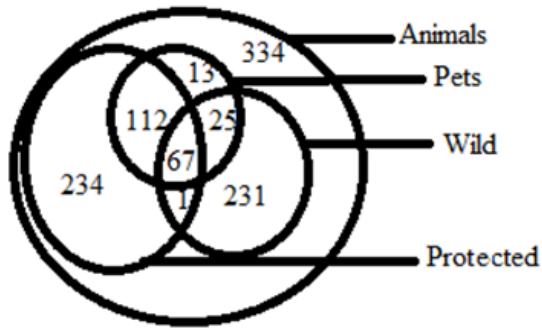
C. 5 kms

D. 4 kms



Q37 General Intelligence and Reasoning

Study the Venn Diagram given below and answer the question that follows.



How many animals are pets but not protected?

A. 67

B. 25

C. 13

D. 38



Q38 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

22, 21, 24, 19, 26, 17, 28, 15, ?

A. 32

B. 2

C. 30

D. 34



Q39 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some caps are headbands.
2. All headbands are hats.
3. Some berets are hats.

Conclusions:

I-Some caps are hats.

II-Some hats are berets.

- A. Only conclusion I follows.
- B. Only conclusion II follows.
- C. Both conclusions I and II follow. ✓
- D. Neither conclusion I nor II follows.

Q40 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(4, 24)

(11, 143)

- A. (9, 102)
- B. (7, 42)
- C. (2, 8) ✓
- D. (5, 40)



Q41 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below, and the conditions that follow. The correct combination of codes following the conditions is your answer.

Number/Digit	2	5	8	1	4	7	3	6	9
Code	A	S	D	G	H	J	K	L	R

Conditions:

1. If the first and last digit are odd, both are to be coded as L.
2. If the first and last digit are even, both are to be coded as Z.

What will be the code for 564783?

A. SLHJDK

B. LLHJKL

C. SLHJDL

D. LLHJDL

**Q42** General Intelligence and Reasoning

A, B, C, D and E live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 5.

B lives on an even numbered floor but not on floor number 4. Only two people live between A and E. C lives immediately below A. Who lives on floor number 5?

A. D

B. C

C. A

D. E

**Q43** General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below:

(Left) 478 635 316 253 675 (Right)

(Example: 697 – First digit = 6, second digit = 9 and third digit = 7)

(NOTE - All operations to be done from left to right.)

What will be the resultant if the second digit of the largest number is added to the first digit of the smallest number?

A. 10

B. 6

C. 8

D. 9



Q44 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) K & ^ 5 G T S P T & B 4 @ 3 # 1 A 3 P H 9 L (Right)

If all symbols are dropped from the series, which of the following will be ninth from the right?

A. B

B. T

C. 4



D. 3

Q45 General Intelligence and Reasoning

Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. D is kept third from the bottom. Only one box is kept between C and D. Only three boxes are kept between B and F. B is kept at one of the positions above F. A is kept immediately below G. How many boxes are kept between D and E?

A. 1

B. 2

C. 3



D. 4

Q46 General Intelligence and Reasoning

Study the given alphanumeric symbol series carefully and answer the question based on it.

P 5 & 8 V O 9 # T 6 H \$ 7 F W * 1 L N 4 ? 2 / C U Q ! J 3 > A

If all the odd numbers are dropped from the above series, then find the product of the numbers that come between the third consonant from the right end and &.

A. 256

B. 246

C. 192

D. 384



Q47 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. C sits fourth to the right of D. E sits third to the right of C. B sits third to the left of D. There are only two persons between E and A. If no other person is sitting in the row, what is the total number of persons seated?

A. 16

B. 10

C. 14



D. 18

Q48 General Intelligence and Reasoning

Eight friends A, B, C, D, E, F, G, and H are sitting around a square table. Four persons are sitting at the corners and the other four are sitting in the middle of each side. They all are facing towards the centre of the table. E is sitting second to the left of F. A is sitting somewhere to the left of B and B is sitting third to the left of F. G is an immediate neighbour of both A and B. C is sitting to the immediate left of F. F is sitting to the immediate left to D. Who is sitting second to the left of H?

A. D

B. F



C. B

D. E

Q49 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question that follows.

(Left) Ω R 7 & S ∞ 5 ! D @ 4 Y 3 D # W A 6 & F O 7 % D C (Right)

How many such symbols are there in the above series, each of which is immediately preceded by a letter and immediately followed by a number?

A. Zero

B. One

C. Two



D. Three



Q50 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully and decide which of the conclusions logically follow(s) from the statement(s).

Statements:

$$I < N < S = R \geq O > M; N > C$$

Conclusions:

I. $N < M$

II. $O \geq N$

A. Either conclusion I or II follows

B. Neither conclusion I nor II follows



C. Only conclusion I follows

D. Only conclusion II follows

Q51 General Intelligence and Reasoning

Raghav starts from Point A and drives 20 km towards the north. He then takes a right turn, drives 40 km, turns right and drives 50 km. He then takes a right turn and drives 120 km. He takes a final right turn, drives 30 km and stops at Point P. How far and towards which direction should he drive in order to reach Point A from Point P in a straight line? (All turns are 90 degree turns only)

A. 80 km towards the west

B. 100 km towards the west

C. 80 km towards the east

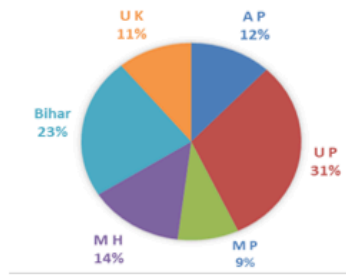


D. 120 km towards the south



Q52 General Intelligence and Reasoning

The following pie-chart shows the population distribution in different States in 2019.
Study the following pie-chart and answer the question based on it.



If the total population of the given states is 44,94,000, and male-female ratio is 3 : 2 in UP, what was the number of males in UP in the year 2019?

- A. 8,65,478
- B. 8,45,623
- C. 8,35,884
- D. 8,21,478



Q53 General Intelligence and Reasoning

If 1 is subtracted from each odd digit and 2 is added to each even digit in the number 6249729, what will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

- A. 6
- B. 8
- C. 10
- D. 12



Q54 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.
82, 23, 69, 30, 56, 37, 43, 44, 30, ?

- A. 51
- B. 37
- C. 27
- D. 55



Q55 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

13 : 195 :: 2 : 8 :: 12 : ?

A. 24

B. 180

C. 48

D. 168



General Science

25 Questions • Answer Key

Q56 General Science

Who is known as India's 'Waterman', who won the prestigious Stockholm Water Prize in 2015?

A. Dr. AK Banerjee

B. Dr. Rajendra Singh



C. Sunder Lal Bahuguna

D. Chandi Prasad Bhatt

Q57 General Science

How many elements were discovered till the time Newland's Law of Octaves came in to existence?

A. 53

B. 61

C. 56



D. 63



Q58 General Science

Consider the following statements about magnetic field due to a bar magnet:

- (a) There is no field inside the bar magnet.
- (b) The field lines inside the bar magnet are directed from its north pole to the south pole.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Neither (a) nor (b) ☒
- D. Both (a) and (b)

Q59 General Science

Consider two wires, A and B, of same thickness but lengths L and $5L$, respectively. If the resistances of A and B are $1.0\ \Omega$ and $2.5\ \Omega$, respectively, the ratio of the resistivity of A to the resistivity of B is:

- A. $\frac{1}{2}$
- B. 1
- C. 2
- D. 5

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q60 General Science

Which of the following are biodegradable substances?

- A. Paper and cotton ☒
- B. Plastic goods
- C. Industrial wastes
- D. Chemicals



Q61 General Science

A ray of light in glass is incident at an angle of 30° on the surface separating glass from air. The ray is refracted in the air at an angle of _____ and the refracted ray _____ in the plane of the incident ray.

- A. more than 30° , lies ✓
- B. less than 30° , lies
- C. more than 30° , does not lie
- D. less than 30° , does not lie

Q62 General Science

An object is placed on the principal axis of a convex lens of focal length 16 cm, at a distance of 8 cm. Its image formed is at a distance of _____.

- A. $\frac{16}{3}$ cm
- B. 8 cm
- C. -16 cm ✓
- D. 24 cm

Q63 General Science

How are the products of photosynthesis transported from leaves to other parts of the plant?

- A. Through the xylem
- B. Through the phloem ✓
- C. Through the tracheid
- D. Through the stomata

Q64 General Science

A diverging mirror of focal length 20 cm forms an image one-third the size of the object. At what distance from the mirror is the object located?

- A. -40 cm ✓
- B. -20 cm
- C. -10 cm
- D. -5 cm



Q65 General Science

The compound containing 5 carbon atoms with the general formula C_nH_{2n+2} is:

- A. pentane
- B. butane
- C. hexane
- D. heptane



Q66 General Science

Two identical resistors are connected in parallel to a 6 V battery. The total power dissipated in the circuit is 12 W. The current in each resistor is:

- A. 0.5 A
- B. 1.0 A
- C. 2.0 A
- D. 4.0 A



Q67 General Science

Which of the following statements is correct regarding the process of waste excretion in plants?

- A. Carbon dioxide is a waste product in photosynthesis.
- B. In plants, excess water is removed by translocation.
- C. Plants do not excrete waste substances into the soil.
- D. In some plants, waste products are stored as resins.



Q68 General Science

A beam of parallel rays close to the principal axis are incident on a convex lens. At which point will they converge:

- A. At F
- B. Beyond 2F
- C. At 2F
- D. Between F and 2F



Q69 General Science

Which of the following is an example of neutralisation reaction?

- A. $\text{CuSO}_4 (\text{aq}) + \text{BaCl}_2 (\text{aq}) \rightarrow \text{BaSO}_4 (\text{s}) + \text{CuCl}_2 (\text{aq})$
- B. $\text{Fe}(\text{s}) + \text{CuSO}_4 (\text{aq}) \rightarrow \text{FeSO}_4 (\text{aq}) + \text{Cu} (\text{s})$
- C. $\text{NaOH} (\text{aq}) + \text{HCl} (\text{aq}) \rightarrow \text{NaCl} (\text{aq}) + \text{H}_2\text{O} (\text{l})$ ✓
- D. $\text{Zn}(\text{s}) + \text{CuSO}_4 (\text{aq}) \rightarrow \text{ZnSO}_4 (\text{aq}) + \text{Cu} (\text{s})$

Q70 General Science

You have two solutions A and B. The pH of solution A is 6 and that of solution B is 9. Based on this information, select the correct answer.

- A. Solution A is acidic, and Solution B is basic. ✓
- B. Solution A is basic, and Solution B is acidic.
- C. Both the solutions are basic.
- D. Both the solutions are acidic.

Q71 General Science

Which of the following is the female reproductive part of a flower?

- A. Petal
- B. Pistil ✓
- C. Stamen
- D. Sepal

Q72 General Science

Lymph transports digested and absorbed intestinal _____.

- A. carbohydrates
- B. proteins
- C. fats ✓
- D. enzymes



Q73 General Science

When a piece of limestone reacts with dilute HCl, a gas X is produced. When gas X is passed through lime water, a white precipitate Y is formed. On passing excess of gas X, the white precipitate dissolves, forming a soluble compound Z. X, Y and Z, respectively, are:

- A. CO_2 , CaCO_3 , $\text{Ca}(\text{HCO}_3)_2$ ✓
- B. CO_2 , $\text{Ca}(\text{HCO}_3)_2$, CaCO_3
- C. CO_2 , CaCO_3 , CaO
- D. CO_2 , CaCO_3 , $\text{Ca}(\text{OH})_2$

Q74 General Science

A DC generator is based on the principle of:

- A. heating effect of current
- B. magnetic effect of current
- C. electromagnetic induction ✓
- D. inductive effect

Q75 General Science

The Modern Periodic Table consists of _____ groups and _____ periods, respectively.

- A. 7; 18
- B. 6; 17
- C. 18; 7 ✓
- D. 17; 6

Q76 General Science

Which factor is the most important for deciding the success rate of birth control programmes in controlling population growth?

- A. Tubectomy
- B. Use of contraceptives
- C. Vasectomy
- D. Acceptability of the contraceptive methods by the people ✓



Q77 General Science

Which of the following is a unicellular organism?

- A. Cuscuta
- B. Paramecium
- C. Bread mould
- D. Lice



Q78 General Science

The succeeding members of alkane homologous series differ by the formula unit:

- A. H_2
- B. CH_2
- C. C_2
- D. OH



Q79 General Science

The tendency of conductor to oppose the flow of current is:

- A. Power
- B. resistance
- C. electric potential
- D. conductance



Q80 General Science

During the process of respiration, how many oxygen molecules combine with one molecule of glucose?

- A. Four
- B. Five
- C. Six
- D. Seven



Q81 General Awareness and Current Affairs

Which law states that “if we keep increasing the employment of an input, with other inputs fixed, eventually a point will be reached after which the resulting addition to output will start falling”?

- A. Law of Diminishing Marginal Product ✓
- B. Law of Variable Proportions
- C. Law of Increasing Profit Generation
- D. Law of Production

Q82 General Awareness and Current Affairs

Of those listed below, which is the LEAST spoken language in the country as per the Census of India 2011?

- A. Bengali
- B. Marathi
- C. Telugu
- D. Tamil ✓

Q83 General Awareness and Current Affairs

In July 2022, which institution was upgraded by the Union Cabinet from a deemed-to-be-university to a Central University with its name as Gati Shakti University?

- A. National Academy of Indian Railways (NAIR)
- B. Institute of Road Traffic Education (IRTE)
- C. National Rail and Transportation Institute (NRTI) ✓
- D. Institute of Road Transport (IRT)

Q84 General Awareness and Current Affairs

The Minister of State for Culture and Parliamentary Affairs launched a _____ workshop 'Paramarsh 2022' in Bikaner.

- A. food and nutrition
- B. health and wellness
- C. career counselling ✓
- D. hospitality and tourism



Q85 General Awareness and Current Affairs

Which is the seven-day long festival celebrated in the north-eastern state of Assam that marks the beginning of the Assamese New Year?

- A. Majuli Festival
- B. Bohag Bihu Festival
- C. Dehing Patkai Festival
- D. Moatsu Festival

Q86 General Awareness and Current Affairs

Which of the following is a complex mixture of hydrocarbons that occur on Earth in liquid, gaseous or solid form, that can be refined into fuel?

- A. Bitumen
- B. Coke
- C. Petroleum
- D. Coal

Q87 General Awareness and Current Affairs

In which of the following years was the Wildlife Protection Act first implemented in India after independence?

- A. 1972
- B. 1976
- C. 1977
- D. 1978

Q88 General Awareness and Current Affairs

Which Indian cricketer broke Kapil Dev's long-standing record for the highest score by an Indian coming to bat at number 7 or below in test cricket?

- A. Ravichandran Ashwin
- B. Ravindra Jadeja
- C. Akshar Patel
- D. Shardul Thakur

Q89 General Awareness and Current Affairs

Which one among the following is the oldest High Court of India?

- A. Patna High Court
- B. Delhi High Court
- C. Bombay High Court
- D. Calcutta High Court



Q90 General Awareness and Current Affairs

Which of the following does not qualify as a source of factor income?

- A. Rent
- B. Wages
- C. Profit
- D. Donation



Q91 General Awareness and Current Affairs

When was the Essential Defence Services Act passed?

- A. 2018
- B. 2019
- C. 2020
- D. 2021



Q92 General Awareness and Current Affairs

The 11th Schedule of the Indian Constitution was added in 1992 by the _____ Constitution Amendment Act.

- A. 74th
- B. 72nd
- C. 42nd
- D. 73rd



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Q93 General Awareness and Current Affairs

How many stars (hotter than the sun) did an Indian team led by Barnali Das discover in the year 2021?

- A. 2
- B. 5
- C. 8
- D. 10



Q94 General Awareness and Current Affairs

Which river system's tributaries are Purna and Girna Rivers?

- A. Narmada
- B. Godavari
- C. Tapti
- D. Kaveri



Q95 General Awareness and Current Affairs

The Smart Event Tracking System, a Google Maps-based planning and analysis tool launched in March 2022 is an in-house software of the _____.

- A. Indian Air Force
- B. Indian Railways
- C. Airports Authority of India
- D. Inland Waterways Authority of India



Q96 General Awareness and Current Affairs

Which Article of the Constitution of India prohibits discrimination on the grounds of religion?

- A. Article 14
- B. Article 16
- C. Article 15
- D. Article 17



Q97 General Awareness and Current Affairs

National Women Ice Hockey Championship - 2022 was hosted by:

A. Himachal Pradesh



B. Jammu and Kashmir

C. Ladakh

D. Uttarakhand

Q98 General Awareness and Current Affairs

The banknotes of denomination of _____ introduced in the Mahatma Gandhi (New) Series post demonetisation (2016) have an image of Mangalyaan representing India's first interplanetary space mission.

A. ₹2000



B. ₹500

C. ₹200

D. ₹50

Q99 General Awareness and Current Affairs

Indian economy on the eve of independence was:

A. developed

B. undeveloped

C. developing

D. underdeveloped and stagnant



Q100 General Awareness and Current Affairs

The famous Jagannath Temple is located in which of the following cities?

A. Madurai

B. Puri



C. Ayodhya

D. Varanasi



Mathematics

25 Questions · Answer Key

Q1 Mathematics

The marked price of an item is ₹250 and a shopkeeper allows a discount of 30%. The selling price of the item is:

A. ₹195

B. ₹185

C. ₹175



D. ₹165

Q2 Mathematics

A started a business with a capital of ₹4,50,000. After 3 months, B joined him with a certain amount of capital. At the end of a year of A's starting the business, the profit was shared in the ratio 3 : 2. How much (in ₹) did B invest?

A. 3,20,000

B. 3,60,000

C. 4,00,000



D. 4,20,000

Q3 Mathematics

The value of $\sqrt{625} + \sqrt{0.25} - \sqrt{0.000025}$ is:

A. 25.395

B. 25.495



C. 25.5

D. 25.405

Q4 Mathematics

The ratio of the present ages of a father and son is 7 : 4. The product of their ages is 6300. The age of the son is:

A. 80 years

B. 70 years

C. 60 years



D. 50 years



Q5 Mathematics

12 unskilled and 14 skilled workers together complete a certain piece of work in 9 days. If each unskilled worker takes twice the time taken by a skilled worker to finish the work, in how many days will 12 skilled workers finish the same work?

A. 10 days

B. 12 days

C. 15 days



D. 18 days

Q6 Mathematics

The marked price of an article is ₹100. If the article is sold at a discount of 25%, then 25% profit is realised. The percentage loss or percentage profit made (approximately) if it is sold for ₹20 less than the marked price is:

A. $33\frac{1}{3}\%$ profit



B. 25% profit

C. $12\frac{1}{2}\%$ loss

D. 35% loss

Q7 Mathematics

The HCF of $(x^4 - y^4)$, $(x^8 - y^8)$ and $(x^2 - y^2)$ is:

A. $(x - y)(x + y)$



B. $(x + y)(x + y)$

C. $(x - y)(x + y)(x + y)$

D. $(x - y)(x + y)(x - y)(x + y)$

Q8 Mathematics

The value of

$$\frac{\sin^2 54^\circ + \sin^2 36^\circ}{\tan^2 40^\circ - \operatorname{cosec}^2 50^\circ} \text{ is:}$$

A. 1

B. 0

C. -1



D. 2



Q9 Mathematics

A solid cube with an edge of 10 cm is cast into cuboids of dimensions $4\text{ cm} \times 2\text{ cm} \times 1\text{ cm}$. The number of such cuboids that can be cast through it is:

A. 125



B. 130

C. 120

D. 100

Q10 Mathematics

The compound interest earned in 1 year on ₹40,000 at the rate of 40% per annum, compounded quarterly, is:

A. ₹28,564

B. ₹18,564



C. ₹18,264

D. ₹28,264

Q11 Mathematics

A man is 4 times as old his son. After 6 years, the man's age will be three times that of his son. The sum of their present ages is:

A. 90 years

B. 80 years

C. 70 years

D. 60 years



Q12 Mathematics

One year ago, a man was 7 times as old as his daughter. Now his age is equal to the square of his daughter's age. If the daughter has already celebrated her first year birthday, then their present ages are:

A. 6 and 36



B. 7 and 49

C. 5 and 25

D. 4 and 28



Q13 Mathematics

The third proportional to $(x^3 - y^3)$ and $(x - y)$ is:

A. $\frac{x - y}{x^2 - xy + y^2}$

B. $\frac{(x - y)^2}{x^2 - xy + y^2}$

C. $\frac{x - y}{x^2 + xy + y^2}$ ✓

D. $\frac{(x - y)^2}{x^2 + xy + y^2}$

Q14 Mathematics

The HCF and LCM of two numbers are 24 and 456, respectively. If one number is 96, then the other number is:

A. 192

B. 114 ✓

C. 112

D. 216

Q15 Mathematics

The total surface area of a cube whose main diagonal length is $16\sqrt{3}$ cm is:

A. 1764 cm^2

B. 1854 cm^2

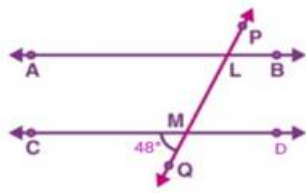
C. 1868 cm^2

D. 1536 cm^2 ✓



Q16 Mathematics

In the given figure, AB and CD are parallel lines intersected by a transversal PQ at L and M, respectively. If $\angle CMQ = 48^\circ$, then $\angle PLA$ is:



A. 110°

B. 120°

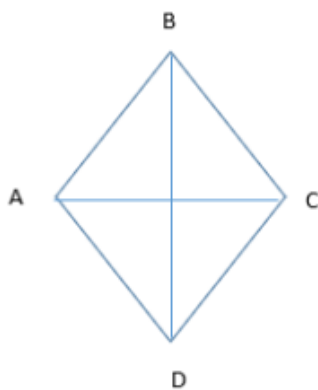
C. 132°



D. 125°

Q17 Mathematics

If ABCD is a rhombus such that $\angle ACB = 50^\circ$, then $\angle BDC$ will be:



A. 40°



B. 50°

C. 55°

D. 60°

Q18 Mathematics

If $x^4 + \frac{1}{x^4} = 27$, then what is the value of $x^2 + \frac{1}{x^2}$?

A. 31

B. 29

C. $\sqrt{31}$

D. $\sqrt{29}$



Q19 Mathematics

The value of $5\sqrt{6} - \sqrt{[3(4-2)]} + \left(\frac{12}{\sqrt{6}}\right)$ is:

A. $5\sqrt{6}$

B. $6\sqrt{6}$ ✓

C. $7\sqrt{6}$

D. $8\sqrt{6}$

Q20 Mathematics

The average sale of cars by a dealer per day in the month of March, other than on Saturdays and Sundays, is 125. The average sale of cars per day on Sundays is 150. What is the average sale of cars per day on Saturdays, if the first Saturday is on the 3rd of March and average sale of cars per day for the whole month is 130?

A. 140

B. 138

C. 136 ✓

D. 132

Q21 Mathematics

A man goes from place A to B at a speed of 18 km/h and returns from B to A at a speed of 30 km/h using the same route. The average speed for the whole journey is:

A. $52\frac{1}{2}$ km/h

B. $42\frac{1}{2}$ km/h

C. $32\frac{1}{2}$ km/h

D. $22\frac{1}{2}$ km/h ✓



Q22 Mathematics

The value of $47 + \{7 + [61 - (21 \div 3)] \div 9\}$ is:

A. 100

B. 80

C. 60



D. 40

Q23 Mathematics

Roots of the equation $x^2 - 5x - 14 = 0$ are:

A. 7, -2



B. 2, -7

C. 3, -2

D. 5, -3

Q24 Mathematics

If $x+y = 8$, product of x and y is 15, then the value of $x^4 + y^4$ is:

A. 906

B. 806

C. 706



D. 606

Q25 Mathematics

There are 20 members in group A, 32 members in group B and 28 members in group C. All the members of these groups went to a restaurant. The average amount spent on each member of group A, B and C is ₹120, ₹125 and ₹100, respectively. The total average amount (in ₹) spent per member is:

A. 112

B. 115



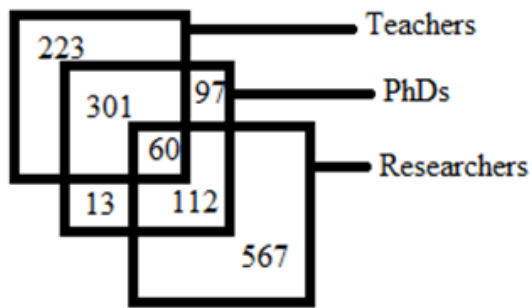
C. 116

D. 118



Q26 General Intelligence and Reasoning

Study the Venn Diagram given below and answer the question that follows.



How many PhDs are neither teachers nor researchers?

A. 110



B. 112

C. 60

D. 301

Q27 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(13, 9, 5)

(14, 11, 8)

A. (18, 26, 36)

B. (22, 19, 16)



C. (14, 10, 12)

D. (22, 32, 24)



Q28 General Intelligence and Reasoning

Eight coloured boxes are kept in an almirah having eight shelves. Only one box is kept on one shelf. The lower most shelf is numbered one and the uppermost shelf is numbered eight. There are only two boxes kept above the blue box. The brown box is kept between the black and the blue box. Six boxes are kept below the green box. The orange box is kept on an odd numbered shelf. The yellow box is kept just above the white box and is somewhere below the red box.

Which box is kept on the lowermost shelf?

A. White



B. Red

C. Yellow

D. Blue

Q29 General Intelligence and Reasoning

Which two signs should be interchanged to make the following equation correct?

$$33 + 4 \times 21 \div 3 - 17 = 122$$

A. + and ×



B. + and −

C. − and ×

D. ÷ and −

Q30 General Intelligence and Reasoning

If all the numbers given below are arranged in ascending order, the position of how many numbers will remain unchanged?

246, 247, 548, 845, 346, 578, 145

A. 1



B. 2

C. 3

D. 4



Q31 General Intelligence and Reasoning

Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

AZ – CX – GT

XC – ZA – DW

A. TH – VE – ZA

B. MN – OM – SH

C. DW – FU – JQ



D. PK – RI – WD

Q32 General Intelligence and Reasoning

Gaganpreet started walking towards the north from his school. After walking for 6 metres he turned left and walked further 8 metres to reach his home. In which direction is his school from his home? (All turns are 90 degree turns only)

A. North-west

B. South-east



C. South-west

D. North-east

Q33 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some mats are figs.

All figs are clips.

No clip is a stand.

Conclusions:

I. All mats being stands is a possibility.

II. Some clips are mats.

A. Both conclusions I and II follow

B. Only conclusion II follows



C. Only conclusion I follows

D. Neither conclusion I nor II follows



Q34 General Intelligence and Reasoning

Six boxes of different food items are kept in a row on the dining table. The box with toffees is kept at one end. There are three boxes kept between the box with toffees and the box with chocolates. The box with ice cream is not kept with the toffee box or the fruit-jam box. Cookies and pancakes boxes are kept with the ice cream box. Which of the following box is kept at an end?

A. Fruit-jam



B. Chocolates

C. Pancake

D. Cookies

Q35 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(20, 16, 8)

(13, 20, 23)

A. (32, 27, 18)



B. (13, 16, 13)

C. (14, 18, 16)

D. (19, 18, 21)

Q36 General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. T is taller than only two other friends. R is shorter than only one friend. P is shorter than T but taller than S. Q is shorter than U. Who is the third tallest among all the friends?

A. T

B. U

C. Q



D. R



Q37 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

15, 18, 27, 54, 135, ?

A. 367

B. 368

C. 378



D. 398

Q38 General Intelligence and Reasoning

Each vowel in the word 'EXACTLY' is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. W

B. B



C. S

D. K

Q39 General Intelligence and Reasoning

Among six friends, A, B, C, D, E and F, each with a different height, B is taller than D but shorter than E. C is shorter than E. A is taller than F. D and E are shorter than C and A, respectively. E is shorter than A and F. Who among the six friends is the tallest?

A. F

B. E

C. C

D. A



Q40 General Intelligence and Reasoning

Refer to the following number series and answer the question.

7 2 9 6 3 8 3 8 7 2 3 2 7 3 2 2 1 3 3 9 9 7 4 2 9 3 0 9

Find the sum of number of occurrences of 2s and number of occurrences of 3s in the given series.

A. 8

B. 10

C. 12

D. 13



Q41 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 634 145 317 534 621 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

What will be the resultant if the third digit of the largest number is added to the second digit of smallest number?

A. 4

B. 8



C. 9

D. 7

Q42 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

FUR37, LAX43, RGD49, XMJ55, ?

A. PDS63

B. DPS61

C. DSP61



D. PSD63

Q43 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. Some students are males.
2. Some males are sincere.
3. All sincere are honest.

Conclusions:

- I. Some honest are males.
- II. All males are students is a possibility.
- III. Some sincere are not students.

A. Only conclusion I is true

B. Only conclusion II is true

C. Only conclusion III is true

D. Only conclusion I and II are true



Q44 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$10 \div 5 + 144 \times 12 + 13 - 45 \times 9 + 12 = ?$$

A. 16

B. 18



C. 20

D. 22

Q45 General Intelligence and Reasoning

If in a code language, THINE is written as SGHMD and ISLAND is written as HRKZMC, how will DYNAMIC be written in that language?

A. CXMZLHB



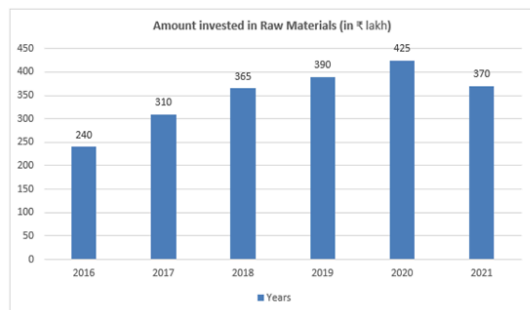
B. EZNBMCI

C. FGTRDVN

D. JUHGTRD

Q46 General Intelligence and Reasoning

The following bar chart shows the amount invested by a company in raw material over the duration of six years. Study the bar chart and answer the question based on it.



The sum of amount invested in raw materials in 2016 and 2021 was what percentage of the sum of the amount invested in raw materials in the year 2018 and 2020?

A. 77.22%



B. 78.36%

C. 79.56%

D. 79.98%



Q47 General Intelligence and Reasoning

Satheesh starts from a bus-stand and travels 6 km towards the north. He then takes a right turn, travels 2 km, turns right and travels 11 km. He then takes a right turn and travels 5 km. He takes a final right turn, travels 3 km and stops at a junction. In which direction is the bus-stand with respect to the junction? (All turns are 90° turns only.)

A. North-east



B. North

C. South

D. South-west

Q48 General Intelligence and Reasoning

Given below is a statement followed by two possible underlying assumptions I and II. Read the information carefully and select the correct option.

Statement:

Extracts of plant C have been found useful in treating an earlier fatal disease. Although plant C, once imported, can be grown on any moist soil, most pharma companies in country Y are still choosing synthetic substitutes over using natural extracts.

Which of the following can be assumed by the given statement?

I. Unlike the case in all other countries, in Country Y, production of this synthetic substitute is substantially cheaper than growing Plant C.

II. The effect of a synthetic substitute is not drastically different from the plant extract.

A. Only I can be assumed

B. Only II can be assumed



C. Both I and II can be assumed

D. Neither I nor II can be assumed

Q49 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

25, 23, 29, 28, 33, 33, ?

A. 34

B. 38

C. 35

D. 37



Q50 General Intelligence and Reasoning

From the numbers 583, 459, 687, 754 and 853,, which of the following will be the lowest number, if in each number, all the 8s and 5s are replaced with 2 and 1, respectively?

A. 853

B. 583

C. 687

D. 459

Q51 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	4	5	9	#	\$	%	6
Codes	S	D	M	U	T	L	A

Conditions:

- (i) If the first element is an even number and the last element is an odd number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the second element is an even number and the fifth element is a symbol, the codes for these two (the second and the fifth elements) are to be interchanged.
- (iii) If the fourth element is a number and the sixth element is a symbol, both these elements (the fourth and the sixth elements) are to be coded as G.

Question: 4 5 \$ 9 4 % # 6

A. ADTGSGUS

B. SDTGSGUA

C. SSTGDGUA

D. SDTMLGUA

Q52 General Intelligence and Reasoning

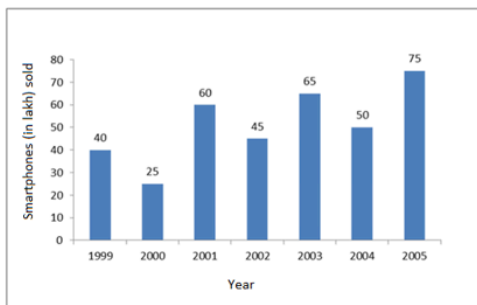
Rakesh and Raman have their houses in an eight-storeyed building. The lower most floor of the building is numbered as one and the top most floor is numbered as eight. Rakesh's house is just above Raman's floor. Every Day Raman has to go three floors down to drop his son to school which is nearby. On which floor Rakesh Lives?

A. 4thB. 5thC. 6thD. 3rd

Q53 General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The graph presents smartphones (in lakh) sold by a company during the years 1999 to 2005.



What was the approximate percentage increase in the smartphone sales of the company from 2002 to 2003?

A. 48%

B. 44%

C. 42%

D. 39%

Q54 General Intelligence and Reasoning

I, J, K, L, M, N and O are sitting along a circle facing at the centre and are playing cards. M is the immediate neighbour of I and L. J is second to the left of O. N is on the immediate right of I. What is the position of N?

A. 2nd to the right of K

B. To the immediate left of J

C. 2nd to the left of L

D. 3rd to the right of O

Q55 General Intelligence and Reasoning

Five friends V, W, X, Y, and Z are eating dinner around a circular dining table, facing the centre. X is an immediate neighbour of both Z and W. V is sitting to the immediate left of W. Y is sitting second to the left of W. Who is sitting to the immediate left of X?

A. Z

B. W

C. V

D. Y



Q56 General Science

A $4\ \Omega$ resistor, A, is connected in series to a $6\ \Omega$ resistor, B, and a 2 V battery. The potential drops across A and B are respectively _____.

A. 1.2 V and 0.8 V

B. 0.8 V and 1.2 V



C. 1.4 V and 0.6 V

D. 0.6 V and 1.4 V

Q57 General Science

The double displacement reaction among the following is:

A. $\text{Fe (s)} + \text{CuSO}_4 \text{ (aq)} \rightarrow \text{FeSO}_4 \text{ (aq)} + \text{Cu (s)}$

B. $\text{Zn (s)} + \text{CuSO}_4 \text{ (aq)} \rightarrow \text{ZnSO}_4 \text{ (aq)} + \text{Cu (s)}$

C. $\text{Pb (s)} + \text{CuCl}_2 \text{ (aq)} \rightarrow \text{PbCl}_2 \text{ (aq)} + \text{Cu (s)}$

D. $\text{CuSO}_4 \text{ (aq)} + \text{H}_2\text{S (g)} \rightarrow \text{CuS (s)} + \text{H}_2\text{SO}_4 \text{ (aq)}$

**Q58** General Science

A concave mirror is made from a section of the surface of a sphere of radius 8.0 cm. Its principal focus is at a distance of _____ from its pole.

A. 4.0 cm



B. 8.0 cm

C. 12.0 cm

D. 16.0 cm



Q59 General Science

Consider the following statements about an electric motor:

- (a) It uses a commutator that reverses the direction of the current in the coil after each half rotation.
- (b) The direction of the force on an arm of the coil can be found using Fleming's left hand rule.

Which of the above statements is/are correct?

- A. Neither (a) nor (b)
- B. Both (a) and (b) ✓
- C. Only (a)
- D. Only (b)

Q60 General Science

Which of the following gases is essential for all aerobic forms of life?

- A. CO_2
- B. O_2 ✓
- C. O_3
- D. CO

Q61 General Science

What is the normal systolic and diastolic pressure in humans?

- A. 130 mm of Hg / 80 mm of Hg
- B. 130 mm of Hg / 90 mm of Hg
- C. 120 mm of Hg / 90 mm of Hg
- D. 120 mm of Hg / 80 mm of Hg ✓



Q62 General Science

An area designated for wildlife in which they have unrestricted access to ecosystems and natural resources is called a _____.

- A. wildlife sanctuary
- B. national park
- C. biosphere reserve
- D. protected area



Q63 General Science

Which of the following is NOT a component of the male reproductive part of flower?

- A. Filament
- B. Style
- C. Anther
- D. Pollen



Q64 General Science

An object is placed on the principal axis of a concave lens, at a point between infinity and its optical centre O. Its image formed is _____.

- A. real and enlarged
- B. virtual and enlarged
- C. real and diminished
- D. virtual and diminished



Q65 General Science

A 100 W bulb is connected to a 220 V source. The current through the bulb is:

- A. 2.2 A
- B. 1.1 A
- C. 0.45 A
- D. 0.25 A



Q66 General Science

Which of the following options correctly describes the features of arteries?

- A. Thick walls, blood flows under low pressure, collect blood from different parts of the body
- B. Thin walls with valves, blood flows under low pressure, collect blood from different parts of the body
- C. Thin walls with valves, blood flows under high pressure, carry blood to different parts of the body
- D. Thick walls, no valves, blood flows under high pressure, carry blood to different parts of the body ✓

Q67 General Science

A device of 60 W is connected to a 12 V battery. The current in the device is:

- A. 0.1 A
- B. 0.2 A
- C. 2.5 A
- D. 5.0 A ✓

Q68 General Science

Which of the following metals is most metallic in nature?

- A. Li
- B. Rb
- C. Na
- D. Cs ✓

Q69 General Science

Genes control traits through the activity of:

- A. enzymes
- B. hormones ✓
- C. chromosomes
- D. gametes



Q70 General Science

In plants, diffusion is mainly responsible for the process of transportation. However for transport of some substances, energy is needed. Which option shows the substances transported using energy from ATP?

- A. Water and minerals
- B. Only amino acids
- C. Water, minerals and food
- D. Food, amino acids and hormones



Q71 General Science

Consider the statements given below and identify the correct answer.

Statement I: The Modern Periodic Table has 18 vertical columns known as 'periods' and 7 horizontal rows known as 'groups'.

Statement II: Groups in the Periodic Table signify an identical outer shell electronic configuration

- A. Statement I is correct, Statement II is incorrect.
- B. Statement II is correct, Statement I is incorrect.
- C. Both statements are correct.
- D. Both statements are incorrect.



Q72 General Science

A decomposition reaction carried out by heating is called:

- A. photochemical decomposition
- B. thermal decomposition
- C. electrolysis
- D. exothermic reaction



Q73 General Science

Which of the following members of the homologous series of alkanes has the highest melting point?

- A. C_4H_{10}
- B. C_3H_8
- C. C_2H_6
- D. CH_4



Q74 General Science

An object is placed in front of a concave mirror at a point beyond its centre of curvature C. The image is formed at a point _____ and is _____.

A. between F and C, diminished



B. between F and C, enlarged

C. beyond C, enlarged

D. beyond C, diminished

Q75 General Science

Which of the following will NOT affect the magnetic strength of an electromagnet?

A. Number of turns in the coil

B. Direction of placement of the coil



C. Current flowing through the coil

D. Length of the metallic core

Q76 General Science

Acids that give rise to more H^+ ions are said to be _____, while those which gives less H^+ ions are said to be _____.

A. strong acid, strong base

B. strong acid, weak base

C. weak acid, strong acid

D. strong acid, weak acid



Q77 General Science

The total numbers of covalent bond in propane are _____.

A. 8

B. 7

C. 10



D. 12



Q78 General Science

Which of the following properties is NOT shown by bleaching powder?

- A. Reducing agent
- B. For bleaching cotton fibre
- C. Oxidising agent
- D. In water purification

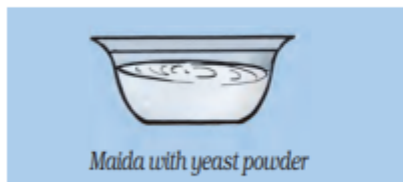
Q79 General Science

Which of the following phenomena is NOT involved during the formation of a rainbow?

- A. refraction
- B. dispersion
- C. scattering
- D. Total internal reflection

Q80 General Science

Study the figures A and B carefully. What is the reason for the increase in volume in dough B?



A



B

- A. CO_2 produced during respiration increases the volume
- B. Alcohol is produced that increases the volume
- C. Lactic acid is produced that increases the volume
- D. Water is produced that increases the volume



Q81 General Awareness and Current Affairs

_____ as a result of the 44th Constitutional Amendment to the Constitution of India.

- A. Right to Property ceased to be a Fundamental Right ☒
- B. Sikkim became the 22nd state of the India Union
- C. The Preamble to the Constitution of India was amended to include the words 'socialist' and 'secular'
- D. Salaries of Judges of the High Courts and Supreme Court of India were revised

Q82 General Awareness and Current Affairs

Which ministry released a draft 'National Air Sports Policy (NASP)' for public feedback on January 2, 2022?

- A. Ministry of Civil Aviation ☒
- B. Ministry of Youth Affairs and Sports
- C. Ministry of Home Affairs
- D. Ministry of External Affairs

Q83 General Awareness and Current Affairs

Which language institution gives away the Bhasha Bharti Samman award in India?

- A. Central Hindi Directorate
- B. Rashtriya Sanskrit Sansthan
- C. Kendriya Hindi Sansthan
- D. Central Institute of Indian Languages ☒



Q84 General Awareness and Current Affairs

Which of the following is the birth place of the founder of Christianity?

- A. Nazareth
- B. Haifa
- C. Bethlehem
- D. Galilee



Q85 General Awareness and Current Affairs

During the British rule in India, about how much per cent of the country's population lived mostly in villages and derived their livelihood directly or indirectly from agriculture?

- A. 85%
- B. 75%
- C. 65%
- D. 55%



Q86 General Awareness and Current Affairs

Which amendments of the Constitution of India aimed at strengthening local governments and ensuring an element of uniformity in their structure

and functioning across the country?

- A. 73rd and 74th
- B. 63rd and 64th
- C. 53rd and 54th
- D. 43rd and 44th



Q87 General Awareness and Current Affairs

According to the Union Budget 2022, the overall workforce participation rate in India is _____.

- A. 19.1%
- B. 20.3%
- C. 21.2%
- D. 22.6%



Q88 General Awareness and Current Affairs

Name the state that became the first state to introduce carbon-neutral farming methods, in March 2022?

A. Kerala



B. Tamil Nadu

C. Assam

D. Jharkhand

Q89 General Awareness and Current Affairs

_____ is a newsletter published by the Small Industries Development Bank of India (SIDBI) and Equifax.

A. Microfinance Pulse



B. Microfinance Times

C. Microfinance Now

D. Microfinance World

Q90 General Awareness and Current Affairs

The newer, younger deposits of the flood plains called _____ are renewed almost every year, and hence are fertile, thus being ideal for intensive agriculture.

A. Bangar

B. Khadar



C. Bhabar

D. Tarai



Q91 General Awareness and Current Affairs

Which of the following Indian states received the maximum of its rainfall from the Northeast Monsoon in 2021?

- A. Haryana
- B. Uttar Pradesh
- C. Gujarat
- D. Tamil Nadu



Q92 General Awareness and Current Affairs

The National Commission for Protection of Child Rights (NCPCR) launched the SAMVEDNA helpline in 2021 to _____.

- A. provide mental support to children affected by Covid-19
- B. counsel children who witness domestic violence
- C. counsel children of sex workers
- D. provide guidance to students about career choices



Q93 General Awareness and Current Affairs

In February 2022, which job portal powered by artificial intelligence was launched by IIT-Hyderabad to help people with disabilities to acquire relevant skills and find jobs?

- A. Glassdoor
- B. Swarajability
- C. Yuvika
- D. Sarthakindia



Q94 General Awareness and Current Affairs

Indian Space Research Organization (ISRO) has successfully completed the ground test of the solid fuel-based booster stage (SS1) of its new SSLV at Satish Dhawan Space Centre (SDSC), Sriharikota at Andhra Pradesh in March 2022. What is the full form of the above mentioned SSLV?

- A. Solar Satellite Launch Vehicle
- B. Small Satellite Launch Vehicle
- C. Synchronized Satellite Launch Vehicle
- D. Systematic Satellite Launch Vehicle



Q95 General Awareness and Current Affairs

Select the correct statement.

- A. Slope of the consumption function is indicated by APC, and not MPC.
- B. MPC multiplied by MPS equals 1.
- C. Investment multiplier is positively related to MPC. ✓
- D. Investment multiplier is zero when MPS is zero.

Q96 General Awareness and Current Affairs

In the year 2021, the sportspersons who won the most Arjuna Awards were associated with which sport?

- A. Hockey ✓
- B. Cricket
- C. Shooting
- D. Archery

Q97 General Awareness and Current Affairs

The term 'lithification' is related to which of the following geographic elements?

- A. Rocks ✓
- B. Seas
- C. Rivers
- D. Valleys

Q98 General Awareness and Current Affairs

Who among the following freedom fighters has been honoured with the title of 'The Iron Man Of India'?

- A. Jawaharlal Nehru
- B. Vithalbhai Patel
- C. Ram Manohar Lohia
- D. Vallabhbhai Patel ✓



Q99 General Awareness and Current Affairs

The guardian of the Constitution of India is:

- A. the President
- B. the Supreme Court
- C. the Lok Sabha
- D. the Rajya Sabha



Q100 General Awareness and Current Affairs

Which of the following festivals is also known as 'Vijayadashmi'?

- A. Pongal
- B. Onam
- C. Diwali
- D. Dussehra



Mathematics

25 Questions · Answer Key

Q1 Mathematics

Pipe A can fill a cistern in 6 hours and B can fill it in 30 hours. Both pipes were turned on but there was a leakage in the bottom of the cistern. So, the cistern took 30 minutes more to fill. The time that the leakage will take to empty the full cistern is:

A. 54 hours

B. 55 hours



C. 65 hours

D. 60 hours

Q2 Mathematics

The median of the observations 4, 14, 11, 8, 7, 8, 9, 12, 4 and 6 is:

A. 11

B. 10

C. 9

D. 8



Q3 Mathematics

A sum of ₹4,800 is divided between A, B and C such that the ratio of the share of A to the combined share of B and C is 3 : 5 and C receives $\frac{5}{7}$ of what A and B together receive. The difference (in ₹) of A's share and B's share is:

A. 800



B. 850

C. 900

D. 1,000

Q4 Mathematics

The average marks obtained in mathematics by the students of a class was 70. The average marks obtained by the boys is 20% more than the average marks obtained by the girls. If the ratio of the number of boys to that of girls is 3 : 2, then the average marks obtained by the girls is:

A. 62.5



B. 63

C. 63.5

D. 65



Q5 Mathematics

If the cost price of an item is ₹4,500 and its selling price is ₹3,500, then the loss percentage is:

A. $55\frac{2}{9}\%$

B. $44\frac{2}{9}\%$

C. $33\frac{2}{9}\%$

D. $22\frac{2}{9}\%$



Q6 Mathematics

The value of $39 \div \{6 \times (\frac{6}{7} \text{ of } \frac{7}{8})\}$ is:

A. $\frac{23}{3}$

B. $\frac{25}{3}$

C. $\frac{26}{3}$

D. $\frac{28}{3}$



Q7 Mathematics

Which of the following statements is true about the nature of roots for the equation $2x^2 + 9x + 15 = 0$?

A. Both roots are imaginary or non-real



B. One root is positive real and one is negative real

C. Both roots are positive real

D. Both roots are negative real



Q8 Mathematics

The present ages of two persons are 46 years and 60 years, respectively. If after 'n' years, the ratio of their ages is 4: 5, then the value of 'n' is:

A. 13

B. 12

C. 11

D. 10

**Q9 Mathematics**

The LCM of the numbers 36, 54, 72 and 96 is:

A. 1064

B. 964

C. 864



D. 764

Q10 Mathematics

Three numbers are in the ratio 4: 5: 7, and their LCM is 5600. Their HCF is:

A. 10

B. 20

C. 30

D. 40

**Q11 Mathematics**

The value of $(0.1 \times 0.001 \times 0.0001 \times 10^6)$ is:

A. 100

B. 1

C. $\frac{1}{100}$



D. $\frac{1}{10}$



Q12 Mathematics

The volumes of two spheres are in the ratio 216 : 125. The ratio of their surface areas is:

- A. 9 : 4
- B. 36 : 25
- C. 16 : 9
- D. 25 : 9



Q13 Mathematics

The value of $\sec A (1 - \cos A) (\operatorname{cosec} A + \cot A)$ is:

- A. $\cot A$
- B. $\tan A$
- C. $\operatorname{cosec} A$
- D. $\sec A$



Q14 Mathematics

In a competitive exam, 3 marks are to be awarded for every correct answer and for every wrong answer, 1 mark will be deducted. Sindhu scored 80 marks in this exam. Had 4 marks been awarded for each correct answer and 2 marks deducted for each incorrect answer, Sindhu would have scored 90 marks. If Sindhu attempted all the questions, then the number of questions in the test are:

- A. 70
- B. 60
- C. 55
- D. 50



Q15 Mathematics

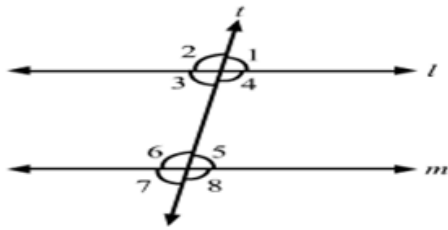
The sum of the present ages of A and B is 30 years. The ratio of their ages after 5 years will be 3 : 2. The present age of A is:

- A. 39 years
- B. 29 years
- C. 19 years
- D. 11 years



Q16 Mathematics

In the given figure, $l \parallel m$ and t is a transversal. If $\angle 1$ and $\angle 2$ are in the ratio $4 : 11$, the measures of the angles $\angle 7$ and $\angle 8$, respectively, are:



- A. 65° and 115°
- B. 132° and 48° ✓
- C. 110° and 70°
- D. 87° and 93°

Q17 Mathematics

If a certain sum becomes two times itself in 6 years at compound interest in case of annual compounding, then the number of years in which it will become eight times of itself at the same rate of interest under annual compounding is:

- A. 12 years
- B. 24 years
- C. 18 years ✓
- D. 36 years

Q18 Mathematics

Solutions for the equation $11a^2 + 18a + 7 = 0$ are:

- A. $-1, 2$
- B. $-2, \frac{-7}{11}$
- C. $-1, \frac{-7}{11}$ ✓
- D. $-1, -3$



Q19 Mathematics

In a quadrilateral ABCD, if the sum of angles $\angle B$ and $\angle D$ be 150° while angles $\angle A$ and $\angle C$ are in ratio 4 : 3, then the measure of $\angle C$ will be:

A. 210°

B. 150°

C. 90°



D. 120°

Q20 Mathematics

The value of $36^2 \div 9^2 + 4^2$ is:

A. 32



B. 36

C. 49

D. 25

Q21 Mathematics

A shopkeeper allows 4% discount on his marked price. If the cost price of an article is ₹ 120 and he has to make a profit of 10%, then his marked price must be:

A. ₹127.50

B. ₹137.50



C. ₹120.50

D. ₹117.50

Q22 Mathematics

If $9x = 55^2 - 35^2$, then the value of x is:

A. 500

B. 400

C. 300

D. 200



Q23 Mathematics

A man goes to his office from his house at the speed of 5 km/h and returns to his house using the same route at the speed of 20 km/h. The average speed during the journey is:

- A. 6 km/h
- B. 12 km/h
- C. 10 km/h
- D. 8 km/h

**Q24** Mathematics

The area of a square having side 15 cm is:

- A. 525 cm^2
- B. 425 cm^2
- C. 325 cm^2
- D. 225 cm^2

**Q25** Mathematics

The third proportional of 3.6 and 1.2 is:

- A. 0.40
- B. 0.60
- C. 0.80
- D. 0.90

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

21, 22, 26, 35, 51, 76, ?

- A. 140
- B. 114
- C. 112
- D. 110



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Q27 General Intelligence and Reasoning

E, F, G, H, I and J live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 6.

G lives on the lowermost floor. Only J lives between the floors occupied by H and I. E lives on floor number 2. F lives on an even numbered floor, with I as an immediate neighbour. Who lives on floor number 4?

A. F

B. J



C. H

D. I

Q28 General Intelligence and Reasoning

Amongst six friends C, V, Z, N, X and B, each has a different height. Z is taller than only four other friends. N is taller than only one friend. X is taller than B but shorter than V. V is not the tallest. Who is the tallest among all the friends?

A. N

B. X

C. B

D. C



Q29 General Intelligence and Reasoning

If the first and third digits of each number are interchanged and then the numbers are arranged in descending order, the position of how many numbers will NOT change?

7451, 3254, 7353, 3464, 1958

A. Three

B. Two

C. One

D. Zero



Q30 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(4, 6, 8)

(6, 9, 12)

A. (8, 12, 16)



B. (5, 30, 10)

C. (2, 12, 8)

D. (18, 18, 16)

Q31 General Intelligence and Reasoning

Raghav starts from Point A and drives 10 km towards the north. He then takes a right turn, drives 4 km, turns right and drives 13 km. He then takes a right turn and drives 7 km. He takes a final right turn, drives 3 km and stops at Point P. How far and towards which direction should he drive in order to reach Point A from Point P? (All turns are 90 degree turns only)

A. 3 km towards the west

B. 3 km towards the east



C. 4 km towards the east

D. 5 km towards the north

Q32 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the middle of the sides. G sits third to the left of D. G sits at one of the corners. B sits second to the right of A. A does not sit at any of the corners. A is not an immediate neighbour of G. H is an immediate neighbour of C. H does not sit at any of the middle of the sides. Only three people sit between H and F.

Who sits third to the left of E?

A. F

B. B

C. D

D. C



Q33 General Intelligence and Reasoning

Each of the digits in the number 8132475 is arranged in descending order from left to right. what will be the sum of the digits which are third from the left and second from the right in the new number thus formed?

A. 9

B. 2

C. 5

D. 7



Q34 General Intelligence and Reasoning

In a certain code language, ELDERLY is written as DLEEYLR, and GENERAL is written as NEGELAR. How is NUCLEAR written in that language?

A. UCNRLLEL

B. CULNREA

C. UCNLARE

D. CUNLRAE



Q35 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Lalit sits fourth to the left of Purnima. Lalit is third from the left end. Leela is eleventh from the right end and an immediate neighbour of Lalit. Only four people sit between Sheetal and Lalit. Only four people sit between Sheetal and Neena. How many people are sitting in the row?

A. 14

B. 23

C. 33

D. 18



Q36 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. No Boy is a Singer.
2. All Singers are Musicians.
3. All Musicians are Actors.

Conclusions:

- I. All Musicians cannot be Boys.
- II. All Boys are Actors.
- III. No Actor is a Boy.

A. Only conclusion I follows



B. Only conclusion II follows

C. Conclusions II and III follow

D. Conclusions I and II follow

Q37 General Intelligence and Reasoning

Five persons, P, Q, R, S and T travelled in different months of the same year viz. January, February, March, April and May.

P travelled in February. Only one person travelled between P and R. Only three people travelled between S and Q. Q travelled in a month after R. Who among them travelled in January?

A. Q

B. S



C. T

D. R



Q38 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 744 345 417 235 829 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

What will be the resultant if the second digit of the largest number is added to the third digit of smallest number?

A. 7



B. 14

C. 5

D. 12

Q39 General Intelligence and Reasoning

In a certain code language, 'ALBUM' is written as 'CPHCW' and 'BOARD' is written as 'DSGZN'. How will 'CLEAR' be written in that language?

A. SDOIG

B. EPKIB



C. PLEUV

D. EKNPS

Q40 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $Q \geq W = E > R \leq T < Y$

A. $R < Y < T$

B. $Q = W = E$

C. $Q > R < Y$



D. $E > Y > T$



Q41 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statement.

Statements:

All sofas are chairs

All chairs are benches

All benches are desks

Conclusions:

(I) Some desks are sofas

(II) All chairs are sofas

(III) No chair is a sofa

A. Only conclusion I follows



B. Only conclusion II follows

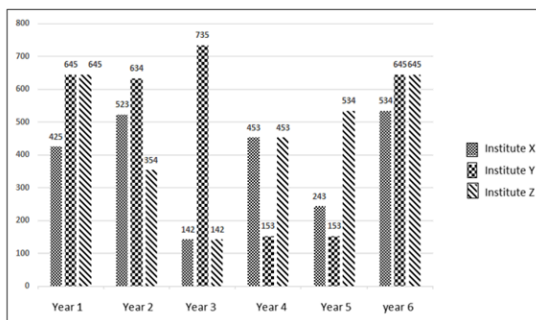
C. Only conclusion I and III follows

D. None of the conclusions follow

Q42 General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The graph presents the total number of candidates who qualified for medical entrance examination from three reputed institutions over the six years.



In which year have the maximum number of candidates succeeded in all three institutes taken together?

A. Year 6



B. Year 5

C. Year 1

D. Year 2



Q43 General Intelligence and Reasoning

Each vowel in the word 'EXACTLY' is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter, thus formed, is arranged in alphabetical order, which letter will be third from the right end?

A. F

B. K

C. S



D. W

Q44 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

TEACHER : BFUDSFI :: STUDENT : VUTEUOF :: CLASSES : ?

A. BMDTTET

B. BMDTTFT



C. DMBTTFT

D. BMDSTFU

Q45 General Intelligence and Reasoning

Five people A, B, C, D and E are sitting around a circular table. One of them is facing outside (opposite to the centre) and the other four are facing the centre. C is facing the centre and is sitting at second place to the left of D. B is sitting at second place to the right of D. A is sitting to the immediate left of both C and D. E is sitting to the immediate right of B. Who among them is facing outside?

A. B

B. C

C. E

D. D



Q46 General Intelligence and Reasoning

What will come in place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$13 \div 7 + 132 \times 11 + 23 - 512 \times 2 + 122 = ?$$

A. 200

B. 165

C. 195

D. 190

**Q47** General Intelligence and Reasoning

The following table shows the investment (in Rs.) of three friends over the years. Study the table carefully and answer the question that follows.

Years	A	B	C
2017	55000	48000	36000
2018	25000	85000	46000
2019	64000	56000	75000
2020	79000	42000	84000
2021	38000	62000	54000

The sum of average investment of both A and average investment of B for the given years is what percentage of the sum of average investment of B and average investment of C for the given years?

A. 85.35%

B. 87.25%

C. 91.36%

D. 94.22 %

**Q48** General Intelligence and Reasoning

Meeta starts walking from her office and goes 60 m towards the east. She then takes a right turn and walks 40 m. She then turns left and walks 36 m. She then takes a final left turn and walks 40 m to reach a park. In which direction is the park with reference to Meeta's office? (All turns are 90 degree turns only)

A. East

B. West

C. North

D. South



Q49 General Intelligence and Reasoning

Refer to the following number series and answer the question that follows.

(Left) 1 4 6 7 4 3 2 5 6 7 3 4 6 5 1 3 4 5 2 4 5 1 5 7 (Right)

If every second number from the left in the above series is dropped, which number would appear at the eighth place from the left?

A. 1



B. 5

C. 6

D. 4

Q50 General Intelligence and Reasoning

Refer to the following letter-symbol series and answer the question that follows.

H Y T G B D R S V % ^ C D N S S R ^ @ @ F S V # D % & H

How many such letters are there that are immediately preceded by a symbol and also immediately followed by a symbol?

A. 3

B. 5



C. 4

D. 2

Q51 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.

K _ G _ D _ L G P _ K L _ P D K _ G _ D

A. L P K L G D P

B. L K P D L G P

C. L L P P K D G

D. L P K D G L P



Q52 General Intelligence and Reasoning

Four number triads have been given, out of which three are alike in some manner as they follow the same pattern and one is different. Select the number triad that is different from the rest.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 is not allowed)

A. (34, 22, 12)

B. (47, 33, 21)

C. (79, 61, 45)

D. (99, 79, 60)



Q53 General Intelligence and Reasoning

Given below is a decision followed by two statements I and II. Read the information carefully and select the correct option.

Decision:

Many private schools in country F have decided to discontinue assessments for students until grade 7. All students will be promoted to the next grade irrespective of how they have performed.

Statements:

I. A survey in country F showed that students who were assessed regularly had much better grasp on concepts than those who did not have assessments on a regular basis.

II. As per the current curriculum of grades 4 to 7 in country F, 70-80% of all subject matter consists of basics which are very important for higher education.

A. Both statements I and II strengthen the decision.

B. Statement I weakens the decision but statement II is neutral.

C. Both statements I and II weaken the decision.



D. Statement I is neutral but statement II strengthens the decision.



Q54 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

5, 11, 24, 51, ?

A. 102

B. 104

C. 106



D. 108

Q55 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All keys are mouse.
2. Some mouse are processor.
3. Some processors are drive.

Conclusions:

- I. Some processors are mouse.
- II. Some processors are keys.
- III. Some drives are mouse.

A. Only conclusion I follows



B. Only conclusion II follows

C. Both conclusions II and III follow

D. All the conclusions follow

General Science

25 Questions • Answer Key

Q56 General Science

A current carrying wire is placed horizontally in a magnetic field with north pole in upward and south pole in downward direction. The wire is deflected towards south direction. The direction of electrons in the wire is:

A. east to west

B. west to east



C. north to south

D. south to north



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Q57 General Science

A ray of light is incident on a refracting surface AB of a glass prism and emerges out of the other refracting surface AC. Consider the following statements:

- (a) The angle of refraction at surface AB is more than the angle of incidence.
- (b) The angle of refraction at the surface AC is less than the angle of incidence.

Which of the above statements is/are correct?

A. Both (a) and (b)

B. Neither (a) nor (b)



C. Only (a)

D. Only (b)

Q58 General Science

Which of the following parts of the alimentary canal carries out the complete digestion of carbohydrates, proteins and fats?

A. Oesophagus

B. Stomach

C. Small intestine



D. Large intestine

Q59 General Science

Select the correct product when ethanol is heated at 443 K with excess concentrated sulphuric acid.

A. $CH_2 = CH_2$



B. CH_4

C. CH_3COOH

D. $CH_3 - CH_3$

Q60 General Science

Two resistors, each of $10\ \Omega$, are connected in parallel. The combination, in turn, is connected in series to a third resistor of $10\ \Omega$ and a battery of 6 V. The power supplied by the battery is:

A. 10.8 W

B. 5.4 W

C. 2.4 W



D. 1.2 W



Q61 General Science

Tarnishing of ornaments is an example of _____.

- A. oxidation reaction
- B. neutralisation reaction
- C. exothermic reaction
- D. photolytic decomposition reaction

Q62 General Science

What is the correct order of periods in terms of number of elements?

- A. $1 < 2 = 3 < 4 = 5 < 6 = 7$
- B. $1 = 2 < 3 = 4 < 5 = 6 < 7$
- C. $1 = 2 = 3 < 4 = 5 < 6 = 7$
- D. $1 < 2 < 3 = 4 < 5 = 6 < 7$

Q63 General Science

Which of the following constitutes the human excretory system?

- A. One pair of kidneys, single ureter, single urinary bladder and single urethra
- B. Single kidney, single ureter, one pair of urinary bladder and single urethra
- C. One pair of kidneys, one pair of ureters, single urinary bladder and single urethra
- D. One pair of kidneys, single urinary bladder, single ureter and one pair of urethra

Q64 General Science

Which atomic number is related with four valence electrons?

- A. 5
- B. 6
- C. 7
- D. 8



Q65 General Science

An object is placed in front of a concave mirror at a point between its pole P and focus F. The image formed is:

- A. virtual and inverted
- B. virtual and erect
- C. real and erect
- D. real and inverted

Q66 General Science

Which of the following are the end products of respiration in plants?

- A. CO_2 , H_2O and Energy
- B. O_2 and Energy
- C. CO_2 and O_2
- D. Glucose and O_2

Q67 General Science

How can we reduce the use of non-biodegradable products?

- A. By packing milk and water in polybags
- B. Fruits and vegetables can be bought packed in beautiful polystyrene and plastic packaging
- C. By using eco-friendly packaging
- D. Eatables like biscuits etc., can be bought packed in plastic tins and wrappers

Q68 General Science

What happens when calcium hydroxide solution is left open in air?

- A. CaCO_3 is formed.
- B. CaO is formed.
- C. O_2 is liberated.
- D. H_2O (gas) is evolved.



Q69 General Science

Which of the following plants produce unisexual flowers?

- A. Mustard and Hibiscus
- B. Watermelon and Papaya
- C. Hibiscus and Papaya
- D. Watermelon and Mustard

Q70 General Science

An object is placed in front of a concave mirror of focal length 12 cm, at a distance of 6 cm. Its image is formed at a distance of _____ and is _____.

- A. 4 cm, virtual
- B. 4 cm, real
- C. 12 cm, virtual
- D. 12 cm, real

Q71 General Science

Whenever moving from left to right in a period, metallic character _____.

- A. increases
- B. decreases
- C. remains constant
- D. first increases, then decreases

Q72 General Science

A ray of light in air is incident at an angle of 60° on the surface separating air from a medium of refractive index $\sqrt{3}$. The ray is refracted in the medium at an angle of _____.

- A. 60°
- B. 45°
- C. 30°
- D. 15°



Q73 General Science

Name the process that causes living cells to expand in size and shape when placed in a hypotonic solution.

- A. Photosynthesis
- B. Transpiration
- C. Osmosis
- D. Diffusion



Q74 General Science

A current of 0.4 A is maintained in a resistor of $2\ \Omega$. The heat produced in the resistor in 1 second is:

- A. 0.16 J
- B. 0.32 J
- C. 0.80 J
- D. 1.6 J



Q75 General Science

The _____ is the area of the earth where living organisms can be found or where life can be sustained.

- A. biosphere
- B. stratosphere
- C. troposphere
- D. atmosphere



Q76 General Science

Consider the below statements and identify the correct answer.

Statement-I: Bleaching powder is used to make drinking water free from germs.

Statement-II: Bleaching powder is used as an oxidising agent in many chemical industries.

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.



Q77 General Science

The magnetic field produced by a solenoid increases by:

- A. changing direction of solenoid
- B. changing direction of current
- C. placing soft iron core inside it
- D. decreasing number of turns



Q78 General Science

Consider the below statements and identify the correct answer.

Statement-I: The chemical formula of bleaching powder is CaOCl_2 .

Statement-II: It is used to make drinking water free from germs.

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.



Q79 General Science

In series combination, the current passing through each resistor is:

- A. Proportional to their resistance
- B. Proportional to their thickness
- C. Equal in all resistors
- D. Increases gradually



Q80 General Science

In which of the following classes does temperature determine the sex in some species?

- A. Aves
- B. Amphibians
- C. Reptiles
- D. Mammals



Q81 General Awareness and Current Affairs

Indian sub-continent, in general, is known to have which of the following types of climate?

A. Tropical Monsoon



B. Temperate Monsoon

C. Mediterranean

D. Equatorial

Q82 General Awareness and Current Affairs

Gautama (Siddhartha) is believed to have piously meditated at which place for six years before he went to Bodhgaya for the final realisation?

A. Itkhor

B. Rajgir

C. Pragbodhi



D. Kapilavastu

Q83 General Awareness and Current Affairs

Section 2(12) of The Juvenile Justice (Care and Protection of Children) Act, 2015 defines a child as 'a person who has not completed ____ years of age'.

A. 15

B. 17

C. 12

D. 18

**Q84** General Awareness and Current Affairs

Which of the following is NOT a part of aggregate demand in an economy?

A. Capital goods

B. Exports

C. Imports

D. Increase in population



Q85 General Awareness and Current Affairs

The Finance Commission of India is set up under _____.

- A. Article 265
- B. Article 277
- C. Article 280
- D. Article 288



Q86 General Awareness and Current Affairs

The 12th Hockey India Senior Male National Championship - 2022 was organised by:

- A. Madhya Pradesh
- B. Orissa
- C. Punjab
- D. Haryana



Q87 General Awareness and Current Affairs

The Industrial (Development and Regulation) Act was first enacted in which year in India?

- A. 1951
- B. 1950
- C. 1949
- D. 1948



Q88 General Awareness and Current Affairs

Where is the Manikaran Geothermal Energy Plant located in India?

- A. West Bengal
- B. Jammu and Kashmir
- C. Himachal Pradesh
- D. Punjab



Q89 General Awareness and Current Affairs

Who among the following received the prestigious Padma Shri award in 2022 in the field of science and engineering

- A. Sirpi Balasubramaniam
- B. Malji Bhai Desai
- C. Jagjit Singh Dardi
- D. Subbanna Ayyappan



Q90 General Awareness and Current Affairs

Which of the following states of India does NOT have a Panchayati Raj system?

- A. Rajasthan
- B. Andhra Pradesh
- C. Uttar Pradesh
- D. Nagaland



Q91 General Awareness and Current Affairs

The Cash Reserve Ratio (CRR) in India is fixed by _____.

- (A) RBI
- (B) SEBI
- (C) Ministry of Finance

- A. Only A
- B. Only B
- C. Only C
- D. Both A and C



Q92 General Awareness and Current Affairs

In May 2021, the Chief Minister of _____ announced the Mukhyamantri Sishu Sewa Achoni scheme, which will provide relief to children who have lost their parents due to Covid-19.

- A. Bihar
- B. Odisha
- C. Gujarat
- D. Assam



Q93 General Awareness and Current Affairs

‘Azadi Ka Amrit Mahotsav’, launched on _____, is an initiative by the Government of India to celebrate 75 years of Indian Independence.

- A. 12 January 2021
- B. 12 February 2021
- C. 12 March 2021
- D. 12 April 2021



Q94 General Awareness and Current Affairs

B Adhiban headed a star-studded field in the 58th Senior National _____ Championship that started on 25 February 2022.

- A. Golf
- B. Wrestling
- C. Badminton
- D. Chess



Q95 General Awareness and Current Affairs

ITCZ is a broad trough of low pressure in equatorial latitudes. The full form of ITCZ is:

- A. Inter Tropical Convergence Zone
- B. Inter Terrain Convergence Zone
- C. Inner Tropical Convergence Zone
- D. Inter Tropical Climate Zone



Q96 General Awareness and Current Affairs

A team from the Physical Research Laboratory (PRL) in Ahmedabad identified an exoplanet in 2021 that is _____ times the size of Jupiter.

- A. 0.70
- B. 1.4
- C. 3
- D. 2



Q97 General Awareness and Current Affairs

What will be the value of MPC (Marginal Propensity to Consume) if the consumer's consumption patterns change due to a change in income?

- A. $MPC = 1$
- B. $MPC = \text{More than } 1$
- C. $MPC = (\text{ranging between } 0 \text{ and } 1)$ ✓
- D. $MPC = 0$

Q98 General Awareness and Current Affairs

Which of the following is NOT included under the right to freedom in the Constitution of India?

- A. The freedom of speech and expression
- B. To assemble peaceably and without arms
- C. To promote one's religion throughout the territory of India ✓
- D. To move freely throughout the territory of India

Q99 General Awareness and Current Affairs

In July 2022, the Ministry of Health and Family Welfare, Government of India has notified new sets of specified health warnings for all tobacco product packs by making an amendment in the Cigarettes and other Tobacco Products (Packaging and Labelling) Rules, 2008. From which date will these new health warnings be applicable?

- A. 1 October 2022
- B. 1 December 2022 ✓
- C. 1 January 2023
- D. 1 April 2023

Q100 General Awareness and Current Affairs

Which Indian state has 'KOKBOROK' as one of its official languages?

- A. Goa
- B. Tripura ✓
- C. West Bengal
- D. Himachal Pradesh



Mathematics

25 Questions · Answer Key

Q1 Mathematics

In $\triangle MNO$, $\angle N = \angle O$ and $NO = 12$ cm, $MO = 10$ cm and MP be the altitude, then the length of MP is:

A. 3 cm

B. 8 cm

C. 11 cm

D. 10 cm

Q2 Mathematics

The value of $(\operatorname{cosec} x + \cot x + 1)(\sec x - \tan x - 1)$ is:

A. -1

B. 0

C. 1

D. -2

Q3 Mathematics

A man saves 30% of his monthly income. If his monthly income increases by 10%, then he saves 20% more than the previous savings. The percentage increase in his expenditure is _____ (rounded off to one decimal place).

A. 5.7%

B. 6.8%

C. 7.3%

D. 4.8%

Q4 Mathematics

Find the surface area of a sphere of radius 3.5 cm.

A. 210 cm^2 B. 142 cm^2 C. 154 cm^2 D. 120 cm^2 

Q5 Mathematics

10 years ago, the ratio of the ages of A and B was 5: 9. 15 years from now, the ratio of their ages will be 15: 17. What will be A's age 15 years from now?

A. 38 years

B. 30 years



C. 26 years

D. 35 years

Q6 Mathematics

The area of a triangle having base 9 cm and height 16 cm is:

A. 92 cm^2

B. 82 cm^2

C. 72 cm^2



D. 62 cm^2

Q7 Mathematics

The quadratic equation with real coefficients which has real roots 4 and -5 is:

A. $x^2 + x - 20 = 0$



B. $x^2 - 5x - 24 = 0$

C. $x^2 - 4x - 20 = 0$

D. $x^2 - x - 30 = 0$

Q8 Mathematics

The cost price of an article is ₹5,000. What should the selling price of the article be so that a profit of 25% is earned?

A. ₹8,250

B. ₹7,250

C. ₹6,250



D. ₹5,250



Q9 Mathematics

Three years ago, a man was six times as old as his grandson. Three years later, his age will be 6 more than four times the age of the grandson. The present age of the grandson is:

A. 12 years

B. 10 years

C. 15 years



D. 8 years

Q10 Mathematics

A person covers certain distance in 8 hours at a speed of 6 km/h and some more distance in 10 hours at a speed of 4 km/h. Find his average speed for the entire distance covered.

A. $6\frac{8}{9}$ km/h

B. $5\frac{8}{9}$ km/h

C. $4\frac{8}{9}$ km/h



D. $3\frac{8}{9}$ km/h

Q11 Mathematics

Express $0.4\overline{35}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{430}{991}$

B. $\frac{425}{990}$

C. $\frac{456}{991}$

D. $\frac{431}{990}$



Q12 Mathematics

The listed price of an article is ₹200. A customer purchases it at ₹150 after two successive discounts. If one discount is 10%, then the other discount percentage (rounded off to two decimal places) is:

A. 12.5%

B. 11.11%

C. 16.66%



D. 20%

Q13 Mathematics

If $\sqrt{\left(1 - \frac{99}{2500}\right)} = \frac{49}{\sqrt{x}}$, then the value of x is:

A. 2500



B. 50

C. 2401

D. 49

Q14 Mathematics

The HCF of the numbers 310, 208 and 180 is:

A. 2



B. 4

C. 6

D. 8

Q15 Mathematics

The value of $(279 \div 31) + (363 \div 33) - (512 \div 16)$ is:

A. -12



B. 9

C. -11

D. 10



Q16 Mathematics

Simplify $(4x - 5y)^2 + (5x + 4y)^2 + (4x + 5y)(4x - 5y)$.

A. $57x^2 + 16y^2$



B. $-58x^2 + 16y^2$

C. $-57x^2 - 16y^2$

D. $58x^2 + 16y^2$

Q17 Mathematics

The cost of a washing machine is 40% less than the cost of a TV. If the cost of the washing machine increases by 18% and that of the TV decreases by 10%, then what is the change in the total cost of 5 washing machines and 2 TVs?

A. Decreases by 6.5%

B. Increases by 6.5%

C. Decreases by 6.4%

D. Increases by 6.8%



Q18 Mathematics

What is the mean of the following distribution?

Marks	10	30	50	70	90
Number of students	17	28	32	24	19

A. 49.2

B. 50



C. 51

D. 52.4



Q19 Mathematics

Suman invested a sum of ₹20,000 at 10% per annum compound interest. If she received an amount of ₹ 26,620 after n years, the value of n is:

A. 3 years



B. 2.8 years

C. 2.5 years

D. 2 years

Q20 Mathematics

Three pipes A, B and C together can fill a tank in 8 hours. Three pipes were opened for 2 hours, after that C was closed. Later A and B fill the remaining part in 9 hours. The number of hours taken by C alone to fill the tank is:

A. 12

B. 13

C. 20

D. 24

**Q21** Mathematics

The largest four-digit number which when divided by 7, 11 and 13 leaves remainder 4 in each case is:

A. 1005

B. 9999

C. 9009

D. 9013

**Q22** Mathematics

If $p + q + r = 13$ and $pq + qr + rp = 30$, then the value of $p^3 + q^3 + r^3 - 3pqr$ is:

A. 1125

B. 1216

C. 1027



D. 1145



Q23 Mathematics

What is the measure of each interior angle of a regular polygon with 10 sides?

A. 144°



B. 156°

C. 180°

D. 174°

Q24 Mathematics

Which of the following statements is true about the nature of roots for the equation

$$x(x + 3) - 8 = 2(x + 3)(x - 3)?$$

A. Roots are real and equal

B. Roots are irrational

C. Two real and distinct roots



D. Two imaginary or non-real roots

Q25 Mathematics

The average weight of all children in a group is 45 kg. If 10 children of average weight 42 kg leave the group and 2 children of average weight 55 kg join the group, then the average weight of the children in the group increases by $1\frac{1}{4}$ kg. The number of children in the group initially was:

A. 38

B. 42

C. 48



D. 52



Q26 General Intelligence and Reasoning

Read the given statements and conclusions carefully and decide which of the given conclusions logically follow the statements.

Statements:

- 1) $G \geq M$
- 2) $O < K$
- 3) $K < H$
- 4) $F = Q$
- 5) $M < O$
- 6) $F > H$

Conclusions:

- I. $G < F$
- II. $Q > M$
- III. $O > Q$
- IV. $M < Q$

A. Conclusions II and III follow

B. Conclusions II and IV follow



C. Conclusions I and IV follow

D. Conclusions I and II follow

Q27 General Intelligence and Reasoning

VM 19 is related to SJ 25 in a certain way. In the same way, HN 17 is related to EK 23. To which of the following is SL 15 related following the same logic?

A. QI 21

B. RJ 19

C. PI 21



D. MQ 24

Q28 General Intelligence and Reasoning

Which of the following interchanges of numbers would make the given equation correct?

$$10 \div 6 \times 4 + 14 - 24 = 30$$

A. 10, 6

B. 4, 6

C. 14, 24

D. 10, 30



Q29 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some parks are libraries.
2. Some banks are libraries.
3. All schools are banks.

Conclusions:

I-Some banks are schools.

II-Some parks are banks.

- A. Only conclusion I follows. ✓
- B. Only conclusion II follows.
- C. Both conclusions I and II follow.
- D. Neither conclusion I nor II follows.

Q30 General Intelligence and Reasoning

If

A means 'addition',

B means 'multiplication',

C means 'subtraction' and

D means 'division',

then $40 \text{ D } 2 \text{ A } 3 \text{ B } 8 \text{ C } 5 = ?$

- A. 33
- B. 45
- C. 39 ✓
- D. 40

Q31 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

4, 9, 16, 29, 50, ?

A. 71

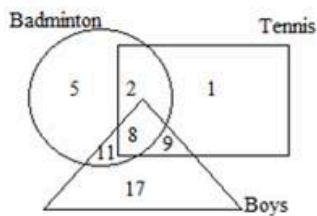
B. 73

C. 78

D. 85

**Q32** General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such boys are there who play badminton but NOT tennis?

A. 11

B. 17

C. 8

D. 9

**Q33** General Intelligence and Reasoning

Rohan lives in a seven-storeyed building. The top floor of the building is numbered as seven and the lowermost floor is numbered as one. Diya who is Rohan's friend lives somewhere above the floor where Rohan lives. Every Sunday Rohan goes two floors below to his colleague Atul's flat to eat and drink together. If there are three floors between Rohan's and Diya's floor, on which floor does Rohan live?

A. First floor

B. Second floor

C. Third floor

D. Fourth floor



Q34 General Intelligence and Reasoning

Amit told Shweta, "To reach our apartment, your mother must walk 560 m towards the east from her restaurant. She must then take a right turn and walk 543 m. She must take another right turn and walk 560 m. Then she must take one final right turn and walk 120 m". How far and in which direction is the apartment from the restaurant? (All turns are 90 degree turns only)

A. 423 m, South



B. 423 m, North

C. 397 m, South

D. 397 m, North

Q35 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

N L A _ X N _ B F _ N L _ F _ N L _ _ X

A. F L X C X D F



B. F N X C X C F

C. F L X N X D C

D. F L C C X A F

Q36 General Intelligence and Reasoning

Starting from point A, Ravi walks 30 m towards the north. He then takes a right turn and walks 100 m. Then, he takes another right turn and walks 30 m. From there, he turns to his right and walks 70 m. Then, he takes a left turn and walks 50 m. Finally, he takes a right turn and walks 30 m. How far and in which direction is Ravi now from point A? (All turns are 90 degree turns only)

A. 30 m, West

B. 50 m, North

C. 30 m, North

D. 50 m, South



Q37 General Intelligence and Reasoning

In a certain code language, 'BLISS' is written as 'KSNVT' and 'LIGHT' is written as 'UPLKU'. How will 'WHITE' be written in that language?

- A. FONVF
- B. FONWG
- C. FONWF
- D. FOMWF



Q38 General Intelligence and Reasoning

In a certain code language, 'JUPITER' is written as 'KSSEYYY' and 'URANUS' is written as 'VPDJZM'. How will 'EARTH' be written in the same code language?

- A. FCUPM
- B. FYUXM
- C. FYUPM
- D. FYOPM



Q39 General Intelligence and Reasoning

Eight girls, A, B, C, D, E, F, G and H, are seated around a square table, facing the centre. A sits 2nd to the right of B. F sits 2nd to the right of E, who sits fourth to the left of H. G sits between A and B. D sits to the immediate left of H, who is to the immediate left of B. Only one person sits between C and D. Who is fourth to the right of G?

- A. B
- B. D
- C. F
- D. C



Q40 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(3, 6, 18)

(15, 30, 450)

A. (6, 12, 64)

B. (9, 18, 166)

C. (1, 2, 2)



D. (11, 22, 44)

Q41 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. H is sitting at any one of the sides and is exactly opposite to C. G is sitting second to the right of H and second to the left of C. E is sitting exactly opposite to G. B is sitting third to the right of H and is exactly opposite to A. Both G and H are the immediate neighbours of D. Which of the following statements is NOT true with reference to F?

A. H is sitting to F's third left



B. F is exactly opposite to D

C. E and C are F's immediate neighbours

D. B is sitting to F's second left.

Q42 General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is NOT true based on the statement.

Statement: $H < N \leq C \leq K = X > T > F$

A. $N > X$



B. $X \geq N$

C. $H < X$

D. $K > F$



Q43 General Intelligence and Reasoning

Three statements are given followed by three conclusions. Consider the statements and conclusions to be true even if they vary from commonly known facts and then decide which of the conclusions follow(s) from the given statements.

Statements:

1. All bags are books.
2. All books are copies.
3. No pen is a copy.

Conclusions:

- (I) Some books are pens.
(II) No bag is a pen.
(III) Some copies are bags.

- A. Only conclusion III follows.
- B. Only conclusion II follows.
- C. Only conclusions II and III follow. ✓
- D. None of the conclusions follow.

Q44 General Intelligence and Reasoning

During a school tour one among the group of 15 students was elected as the group leader. If there are total 11 such groups, how many students are going for the tour?

- A. 176
- B. 165 ✓
- C. 154
- D. 174



Q45 General Intelligence and Reasoning

Given below is a statement followed by two possible underlying assumptions I and II. Read the information carefully and select the correct option.

Statement:

Research has suggested that regular physical activity not only reduces the chances of physical illness but also of mental illnesses.

Which of the following can be assumed by the given statement?

I. The medicines for mental illness would work faster if the patient also exercises daily.

II. Patients who are bedridden have a greater chance of developing some mental illness as compared to those who are not bedridden.

A. Only I can be assumed

B. Only II can be assumed



C. Both I and II can be assumed

D. Neither I nor II can be assumed

Q46 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 12 – Operations on 12 such as adding/ subtracting/multiplying etc. to 12 can be performed. Breaking down 12 into 1 and 2 and then performing mathematical operations on 1 and 2 is not allowed)

(11, 154, 7)

(6, 180, 15)

A. (23, 46, 2)

B. (25, 375, 5)

C. (5, 20, 60)

D. (3, 90, 15)



Q47 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) N & 2 G 9 S P T B 4 @ H # 1 8 S B A 3 P (Right)

If all numbers are dropped from the series, which of the following will be seventh from the right?

A. H

B. B

C. @



D. #

Q48 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

154, 134, 116, ?, 86, 74, 64, 56

A. 100



B. 101

C. 98

D. 96

Q49 General Intelligence and Reasoning

If in the word 'DISCOUNT' all the letters are arranged in alphabetical order from left to right, then the position of how many letters will be remain unchanged?

A. One



B. Two

C. Three

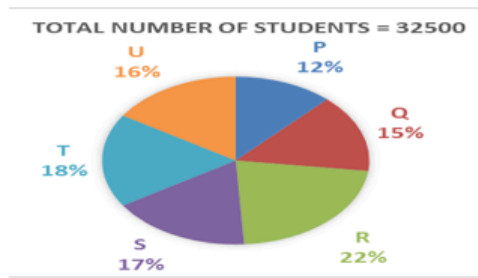
D. Four



Q50 General Intelligence and Reasoning

The following pie-chart shows the distribution of students of graduate levels in seven different colleges.

Distribution of students at graduate levels in seven different colleges:



What is the sum of students in College of P and T studying at graduate level?

A. 3900

B. 8925

C. 9750



D. 9875

Q51 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(left) 434 353 423 224 322 (right)

(Example: 246 – first digit = 2, second digit = 4, third digit = 6)

NOTE – All operations to be done from left to right.

If 4 is added to the second digit of every number, in how many numbers thus formed will the second digit be exactly divisible by the third digit?

A. Three



B. One

C. Two

D. Five



Q52 General Intelligence and Reasoning

Study the given table and answer the question that follows.

The table presents the cost price and profit percentage of various products being sold by an electronic superstore.

Products	2021	
	Cost Price (in thousands)	Profit Percentage
Refrigerators	48	22
Air Conditioners	39	17
Washing Machines	13	12
Televisions	59	23
Music Systems	65	18

If the cost price of all the products increased by 10% in the next year and profit percentage remained the same, which of the following products will record maximum increase in the sales price?

- A. Air conditioners
- B. Refrigerators
- C. Televisions
- D. Music systems

**Q53** General Intelligence and Reasoning

Six persons, P, Q, R, S, T and U travelled in different months of the same year viz. January, February, March, July, September and December.

U travelled in September. Only one person travelled between U and Q. No one travelled between P and S. S travelled in a month after P. More than two people travelled between S and T. Who among them travelled in March?

- A. P
- B. R
- C. Q
- D. T

**Q54** General Intelligence and Reasoning

If '+' means ' $\div$ ', '-' means '+', ' $\times$ ' means '-' and ' $\div$ ' means ' $\times$ ', then, what will be the value of the following expression?

$$[(35 \times 26) - (4 \div 3)] + (3 - 4) \div 5$$

- A. 18
- B. 10
- C. 15
- D. 20



Q55 General Intelligence and Reasoning

Refer to the following letter series and answer the question that follows.

SSGYUNGTRFCEDAWXCVUNJOKLECD

How many such vowels are there each of which is immediately preceded by a consonant and also immediately followed by a consonant?

A. 3

B. 5

C. 6



D. 8

General Science

25 Questions • Answer Key

Q56 General Science

Which of the following characteristics of the pea plant was NOT used by Mendel in his experiments?

A. Shape of seeds

B. Colour of flowers

C. Length of pea plant

D. Shape of leaves



Q57 General Science

Which of the following statements is correct?

A. For every hormone, there is a specific protein.

B. For every hormone, there is a specific chromosome.

C. For every protein, there is a specific RNA.

D. For every protein, there is a specific gene.



Q58 General Science

The focal length of a convex mirror is:

A. positive



B. negative

C. infinite

D. zero



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Q59 General Science

The formula for resultant resistance of three resistors connected in parallel combination is:

A. $R = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$

B. $\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$ ✓

C. $R = R_1 + R_2 + R_3$

D. $\frac{1}{R} = R_1 + R_2 + R_3$

Q60 General Science

If a reactant gains oxygen in a reaction, it is said to be undergoing:

A. reduction

B. Oxidation ✓

C. redox process

D. dissociation

Q61 General Science

When a substance combines with O_2 , it gets:

A. dissolved in air

B. Reduced

C. oxidised ✓

D. back its shine

Q62 General Science

Which of the following statements about plant nutrition is INCORRECT?

A. Carbon is taken up by green plants from atmospheric carbon dioxide.

B. Iron and manganese are both considered micronutrients.

C. Minerals and nutrients are poorly absorbed by water. ✓

D. Plants, in general, make use of the water in the soil at the root zone.



Q63 General Science

Which element has non-metallic properties?

- A. Li
- B. Na
- C. Cl
- D. K



Q64 General Science

Which of the following chemical reactions is balanced?

- A. $\text{Fe} + \text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + \text{H}_2$
- B. $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2$
- C. $\text{Mg} + \text{O}_2 \rightarrow \text{MgO}$
- D. $\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$



Q65 General Science

Induced current is maximum when _____.

- A. coil is kept in the direction parallel to the magnetic field
- B. coil is kept in the direction perpendicular to the magnetic field
- C. direction of motion of the coil is parallel to the magnetic field
- D. direction of motion of the coil is perpendicular to the magnetic field



Q66 General Science

Wires of copper, silver, nichrome and glass are made having similar length and diameter. Which will have the highest resistance?

- A. Copper
- B. Silver
- C. Glass
- D. Nichrome



Q67 General Science

Which of the following is NOT a natural indicator for acids or bases?

- A. Methyl orange
- B. Turmeric
- C. Coloured petals of Hydrangea
- D. Coloured petals of Petunia

Q68 General Science

The part of the magnet from where magnetic field lines emerge is known as:

- A. middle of the magnet
- B. north pole
- C. south pole
- D. north and south pole

Q69 General Science

It is found that during dispersion of white light by a glass prism, the more a colour component is bent, the more is the refractive index of the glass for that colour component. If μ_R , μ_V and μ_Y are refractive indices for red, violet and yellow lights, respectively, then which of the following relations between them is correct?

- A. $\mu_R > \mu_V > \mu_Y$
- B. $\mu_V > \mu_Y > \mu_R$
- C. $\mu_Y > \mu_R > \mu_V$
- D. $\mu_R = \mu_V = \mu_Y$

Q70 General Science

If the power of a convex lens is 3 dioptre, then its focal length will be:

- A. +3 m
- B. -3 m
- C. +0.33 m
- D. -0.33 m



Q71 General Science

An object is placed in front of a convex mirror of focal length 9 cm, at a distance of 18 cm. The magnification produced by the mirror is _____.

A. $-\frac{1}{3}$

B. $\frac{1}{3}$



C. 1

D. -1

Q72 General Science

If the resistance of a conductor is $4.2\ \Omega$ and 220 V is applied across it then the current passing through the conductor is:

A. 924 ampere

B. 52.38 ampere



C. 5238 ampere

D. 0.02 ampere

Q73 General Science

Which of the following objectives is NOT a part of watershed management?

A. Recharging of groundwater

B. Mitigating droughts and floods

C. Restoring water levels in downstream rivers

D. Generating electricity



Q74 General Science

When did the ozone levels in the atmosphere start to reduce?

A. 1980



B. 1965

C. 1990

D. 1995



Q75 General Science

Newlands' Law of Octaves worked well with:

A. metallic elements only

B. radioactive elements only

C. lighter elements only



D. noble gases only

Q76 General Science

When Kavita took an aqueous solution of copper sulphate and added some granules of aluminium, the colour of the solution changed. This is because of the formation of:

A. $\text{Al}_2(\text{SO}_4)_3$



B. Al_2O_3

C. $\text{Al}(\text{OH})_3$

D. CuO

Q77 General Science

The functions of bile juice are mentioned below. Select the option that is NOT the function of bile juice.

A. Provides alkaline medium to the food for the action of pancreatic enzymes

B. Breaks down large fat globules into smaller ones

C. Has a protein digesting enzyme that helps in the digestion of proteins



D. Increases the efficiency of the action of pancreatic enzymes

Q78 General Science

What product(s) is/are transported by the plant transport system from the leaves and roots?

A. Water only

B. Carbohydrates and minerals

C. Energy stores and raw materials



D. Carbohydrates only



Q79 General Science

From the options given below, select the organism having a three-chambered heart.

A. Salamander



B. Pigeon

C. Fish

D. Tiger

Q80 General Science

The hydrocarbons which have a double bond between two carbon atoms are called:

A. saturated compounds

B. unsaturated compounds



C. natural compounds

D. inorganic compounds

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The new Centre for Water Management and Policy, AquaMAP was inaugurated in March 2022 by the Principal Scientific Adviser to the Government of India, K Vijay Raghavan at which of the following IITs?

A. IIT-Bombay

B. IIT-Madras



C. IIT-Kharagpur

D. IIT-Delhi

Q82 General Awareness and Current Affairs

As per the rule change in IPL 2022 duration of strategic time out changed from 2:30 minutes to _____ minutes

A. 3



B. 3:30

C. 4

D. 4:30



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Q83 General Awareness and Current Affairs

In which of the following locations is the Brahmaputra river known as Tsang Po?

- A. Tibet
- B. Bangladesh
- C. Nepal
- D. Pakistan



Q84 General Awareness and Current Affairs

Generally, the value of MPC (Marginal Propensity to Consume) _____.

- A. does not exceed 1 or fall below 0
- B. remains constant at (-)1
- C. varies between (-)1 and (-)2
- D. varies between 1 and 2



Q85 General Awareness and Current Affairs

In which of the following years was the Shri Jagannath Temple Act passed?

- A. 1965
- B. 1945
- C. 1955
- D. 1935



Q86 General Awareness and Current Affairs

Who took oath as the Cabinet Minister of the Ministry of Parliamentary Affairs in 2019?

- A. Pralhad Venkatesh Joshi
- B. Narayan Rane
- C. Subrahmanyam Jaishankar
- D. Sarbananda Sonowal



Q87 General Awareness and Current Affairs

To combat eve teasing, sexual harassment and other crimes against women, 91 Nirbhaya Squads comprising of specially trained police officers were launched in _____ on 26 January 2022.

- A. Delhi
- B. Mumbai
- C. Bengaluru
- D. Chennai

Q88 General Awareness and Current Affairs

In India, the western cyclonic disturbances are weather phenomena of the winter months brought in by the westerly flow from the _____.

- A. Arabian Sea region
- B. Bay of Bengal region
- C. Mediterranean region
- D. Pacific Ocean region

Q89 General Awareness and Current Affairs

Which of the following is the largest coal field in India?

- A. Jharia Coal Fields
- B. Raniganj Coal Fields
- C. Bokaro Coal Fields
- D. Karanpura Coal Fields

Q90 General Awareness and Current Affairs

Article 51A of the Constitution of India deals with _____.

- A. fundamental rights
- B. fundamental duties
- C. union territories
- D. panchayats



Q91 General Awareness and Current Affairs

Which of the following sports events is NOT included in the scheme of cash awards in India to medal winners and their coaches in international sports events?

A. Cricket



B. Chess

C. Billiards

D. Wrestling

Q92 General Awareness and Current Affairs

The Karve Committee, which was constituted in the year 1955, dealt with:

A. small scale industries



B. insurance regulation

C. foreign trade

D. railways

Q93 General Awareness and Current Affairs

As of July 2022, who among the following is the CEO of HelpAge India that works for 'the cause and care of disadvantaged older persons to improve their quality of life'?

A. Deepak Kumar

B. Rohit Prasad



C. Ravi Venkatesan

D. Madhav Chavan

Q94 General Awareness and Current Affairs

The first Digital Food Museum in India was launched in _____ in the year 2021.

A. Tamil Nadu



B. Karnataka

C. Kerala

D. Maharashtra



Q95 General Awareness and Current Affairs

The Kharchi Pooja festival is widely celebrated in the state of _____.

- A. Telangana
- B. Tripura
- C. Uttarakhand
- D. Gujarat

Q96 General Awareness and Current Affairs

_____ is spoken by around 2.5 million people, mainly on the central west coast of India, and it is the official language of Goa.

- A. Dhivehi
- B. Konkani
- C. Marathi
- D. Dogri

Q97 General Awareness and Current Affairs

Some educational institutions in India were established in response to Mahatma Gandhi's call for non-cooperation with the British. Which of the following is NOT one of them?

- A. Serampore College
- B. Kashi Vidyapith
- C. Jamia Millia Islamia
- D. Gujarat Vidyapith



Q98 General Awareness and Current Affairs

In which of the following years was the Ministry of Panchayati Raj created?

A. 2002

B. 2003

C. 2001

D. 2004



Q99 General Awareness and Current Affairs

Who among the following is known as the architect of Indian planning?

A. Kakkadan Nandanath Rajan

B. Dattatreya Gopal Karve

C. Prasanta Chandra Mahalanobis



D. Dhananjay Ramchandra Gadgil

Q100 General Awareness and Current Affairs

Under perfect competition, a firm earns _____ profits in the long run.

A. zero

B. normal



C. super normal

D. negative



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The quadratic equation which has real and equal roots $\frac{3}{5}$ is:

A. $5x^2 - 6x + 9 = 0$

B. $x^2 - 6x + 9 = 0$

C. $x^2 - 30x + 3 = 0$

D. $25x^2 - 30x + 9 = 0$ ✓

Q2 Mathematics

The curved surface area of a cylinder is 1848 cm^2 and its base radius is 19.6 cm. The height of the cylinder is:

A. 17 cm

B. 13 cm

C. 14 cm

D. 15 cm ✓

Q3 Mathematics

If $7\sin^2 x + 3\cos^2 x = 4$, and x is acute angle, then the value of $\cot x + \tan x$ will be:

A. $\frac{2}{\sqrt{3}}$

B. $\frac{4}{\sqrt{3}}$ ✓

C. $\frac{5}{\sqrt{3}}$

D. $\frac{7}{\sqrt{3}}$



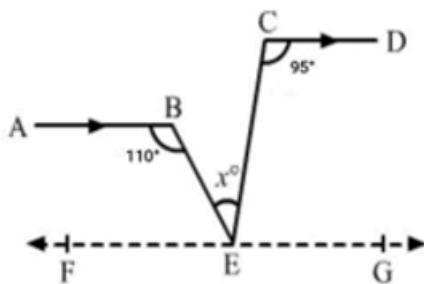
Q4 Mathematics

The value of $[(5^2)^4 \times 5^3] \div 5^9$ is:

- A. 5
- B. 125
- C. 25
- D. $\frac{1}{5}$

**Q5 Mathematics**

In the given figure, lines AB and CD are parallel to line FG. E is a point on the line FG. It is given that $\angle ABE = 110^\circ$, $\angle ECD = 95^\circ$ and $\angle BEC = x^\circ$. The value of x is:



- A. 25°
- B. 60°
- C. 80°
- D. 30°

**Q6 Mathematics**

The population of a village increases at the rate of 10% per annum. If its population 2 years ago was 10,000, the present population is:

- A. 11,000
- B. 12,000
- C. 12,100
- D. 12,400



Q7 Mathematics

A dishonest shopkeeper uses false weights. He gains 30% on purchasing and 30% on selling. His profit percentage is:

- A. 99%
- B. 89%
- C. 79%
- D. 69%

**Q8 Mathematics**

In $\triangle PQR$, if $\angle P : \angle Q : \angle R = 6 : 7 : 5$ then, the measure of $\angle Q$ is:

- A. 55°
- B. 70°
- C. 60°
- D. 75°

**Q9 Mathematics**

The cost of 2 kg of apples and 2 kg of grapes on a day was found to be ₹160. After a month, the cost of 4 kg of apples and 3 kg of grapes was ₹300. Assuming the costs were not changed during the month, the cost of apples (per kg) will be:

- A. ₹120
- B. ₹40
- C. ₹20
- D. ₹60

**Q10 Mathematics**

The sum of two times Manavi's present age and Tanvi's present age is 35 years. Tanvi's father is presently three times as old as Tanvi. Manavi's brother's present age is 6 years more than Manavi's present age. The sum of the present ages of Tanvi's father and Manavi's brother is 56 years. What is the sum of the present ages (in years) of Manavi and Tanvi?

- A. 31
- B. 27
- C. 24
- D. 23



Q11 Mathematics

A man travels from point A to B at a speed of $56\frac{1}{4}$ km/h and returns to A through same route by increasing his speed by $33\frac{1}{3}\%$ of his earlier speed. His average speed (in km/h) for the whole journey is

A. $60\frac{5}{7}$

B. $62\frac{1}{4}$

C. $63\frac{1}{2}$

D. $64\frac{2}{7}$ ✓

Q12 Mathematics

The expenditure of Sudha is 125% more than her savings. If her expenditure decreases by 6% and savings increase by 26.5%, then by what percent does her income increase?

A. 20.5%

B. 18.5%

C. 8%

D. 4% ✓

Q13 Mathematics

The highest common factor of any two distinct prime numbers is:

A. 3

B. 2

C. 1 ✓

D. 0

Q14 Mathematics

A, B and C can complete a piece of work in 20, 24 and 30 days, respectively. The number of days they take to finish it if they work together will be:

A. 6 days

B. 7 days

C. 8 days ✓

D. 5 days



Q15 Mathematics

A team of 30 men is supposed to complete a work in 41 days. After 25 days, 6 more men are employed, and the work is finished one day earlier. By how many days would it have been delayed, if 6 more men were not employed?

- A. 1 day
- B. 2 days
- C. 3 days
- D. 4 days

**Q16** Mathematics

A number when increased by $47\frac{1}{2}\%$, gives 590. The number is:

- A. 700
- B. 600
- C. 500
- D. 400

**Q17** Mathematics

Express $0.1\bar{7}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

- A. $\frac{7}{45}$
- B. $\frac{8}{45}$
- C. $\frac{6}{49}$
- D. $\frac{5}{49}$

**Q18** Mathematics

Using empirical relation between the mean, median and mode, find the value of the median if the mean is 35 and mode is 140.

- A. 100
- B. 90
- C. 80
- D. 70



Q19 Mathematics

A shopkeeper sells one battery for ₹650 at a profit of 30% and another battery for ₹950 at a loss of 5%. His overall gain or loss percentage is:

A. $9\frac{2}{3}\%$ loss

B. $8\frac{2}{3}\%$ gain

C. $7\frac{2}{3}\%$ loss

D. $6\frac{2}{3}\%$ gain

**Q20** Mathematics

If the 8-digit number $3x5479y4$ is divisible by 88 and the 8-digit number $425139z2$ is divisible by 9, then what is the greatest possible value of $(3x + 2y - z)$?

A. 25

B. 33

C. 35

D. 37

**Q21** Mathematics

The quadratic equation whose roots are 2 and $-\frac{1}{2}$ is:

A. $3x^2 - 3x - 2 = 0$

B. $2x^2 - 5x - 2 = 0$

C. $5x^2 - 3x - 2 = 0$

D. $2x^2 - 3x - 2 = 0$

**Q22** Mathematics

If $(a + b) = 11$ and $(a - b) = 3$ then, the value of $(a^2 + b^2)$ is:

A. 63

B. 70

C. 65

D. 75



Q23 Mathematics

The sum of three consecutive natural numbers is 141. The middle number is:

A. 57

B. 56

C. 47



D. 46

Q24 Mathematics

The value of $5 + (12 - 3 \times 4) - 6 \div 2$ is:

A. -6

B. 6

C. -2

D. 2



Q25 Mathematics

If the radius of a sphere is 5 cm, then its surface area is:

A. $81 \pi \text{ cm}^2$

B. $144 \pi \text{ cm}^2$

C. $121 \pi \text{ cm}^2$

D. $100 \pi \text{ cm}^2$



General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Refer to the following number series and answer the question.

13 10 17 25 58 63 94 8 92 29

How many even numbers are immediately followed by a multiple of 3?

A. 4

B. 3

C. 2

D. 1



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Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

96, 98, 102, 110, 126, ?

A. 158



B. 160

C. 166

D. 162

Q28 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

The state government of state X has decided to move 40% of the city buses from the south of city A to the west of city A for the monsoon season.

Which of the following can be concluded from the given information?

I. The inflow of passengers in the western part of the city is usually substantially more during the monsoon season than the rest of the year.

II. The buses that remain in the south of city A will be sufficient to manage the general inflow of passengers.

A. Only I can be concluded from the given information.

B. Only II can be concluded from the given information.

C. Both I and II can be concluded from the given information.



D. Neither I nor II can be concluded from the given information.

Q29 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

67, 67, 56, ?, 45, 45, 34, 34, 23, 23, 12

A. 45

B. 56



C. 67

D. 53



Q30 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) H ^ 5 T & M 4 @ 5 # 1 4 J 3 P H 9 L ! 5 2 (Right)

If all numbers are dropped from the series, which of the following will be fifth from the right?

A. L

B. @

C. J



D. P

Q31 General Intelligence and Reasoning

A, K, G, D, H and Y are sitting in a straight row facing north. K is at one extreme end. Y is sitting third from the right of K and second to the left of A. D and H are immediate neighbours. G is sitting to the immediate left of A. D sits third to the left of G. Who is to the immediate right of K?

A. H

B. D

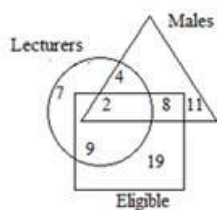


C. Y

D. G

Q32 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such male lecturers are there who are NOT eligible?

A. 4



B. 6

C. 2

D. 10



Q33 General Intelligence and Reasoning

Five boxes A, B, C, D, and E are kept one over the other but not necessarily in the same order. The box A is not kept above or below box C or E which are kept together. Box B is kept at the third place above box C. There is only one box between box D and E and one of them is kept at the bottom. Which box is kept in the middle?

A. A

B. B

C. C

D. D



Q34 General Intelligence and Reasoning

Seven people, A, B, C, D, E, F and G, are sitting in a straight row, facing north. Only three people sit between A and G. Only two people sit to the left of A. F is not an immediate neighbour of G. F sits second to the right of E. C sits to the immediate right of B. Who sits at the extreme left end of the row?

A. D



B. A

C. C

D. G

Q35 General Intelligence and Reasoning

If 3 is added to each odd digit and 1 is subtracted from each even digit in the number 4815421, what will be the sum of the digits that are third from the left and third from the right in the new number thus formed?

A. 9

B. 7



C. 11

D. 10



Q36 General Intelligence and Reasoning

Six persons, P, Q, R, S, T and U travelled in different months of the same year viz. January, February, March, July, September and December.

R travelled in September. Only one person travelled between R and T. No one travelled between U and P. P travelled in a month after U. More than two people travelled between P and S. Who among them travelled in July?

A. S

B. Q



C. T

D. P

Q37 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(1, 2)

(5, 10)

A. 2, 10

B. 4, 8



C. 7, 405

D. 3, 33

Q38 General Intelligence and Reasoning

Which of the following alphanumeric-clusters will replace the question mark (?) in the given series to make it logically complete?

P5U, N7U, L3O, J8R, ?

A. H3E

B. H2F

C. H2J



D. H4D



Q39 General Intelligence and Reasoning

Pole P is to the west of pole T and north of pole R. Pole Q is to the west of pole R and north of pole W. What is the position of pole R with respect to pole T?

- A. South
- B. South-west
- C. North
- D. North-east

Q40 General Intelligence and Reasoning

Six students, J, K, L, M, N and O, decided to race during a PE lesson. Each had a different speed in the race. N ran faster than M but slower than L. M ran slower than J but faster than O. K ran faster than L. J ran slower than L. Who among the six ran the fastest?

- A. K
- B. L
- C. J
- D. N

Q41 General Intelligence and Reasoning

Study the given table and answer the question that follows.

The table presents the total number of new life policies (in thousands) sold by different bank branches over the years.

	2001	2002	2003	2004	2005
Branch A	53	34	54	54	76
Branch B	23	57	65	25	45
Branch C	54	54	56	76	34
Branch D	26	25	45	65	48
Branch E	64	76	76	92	90
Branch F	35	45	56	45	76
Branch G	62	52	45	65	45
Branch H	55	13	76	92	34

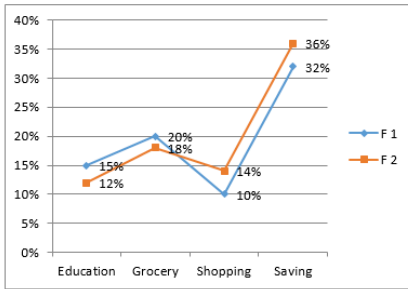
Which pair of branches have recorded lowest number of policy sales in these years taken together?

- A. Branch A and branch E
- B. Branch C and branch D
- C. Branch E and branch F
- D. Branch B and branch D



Q42 General Intelligence and Reasoning

The given graph provides the details of expenses (in percentage) by two families (F1 and F2). Study the graph and answer the question.



Find the average percentage expense for grocery and shopping by family F1.

A. 15%



B. 16%

C. 33%

D. 31%

Q43 General Intelligence and Reasoning

If '+' means '×', '×' means '÷', '÷' means '−', and '−' means '+', then what will be the value of the given expression?

$$999 - 3 + 10 \times 5 \div 4$$

A. 550

B. 1000

C. 3000

D. 1001



Q44 General Intelligence and Reasoning

In a code language, 'you are my world' is written as 'kai po che lu', 'my home world' is written as 'je po kai', and 'she was my girl' is written as 'da mu kai va'. What is the code for the word 'world' in that language?

A. mu

B. lu

C. po



D. kai



Q45 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they do not conform to real world knowledge, decide which of the given conclusions/possibilities can be true on the basis of the statements.

Statements:

1. Some biscuits are cookies.
2. Some cookies are pastries.
3. All pastries are creams.

Conclusions:

- I. Some pastries are biscuits.
- II. Some creams are biscuits.
- III. Some creams are cookies.

A. Only conclusion I is true

B. Only conclusion II is true

C. Only conclusion III is true



D. Only conclusion I and II are true

Q46 General Intelligence and Reasoning

What will be the value of the given expression if 4 and 7 are interchanged and also '×' and '+' are interchanged?

$$63 \times 3 - 4 + 18 \div 7$$

A. 56

B. 86



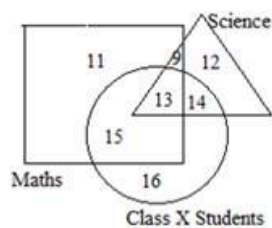
C. 48

D. 68



Q47 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many class X students like to study either Maths or Science but NOT both?

A. 28

B. 27

C. 13

D. 29

**Q48** General Intelligence and Reasoning

Each vowel in the word HAPPILY is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. P

B. B

C. O



D. K

Q49 General Intelligence and Reasoning

Raghav starts from Point A and drives 30 km towards the north. He then takes a right turn, drives 34 km, turns right and drives 41 km. He then takes a right turn and drives 47 km. He takes a final right turn, drives 11 km and stops at Point P. How far and towards which direction should he drive in order to reach Point A from Point P in a straight line? (All turns are 90 degree turns only)

A. 13 km towards the east



B. 15 km towards the west

C. 23 km towards the east

D. 13 km towards the south



Q50 General Intelligence and Reasoning

Select the option in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE: Operations should be performed on the whole numbers without breaking down the numbers into its constituent digits.

E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(4, 13, 3)

(4, 19, 5)

A. (1, 25, 8)



B. (18, 28, 2)

C. (5, 30, 7)

D. (6, 14, 2)

Q51 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully and from the given options, select the pair that follows the same logic.

HTY : ZVK

KUY : ZWN

A. KYT : WAL

B. ABG : HCD

C. APK : BRN

D. AED : EGD



Q52 General Intelligence and Reasoning

In a class of 23 students Parul ranked 6th from the top and Shomya ranked 19th from the bottom. How many students ranked between Parul and Shomya?

A. 0



B. 1

C. 2

D. 12



Q53 General Intelligence and Reasoning

How many such pairs of letters are there in the word REGULATION (in the forward direction) which have as many letters between them in the word as there are in the English alphabetical order?

A. 1

B. 2



C. 3

D. 4

Q54 General Intelligence and Reasoning

In a certain code language, 'SYMBOLIC' is written as 'CPTZNMJD' and 'SYMPATHY' is written as 'QBTZNUIZ'. How will 'SURVIVAL' be written in that language?

A. WJTVSBWM

B. TJWVSMBW

C. WJTUSVBM

D. WJTVSWBM



Q55 General Intelligence and Reasoning

Six friends P, Q, R, M, N and O prepared together for a class test and each one scored different marks. Only 3 friends scored less marks than R. N scored less marks than only 1 friend. Only O scored marks between the marks of P and M. Who scored the highest marks?

A. M

B. P

C. Q



D. R

General Science

25 Questions • Answer Key

Q56 General Science

In a cell, where does the process of breakdown of glucose, a 6-carbon molecule, to pyruvate, a 3-carbon molecule, take place?

A. Mitochondria

B. Cytoplasm



C. Chloroplast

D. Golgi apparatus



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Q57 General Science

If the length of a conductor is increased five times, keeping material and thickness same, its resistance will

- A. become double
- B. remain same
- C. become one-fifth of the original
- D. become five times of the original



Q58 General Science

Name the instrument used by the physicians to measure blood pressure.

- A. Echocardiogram
- B. Sphygmomanometer
- C. Stethoscope
- D. Spirometer



Q59 General Science

Value of refractive index can be calculated by using:

- A. Ohm's law
- B. Maxwell's law
- C. Snell's law
- D. Newton's law



Q60 General Science

Consider the below statements and identify the correct answer.

Statement- I: The stinging hair of nettle leaves injects methanoic acid causing burning pain.

Statement-II: Use of a mild base like baking soda on the stung area gives relief.

- A. Both statements are correct. Statement II is not related to Statement I.
- B. Both Statements are correct. Statement II is related to Statement I.
- C. Only Statement I is correct.
- D. Only Statement II is correct.



Q61 General Science

To obtain a virtual and erect image by reflection from a concave mirror of focal length 20 cm, the object should be placed:

- A. at 20 cm
- B. between 20-40 cm
- C. between 0-20 cm ✓
- D. at zero

Q62 General Science

When blue and orange lights, which are parallel to each other, are passed through prism then:

- A. both emergent rays will be parallel
- B. blue ray will bend towards the top
- C. orange ray will bend more
- D. blue ray will bend more ✓

Q63 General Science

What is the form of contraception that can help stop the spread of sexually transmitted diseases to some extent?

- A. Vasectomy
- B. Oral contraceptive pills
- C. IUD
- D. Condoms ✓

Q64 General Science



In the given reaction, which product remains in the solution?

- A. BaSO_4
- B. NaCl ✓
- C. BaCl_2
- D. Na_2SO_4



Q65 General Science

Apart from nucleus of the cell, which two cell organelles have their own DNA and Ribosomes?

- A. Plastids and Golgi bodies
- B. Mitochondria and Lysosomes
- C. Plastids and Mitochondria
- D. Mitochondria and Golgi bodies



Q66 General Science

Which of the following molecules has only single bonds?

- A. CH_4
- B. CO_2
- C. N_2
- D. O_2



Q67 General Science

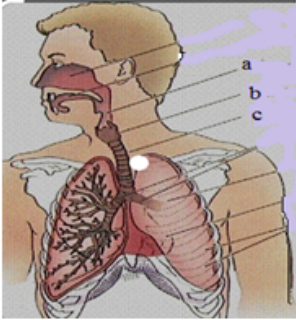
A point on the principal axis which is at double the distance between P and F for a spherical mirror is:

- A. infinity
- B. centre of curvature
- C. pole
- D. principal focus



Q68 General Science

The labelling for the parts a, b and c of the human respiratory system shown below are given as options. Identify the correct option.



- A. a - Larynx, b - Pharynx, c - Trachea
- B. a - Pharynx, b - Trachea, c - Larynx
- C. a - Pharynx, b - Larynx, c - Trachea
- D. a - Trachea, b - Larynx, c - Pharynx

Q69 General Science

How many formula units of CaSO_4 are attached to one molecule of water of crystallisation in Plaster of Paris?

- A. 1
- B. 2
- C. 3
- D. 4

Q70 General Science

Humans has been practicing water harvesting since ancient times. Some different forms of water harvesting structures are given in Column I and the place they are practiced in Column II. Select the option that shows the correct matching.

Column I (Water harvesting structures)	Column II (Places where they are practiced)
A. Surangams	i) Bihar
B. Pynes	ii) Rajasthan
C. Kulhs	iii) Kerala
D. Khadins	iv) Himachal Pradesh

- A. A-i, B-ii, C-iii, D-iv
- B. A-ii, B-iii, C-i, D-iv
- C. A-iii, B-ii, C-iv, D-i
- D. A-iii, B-i, C-iv, D-ii



Q71 General Science

The safety device that works on the heating effect of electric current is:

- A. Switch
- B. Fuse
- C. Electric motor
- D. Heater

Q72 General Science

Which reaction is an example of a double displacement reaction?

- A. $\text{Fe(s)} + \text{CuSO}_4\text{(aq)} \longrightarrow \text{FeSO}_4\text{(aq)} + \text{Cu(s)}$
- B. $\text{Na}_2\text{SO}_4\text{(aq)} + \text{BaCl}_2\text{(aq)} \longrightarrow \text{BaSO}_4\text{(s)} + 2\text{NaCl(aq)}$
- C. $\text{Zn(s)} + \text{CuSO}_4\text{(aq)} \longrightarrow \text{ZnSO}_4\text{(aq)} + \text{Cu(s)}$
- D. $\text{Pb(s)} + \text{CuCl}_2\text{(aq)} \longrightarrow \text{PbCl}_2\text{(aq)} + \text{Cu(s)}$

Q73 General Science

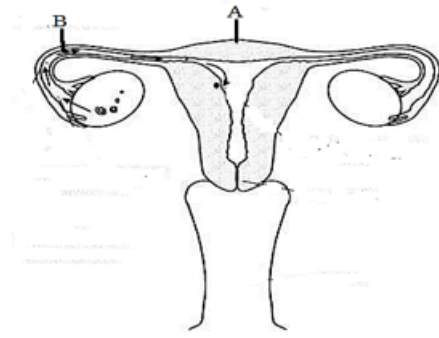
Resistance of a conducting wire is 15 ohm. If another wire of the same material and length but having one-third radius is taken, then the resistance of the second wire will be _____.

- A. 5 ohm
- B. 45 ohm
- C. 135 ohm
- D. 60 ohm



Q74 General Science

The figure given below shows the sectional view of the human female reproductive system. Identify the option stating correct functions of the labelled parts A and B.



- A. A - Implantation and development of embryo, B - Fertilisation of egg ✓
- B. A - Fertilisation of egg, B - Formation of egg
- C. A - Formation of egg, B - Fertilisation of egg
- D. A - Fertilisation of egg, B - Implantation and development of embryo

Q75 General Science

The elements having atomic numbers 15, 16, 17, and 18, respectively, are:

- A. P, S, Cl and Ar ✓
- B. Ar, Cl, S and P
- C. S, P, Cl and Ar
- D. P, S, Ar and Cl

Q76 General Science

Magnetic field lines around the current carrying circular loop are:

- A. perpendicular to conductor
- B. parallel lines
- C. semi-circular
- D. concentric circles ✓

Q77 General Science

A strong magnet is moved towards a stationary coil. The induced current in the coil is the maximum when the angle between the direction of motion of the magnet and the plane of the coil is _____.

A. 15°

B. 45°

C. 75°

D. 90° ✓

Q78 General Science

Which of the following leads to global warming?

A. Afforestation

B. Increase in CO_2 percentage in the air ✓

C. Increase in the levels of atmospheric ozone

D. Accumulation of plastic waste

Q79 General Science

What was the fundamental property used by Mendeleev to arrange elements in his Periodic Table?

A. Gaseous nature

B. Atomic mass ✓

C. Solid nature

D. Liquid nature

Q80 General Science

Which formula is related to an unsaturated carbon compound?

A. C_2H_4 ✓

B. C_2H_6

C. C_3H_8

D. C_4H_{10}



Q81 General Awareness and Current Affairs

The Revised PMJVK Scheme 2022-23, will now be implemented in all districts of the country including all the aspirational districts. States/ UTs can propose infrastructure projects in the identified areas where the concentration of minority population is more than _____ in the catchment area (5 km radius).

- A. 10%
- B. 15%
- C. 20%
- D. 25%

**Q82** General Awareness and Current Affairs

In 1989, which committee recommended constitutional recognition for the local government bodies?

- A. PK Thungon Committee
- B. AK Mathur Committee
- C. Vasudev Committee
- D. Vaghul Committee

**Q83** General Awareness and Current Affairs

As stated by the law of variable proportions, as additional units of a variable factor are combined with a given level of fixed factors and technology, the marginal product of the variable factor _____.

- A. first increases and then declines
- B. first declines and then increases
- C. increases sharply
- D. declines sharply

**Q84** General Awareness and Current Affairs

In the year 2021, who among the following received the Shanti Swarup Bhatnagar Award in biological science?

- A. Amit Singh
- B. Kayarat Sai Krishnan
- C. Jyotirmayee Dash
- D. Aditi Sen De



Q85 General Awareness and Current Affairs

According to the 2011 census of languages, which is the second highest spoken language in India?

- A. Telugu
- B. Bengali
- C. Tamil
- D. Gujarati



Q86 General Awareness and Current Affairs

The Third Five-Year Plan of India was launched under the leadership of _____.

- A. Lal Bahadur Shastri
- B. Gulzarilal Nanda
- C. Jawaharlal Nehru
- D. Morarji Desai



Q87 General Awareness and Current Affairs

Who among the following became the Vice -President of India from 11th August 2022?

- A. Biswabhusan Harichandan
- B. B. D. Mishra
- C. Jagdeep Dhankhar
- D. Phagu Chauhan



Q88 General Awareness and Current Affairs

The Union Territory of Lakshadweep has _____ inhabited islands as of March 2022.

- A. 12
- B. 10
- C. 14
- D. 16



Q89 General Awareness and Current Affairs

Which Muslim festival is celebrated to mark the culmination of the hajj (pilgrimage) rites at Minā, Saudi Arabia, near Mecca?

A. Eid Al-Adha



B. Milad un-Nabi

C. Eid-Ul-Fitr

D. Muharram

Q90 General Awareness and Current Affairs

_____ is a government scheme meant for old age protection and social security of Unorganised workers.

A. Atal Pension Yojna

B. Life Cover under Pradhan Mantri Jan Dhan Yojana

C. Varishtha Pension Bima Yojana.

D. Pradhan Mantri Shram Yogi Maandhan Yojana



Q91 General Awareness and Current Affairs

Which of the following is NOT a location for the Kumbh mela religious festival?

A. Ujjain

B. Haridwar

C. Allahabad

D. Bodh Gaya



Q92 General Awareness and Current Affairs

International chess Olympiad 2022 is hosted by which of the following cities?

A. Bengaluru

B. Chennai



C. Kolkata

D. Trivandrum



Q93 General Awareness and Current Affairs

In March 2022, who was selected for the 31st GD Birla Award for Outstanding Contribution and Scientific Research in the field of Physics?

A. Professor Narayan Pradhan



B. Professor Pinaki Talukdar

C. Professor Deepak Dhar

D. Professor Amrita Hazra

Q94 General Awareness and Current Affairs

Poona Pact was between Mahatma Gandhi and _____.

A. Dr B.R. Ambedkar



B. Lord Irwin

C. Sardar Vallabhbhai Patel

D. Lord Mountbatten

Q95 General Awareness and Current Affairs

The Government of India set up a committee to review the Fiscal Responsibility and Budget Management Act 2003, under the Chairmanship of NK Singh, in the year _____.

A. 2013

B. 2014

C. 2015

D. 2016



Q96 General Awareness and Current Affairs

Who stated that the principle of maximum social advantage is the most fundamental principle lying at the root of public finance?

A. Arthur Cecil Pigou

B. Hugh Dalton



C. Martin EP Seligman

D. John R Hicks

Q97 General Awareness and Current Affairs

What is the altitude of the outermost range of Himalayas, the Shiwaliks?

A. 900 to 1100 meter



B. 800 to 1000 meter

C. 700 to 900 meter

D. 600 to 800 meter

Q98 General Awareness and Current Affairs

Which air mass is warm?

A. Continental Polar

B. Continental Arctic

C. Maritime Polar

D. Continental Tropical



Q99 General Awareness and Current Affairs

As on April 2022, the Indian Constitution contains _____ Articles, with 12 Schedules.

A. 336

B. 448



C. 484

D. 378



Which country has been declared as the winner of the 3rd edition of the SAFF U-18 Women's Football Championship 2022?

A. India



B. Bangladesh

C. Pakistan

D. Nepal



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The sum of two positive numbers is 34 and their product is 64. The positive difference between them is:

- A. 60
- B. 50
- C. 40
- D. 30



Q2 Mathematics

$(x^4 - 625)$ can be factorised as:

- A. $(x^2 + 25)(x^2 + 25)$
- B. $(x^2 - 25)(x^2 - 5)$
- C. $(x - 5)(x + 5)(x^2 + 25)$
- D. $(x + 5)^2(x^2 - 25)$



Q3 Mathematics

The value of $(2^{25} \div 2^{15}) \times 2^4$ is:

- A. 2^{13}
- B. 2^{14}
- C. 2^{11}
- D. 2^{10}



Q4 Mathematics

A merchant purchased an item for ₹1,500. How much should he mark on the item to earn 20% profit after allowing 20% discount?

- A. ₹2,250
- B. ₹2,000
- C. ₹1,800
- D. ₹1,650



Q5 Mathematics

The ratio of the radius of the base to the height of a cylinder is $2 : 1$. If its volume is 4312 cm^3 , then the curved surface area of the cylinder is:

A. 946 cm^2

B. 734 cm^2

C. 616 cm^2 ✓

D. 668 cm^2

Q6 Mathematics

Which of the following statements is true about the nature of roots for the equation $11x^2 + 19x + 8 = 0$?

A. Both roots are imaginary or non-real

B. One root is positive real, and one is negative real

C. Both roots are positive real

D. Both roots are negative real ✓

Q7 Mathematics

The fourth proportional to 0.15, 0.35 and 12 is:

A. 58

B. 48

C. 38

D. 28 ✓

Q8 Mathematics

If the 5-digit number $688xy$ is divisible by 11 and 21, then what is the value of $(8x - 3y + xy)$?

A. 24 ✓

B. 15

C. 13

D. 6



Q9 Mathematics

If $\tan x = \frac{3}{4}$, for $0 < x < 90^\circ$, then the value of $\frac{1 - \sin x}{1 + \sin x}$ will be:

A. $\frac{1}{3}$

B. $\frac{1}{5}$

C. $\frac{1}{2}$

D. $\frac{1}{4}$ ✓

Q10 Mathematics

If $(a - b) = 8$ and $(a^2 + b^2) = 160$, then the value of ab is:

A. 40

B. 48 ✓

C. 36

D. 32

Q11 Mathematics

The sum lent at the rate of 25% per annum simple interest, that produces interest of ₹ 2.00 a day, for a year of 365 days, is:

A. ₹2,820

B. ₹2,920 ✓

C. ₹2,800

D. ₹2,902

Q12 Mathematics

40% of 60% of $\frac{5}{8}$ of a number is 339. The number is:

A. 5260

B. 4260

C. 3260

D. 2260 ✓



Q13 Mathematics

Two trains of lengths 160 m and 90 m are running in the same direction with velocities of 40 km/h and 50 km/h, respectively. The time taken by them to cross each other is:

A. 75 sec

B. 80 sec

C. 95 sec

D. 90 sec

**Q14** Mathematics

The value of $\left\{14 + \left(2\frac{1}{2} + \frac{4}{5} + 1\right)\right\} \times \frac{1}{100}$ is:

A. 1.83

B. 0.183

C. 0.0183

D. 18.3

**Q15** Mathematics

A class of 20 students took a science test. 8 students had an average (arithmetic mean) score of 60. The remaining students had an average score of 40. The average score of the whole class is:

A. 68

B. 48

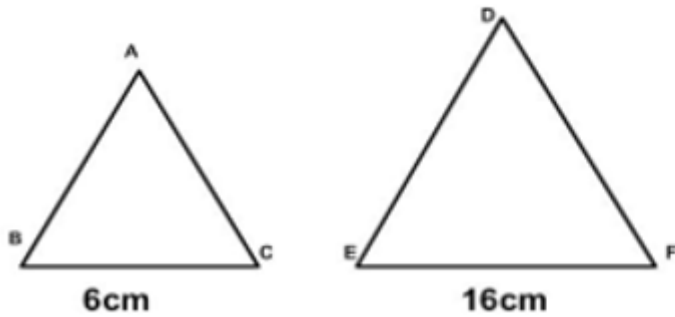
C. 58

D. 40



Q16 Mathematics

In the given figure, if $\triangle ABC$ and $\triangle DEF$ are similar, then the ratio of CA to FD will be:



A. 3 : 8



B. 3 : 4

C. 5 : 7

D. 3 : 7

Q17 Mathematics

Using empirical relation between the mean, median and mode, find the value of the mode if the median is 30 and mean is 25.

A. 60

B. 50

C. 40



D. 30

Q18 Mathematics

The volume of a sphere having radius 6 cm is:

A. $588 \pi \text{ cm}^3$

B. $488 \pi \text{ cm}^3$

C. $388 \pi \text{ cm}^3$

D. $288 \pi \text{ cm}^3$



Q19 Mathematics

Twice the present age of X is 9 years less than thrice the present age of Y. At present, X's father P is twice as old as X, and Y is 9 years younger than her sister Q. If P is 20 years older than Q, then the present age (in years) of Y is:

A. 18

B. 19

C. 21

D. 23

Q20 Mathematics

Which of the following numbers is divisible by 4?

A. 7864534

B. 9876342

C. 8978624

D. 9876754

Q21 Mathematics

Roots of the equation $x^2 = 24 - 10x$ are:

A. 3, -12

B. 2, -12

C. 3, -11

D. 2, -11

Q22 Mathematics

A can complete $\frac{2}{3}$ of a certain work in 12 days and B can complete $\frac{1}{4}$ of the same work in 3 days. Working together, the number of days they will take to finish the work is:

A. $7\frac{1}{5}$ B. $8\frac{1}{5}$ C. $5\frac{1}{5}$ D. $6\frac{1}{5}$ 

Q23 Mathematics

The mode of the observations 20, 23, 25, 30, 20, 31, 32, 35, 20, 41, 42, 43, 20 and 20 is:

A. 40

B. 35

C. 30

D. 20

**Q24** Mathematics

A man bought mangoes at the rate of 12 for ₹900 and sold them at the rate of 9 for ₹1,200. His profit percentage in the transaction is:

A. $99\frac{8}{9}\%$ B. $88\frac{8}{9}\%$ C. $77\frac{7}{9}\%$ D. $66\frac{7}{9}\%$ **Q25** Mathematics

The least 3-digit number that is completely divisible by 8 and 12 is:

A. 108

B. 124

C. 120



D. 144

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Six persons, Prem, Amit, Ram, Shyam, Tarun and Uma travelled in different months of the same year viz. January, February, March, July, September and December. Prem travelled in September. Only one person travelled between Prem and Uma. No one travelled between Tarun and Amit. Amit travelled in a month after Tarun. More than two persons travelled between Amit and Ram. Who among them travelled in July?

A. Shyam



B. Uma

C. Ram

D. Tarun



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Q27 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	2	6	=	@	?	8	<	5	7	#	!	/	7	4
Code	K	S	R	T	U	M	W	Y	A	V	C	X	E	B

Conditions:

- (i) If the first element is a number and the last, a symbol, the codes for these two are to be interchanged.
- (ii) If the first element is an even number and the last, an odd number, the first and last elements are to be coded as O.
- (iii) If both second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '5 # / 4 =' be coded?

A. RCXBY

B. YVXBR

C. YVEBY

D. RVXBY

**Q28** General Intelligence and Reasoning

If the digits of each number are written in reverse order and then the numbers are arranged in descending order, the position of how many numbers will NOT change?

7846, 6354, 8745, 4653

A. Three

B. Two

C. One

D. Zero

**Q29** General Intelligence and Reasoning

Each of A, B, C, D and E has an exam on a different day of a week, starting from Monday and ending on Friday of the same week.

A has the exam on Thursday. Only one person has the exam between D and E. D has the exam on the day immediately before B. Who has the exam on Friday?

A. E

B. B

C. C

D. D



Q30 General Intelligence and Reasoning

Select the triad that follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

BG - FK - JO

NS - RW - VA

A. MR - QV - UY

B. TY - XB - AF

C. DI - HM - LQ



D. SW - VA - ZE

Q31 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

RM13C, WR17H, BW21M, GB25R, ?

A. LG33W

B. GW29L

C. WG33L

D. LG29W



Q32 General Intelligence and Reasoning

If each of the following numbers is multiplied by 2 and the digits of each number are written in reverse order and then the numbers are arranged in descending order, the position of how many numbers will NOT change?

57, 87, 35, 97, 56, 74

A. Four

B. Three

C. Two

D. One



Q33 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $P < Q = R < T = M$, $J < N < P$

A. $R < J$

B. $M > J$

C. $J > T$

D. $N > R$

Q34 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 12 – Operations on 12 such as adding/ subtracting/multiplying etc. to 12 can be performed. Breaking down 12 into 1 and 2 and then performing mathematical operations on 1 and 2 is not allowed)

(5, 144, 7)

(9, 225, 6)

A. (4, 100, 5)

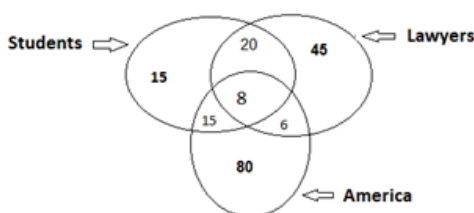
B. (9, 99, 10)

C. (9, 256, 7)

D. (10, 145, 13)

Q35 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such students are there who are also lawyers but NOT from America?

A. 20

B. 45

C. 15

D. 8



Q36 General Intelligence and Reasoning

Given below is a decision followed by two statements I and II. Read the information carefully and select the correct option

Decision:

The Board of Directors of a Digital Marketing Company AMX have decided to shift their headquarters from the city centre to the business towers located on the outskirts of the city.

Statements:

I. Low property rent in outskirts would help reduce the overall expenditure of the company substantially.

II. The business towers is the hub of multiple MNCs with frequent visitors from international companies as well. This will give more visibility to AMX.

- A. Statement I strengthens the decision but statement II is neutral.
- B. Statement I weakens the decision but statement II is neutral.
- C. Both statements I and II weaken the decision.
- D. Both statements I and II strengthen the decision. ☒

Q37 General Intelligence and Reasoning

The following table shows the monthly expenditure (in ₹ thousand) by three persons on rent, food, clothing and traveling. Study the table and answer the question.

	Rent	Food	Clothing	Traveling
Rahul	12.3	10.0	12.7	15.0
Geeta	14.3	15.0	11.7	11.5
Madhu	14.5	25.0	20.0	22.0

What is the average expenditure of Madhu on all the four expenses together?

- A. ₹20,375 ☒
- B. ₹20,357
- C. ₹20,537
- D. ₹20,377



Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

5, 5, 7, 21, 25, ?

A. 125



B. 45

C. 65

D. 120

Q39 General Intelligence and Reasoning

Three statements are given followed by three conclusions. Consider the statements and conclusions to be true even if they vary from commonly known facts and then decide which of the conclusions follow(s) from the given statements.

Statements:

1. All birds are lions.
2. No goat is a lion.
3. Some tigers are goats.

Conclusions:

- (I) Some tigers are lions.
- (II) No lion is a tiger.
- (III) Some lions are birds.

A. Only conclusion III follows.



B. Only conclusion II follows.

C. Only conclusions I and III follow.

D. None of the conclusions follow.

Q40 General Intelligence and Reasoning

Sarvan starts from Point Y and drives 5 km towards the north. He then takes a right turn, drives 5 km, turns right and drives 7 km. He then takes a right turn and drives 15 km. Then he takes a right turn and drives 2 km. He takes a final right turn, drives 5 km and stops at Point M. How far and towards which direction should he drive in order to reach Point Y from Point M? (All turns are 90 degree turns only)

A. 10 km towards the north

B. 5 km towards the east



C. 15 km towards the east

D. 5 km towards the west



Q41 General Intelligence and Reasoning

If south is changed to north-west, north-west is changed to east, east is changed to south-west and so on, which direction is north-east changed to?

A. North

B. South

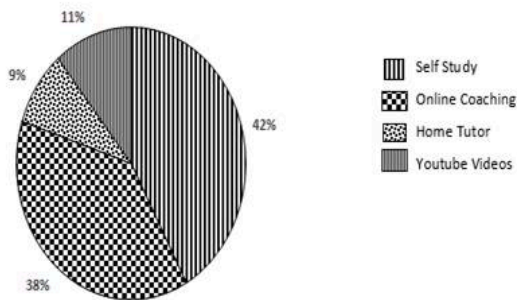
C. East

D. West



Q42 General Intelligence and Reasoning

The given pie chart provides details of the study modes used by students of class XII. Study the pie chart and answer the question.



If 18 students study using home tutors, how many total students are there in class XII?

A. 300

B. 350

C. 180

D. 200



Q43 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

$9 : 83 :: 5 : 47 :: 4 : ?$

A. 37

B. 33

C. 32

D. 38



Q44 General Intelligence and Reasoning

Amit, Bineet, Chandan, Dipti, Gyan and Farhaan live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 6. Dipti lives on an even numbered floor but not on floor number 4. Only two people live between Dipti and Amit. Chandan lives immediately below Farhaan. Farhaan lives on an even numbered floor. Neither Chandan nor Bineet live on the lowermost floor. Who lives on floor number 4?

A. Farhaan



B. Amit

C. Chandan

D. Bineet

Q45 General Intelligence and Reasoning

In a certain code language, 'ADMIT' is written as 'BFPMY' and 'ACTOR' is written as 'BEWSW'. How will 'ABUSE' be written in that language?

A. BDXWJ



B. BDYWJ

C. BDZWJ

D. BDGWJ

Q46 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) G \$ 5 & 2 P H 8 # T * S 2 F 8 C 2 7 \$ Y 6 F (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. 1



B. 2

C. 3

D. 4



Q47 General Intelligence and Reasoning

Six friends E, F, G, H, I and J are seated around a round table facing the centre. E is seated 2nd to the right of I. Only G is seated between H and J. Where is F seated?

- A. 2nd to the left of I
- B. 2nd to the right of I
- C. 3rd to the left of G ☒
- D. 2nd to the right of G

Q48 General Intelligence and Reasoning

If all the letters in each of the following words are rearranged as per English alphabetical order, and the newly formed words/clusters are arranged as per the dictionary arrangement, which initial word/cluster will appear exactly in the middle?

LIKE, LIVE, LOVE, LIME, LUCK

- A. LOVE
- B. LUCK
- C. LIME ☒
- D. LIVE

Q49 General Intelligence and Reasoning

Three statements are given followed by three conclusions. Consider the statements and conclusions to be true even if they vary from commonly known facts and then decide which of the conclusions follow(s) from the given statements.

Statements:

1. Some flowers are petals.
2. Some birds are petals.
3. No bird is a flower.

Conclusions:

- (I) Some petals are birds.
- (II) Some flowers are birds.
- (III) Some petals are flowers.

- A. Only conclusion III follows.
- B. Only conclusion II follows.
- C. Only conclusions I and III follow. ☒
- D. None of the conclusions follow.



Q50 General Intelligence and Reasoning

This question is based on the following 3-letter words.

(Left) CAT OWN EYE AND SAD (Right)

If in each of the given words, each alphabet is changed to the following letter in the English alphabetical series, how many words thus formed will have at least one vowel?

- A. One
- B. Two
- C. Three
- D. Four



Q51 General Intelligence and Reasoning

Six friends M, N, O, P, Q and R are sitting in a row facing north. Only O is seated between P and M. Only R is seated between N and Q. M is not seated at either of the ends and not an immediate neighbour of Q. P is sitting at immediate left of O. Where is N seated?

- A. 2nd from the extreme left end
- B. Immediate right of M
- C. At one of the extreme ends
- D. 2nd from the extreme right end



Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

176, 174, 171, 166, 159, ?

- A. 148
- B. 145
- C. 135
- D. 138



Q53 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$13.99 - 4.02 + 19.89 \times 5.99 = ?$$

A. 130



B. 180

C. 30

D. 210

Q54 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is NOT true based on the given statements.

Statement: $P > M > N = O, X > Y > P$

A. $X > M$

B. $N < Y$

C. $O < X$

D. $Y < N$



Q55 General Intelligence and Reasoning

Each vowel in the word SURPRISING is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. How many letters will appear twice in the group thus formed?

A. Two

B. Three



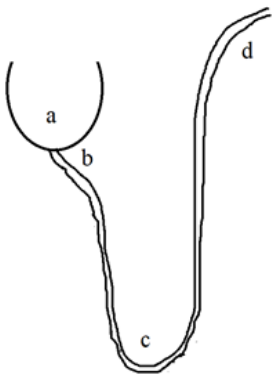
C. Four

D. Five



Q56 General Science

Which letter represents the region Bowman's capsule in the diagram below?



A. Region a



B. Region b

C. Region c

D. Region d

Q57 General Science

The resistance of a wire of length L and area of cross-section A is 0.4Ω . The resistance of a wire of the same material, of the same length (L) and area of cross-section $4A$ will be:

A. 1.6Ω

B. 0.8Ω

C. 0.2Ω

D. 0.1Ω

**Q58** General Science

Which of the following elements has the highest atomic radius?

A. Be

B. O

C. N

D. Li



Q59 General Science

The focal length of a spherical mirror is the distance between _____.

- A. focal plane and centre of curvature
- B. pole and principal focus
- C. centre of curvature and infinity
- D. infinity and principal focus

Q60 General Science

Which of the following statements is correct with reference to aerobic respiration?

- A. In mitochondria, one molecule of pyruvate breaks down to give three molecules of carbon dioxide.
- B. The release of energy in aerobic respiration is lower than that in anaerobic respiration.
- C. Aerobic respiration takes place in the absence of oxygen.
- D. Only carbon dioxide is released in the process of aerobic respiration.

Q61 General Science

What will be the product when CO(g) reacts with $\text{H}_2\text{(g)}$ at 340 atm pressure?

- A. HCHO
- B. CH_3OH
- C. $\text{C}_2\text{H}_5\text{OH}$
- D. HCOOH

Q62 General Science

Select the INCORRECT statement related to magnetic field lines outside a bar magnet.

- A. Field lines intersect each other.
- B. Field lines do not intersect each other.
- C. Field lines emerge from north pole.
- D. Field lines merge at south pole.



Q63 General Science

Which of the following will NOT show covalent bonding?

- A. Oxygen (O_2)
- B. Ammonia (NH_3)
- C. Methane (CH_4)
- D. Magnesium chloride ($MgCl_2$)



Q64 General Science

After fertilisation in plants, the ovule gets converted into:

- A. fruit
- B. embryo
- C. seed
- D. zygote



Q65 General Science

The process by which electrical energy can be produced in a coil involves:

- A. inclusion of commutator in the system
- B. magnet and coil under stationary positions
- C. relative motion of the coil and magnet
- D. presence of galvanometer in the system



Q66 General Science

The correct relation between H (heat), I (current), R (resistance) and T (time) is:

- A. $H = I^2 RT$
- B. $H = IR^2 T$
- C. $H = IR T^2$
- D. $H = I^2 RT^2$



Q67 General Science

Mendeléeev's Periodic Table was published in _____.

- A. 1842
- B. 1852
- C. 1862
- D. 1872



Q68 General Science

The transport of food and other substances takes place in the sieve tubes with the help of adjacent companion cells both in upward and downward directions. Name the process.

- A. Osmosis
- B. Diffusion
- C. Translocation
- D. Transpiration



Q69 General Science

A ray of light is incident on a refracting surface AB of glass prism, kept in air, and emerges out of the other refracting surface AC. Consider the following statements:

- (a) The angle of refraction at surface AB is less than the angle of incidence.
- (b) The angle of refraction at the surface AC is less than the angle of incidence.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b)
- D. Neither (a) nor (b)



Q70 General Science

How many times does an adult human breathe per minute at rest?

- A. 12-15
- B. 15-18
- C. 70-72
- D. 72-75



Q71 General Science

Which of the following statements for the reaction of copper oxide with HCl is correct?

A. CuCl_2 is formed.



B. CuSO_4 is formed.

C. Cu is formed.

D. Cl_2 is liberated.

Q72 General Science

What is the process of accumulation of chemicals in higher trophic levels called?

A. Biological magnification



B. Biological remediation

C. Biological oxidation

D. Biological reduction

Q73 General Science

The focal length of a concave mirror is:

A. positive or negative

B. always negative



C. always positive

D. zero

Q74 General Science

Which of the following is a china dish?



Q75 General Science

If equal potential difference is applied across tungsten, manganin and hard rubber wires of the same length and thickness, then:

- A. equal current will flow through all wires
- B. maximum current will pass through manganin
- C. maximum current will pass through tungsten ✓
- D. maximum current will pass through hard rubber

Q76 General Science

Which group of the following metals are obtained by reduction using carbon?

Na, Zn, Ca, Pb, Mg, Fe, Al, Cu, Ag

- A. Na, Zn, Ca, Pb
- B. Zn, Fe, Cu ✓
- C. Ca, Pb, Mg
- D. Fe, Al, Cu, Ag

Q77 General Science

Which of the following is NOT a common route of transmission of HIV from one person to another?

- A. Unprotected sexual contact with the infected person
- B. Infected mother to foetus during pregnancy
- C. Blood to blood contact with the infected people
- D. Casual contacts like handshakes or hugs with the infected people ✓

Q78 General Science

The random wavering of objects seen through a turbulent stream of hot air rising above a fire can be explained using:

- A. scattering of light
- B. atmospheric refraction ✓
- C. dispersion of light
- D. Total internal reflection



Q79 General Science

Which of the following compounds is used in the manufacture of borax?

A. Chlorine water

B. Washing soda



C. Brine water

D. Bleaching powder

Q80 General Science

Which of the following methods can be used to conserve our natural resources?

A. Using more water

B. Walking to nearby places without using vehicles



C. Not recycling goods

D. Turning on lights even when not required

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Hirakud Dam was in news due to the conflict between Odisha and Chhattisgarh over the distribution of water from the _____ river on which the dam has been erected.

A. Mahanadi



B. Indravati

C. Sankh

D. Damodar

Q82 General Awareness and Current Affairs

The first oil-field in Independent India was discovered in _____.

A. Gujarat

B. Assam



C. Rajasthan

D. Maharashtra



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Q83 General Awareness and Current Affairs

_____ of the Constitution of India deals with the prohibition of traffic in human beings and forced labour.

- A. Article 21
- B. Article 26
- C. Article 23
- D. Article 28



Q84 General Awareness and Current Affairs

Following the Indian Constitution and respecting the national anthem and flag is the _____ fundamental duty included in our Constitution.

- A. First
- B. Second
- C. Third
- D. Fourth



Q85 General Awareness and Current Affairs

_____ is considered as the holy person who gave Jainism its present form.

- A. Rishabhanatha
- B. Digambar
- C. Vasudev
- D. Mahavira



Q86 General Awareness and Current Affairs

Hornbill and Moatsu Festivals are predominantly celebrated in which of the following states?

- A. Uttar Pradesh
- B. Himachal Pradesh
- C. Nagaland
- D. West Bengal



Q87 General Awareness and Current Affairs

In the year 2022, at what altitude was the Earth Observation Satellite (EOS-04) placed into a sun-synchronous polar orbit?

A. 529 km



B. 714 km

C. 317 km

D. 612 km

Q88 General Awareness and Current Affairs

Who won the men's singles Yonex Sunrise India Open 2022?

A. Satwiksairaj Rankireddy

B. Chirag Shetty

C. Lakshya Sen



D. Mohammad Ahsan

Q89 General Awareness and Current Affairs

Identify the committee constituted for the promotion of small scale industries.

A. Karve Committee



B. Hanumanth Committee

C. Kelkar Committee

D. Raja Chelliah Committee

Q90 General Awareness and Current Affairs

Urdu was declared the second official language of which one of the following state in 2017?

A. Telangana



B. West Bengal

C. Odisha

D. Chhattisgarh



Q91 General Awareness and Current Affairs

National air sports policy 2022 lays out the vision of making India one of the top nations by the year:

A. 2025

B. 2030



C. 2035

D. 2040

Q92 General Awareness and Current Affairs

In 1896, Maharshi Dhondo Keshav Karve set up an Ashram at _____ to educate widows and other women as he believed in empowerment through education.

A. Poona



B. Surat

C. Madras

D. Nagpur

Q93 General Awareness and Current Affairs

Which of the following not-for-profit organisations runs a flagship programme called Udaan that supports accelerated learning of out of school adolescent girls (aged 11-14 years), as of July 2022?

A. CARE



B. Save the Children

C. YUVA

D. SEEDS

Q94 General Awareness and Current Affairs

After the changes brought about by the 73rd amendment in Panchayati Raj institutions, all states in India have a uniform _____ tier Panchayati Raj structure.

A. 2

B. 3



C. 4

D. 5



Q95 General Awareness and Current Affairs

As per the Reserve Bank of India notification of March 2022 the minimum requirement of microfinance loans for NBFC-MFIs should be _____ per cent of the total assets.

A. 25

B. 50

C. 75



D. 80

Q96 General Awareness and Current Affairs

In the wake of the Andhra Pradesh microfinance crisis of 2010, RBI had constituted which committee to study issues and concerns in the Microfinance Institutions sector in India?

A. Kelkar Committee

B. Parthasarathi Shome Committee

C. RV Gupta Committee

D. Malegam Committee



Q97 General Awareness and Current Affairs

A Data-Driven Research, has been launched by the Department of Biotechnology, Ministry of Science and Technology on 24 March 2022 with the objective to eradicate which disease?

A. Covid

B. Tuberculosis



C. AIDS

D. Cancer

Q98 General Awareness and Current Affairs

The concept of indifference curve is based on the law of _____.

A. diminishing marginal utility

B. diminishing marginal rate of substitution



C. marginal rate of substitution

D. demand and supply



In January 2022, who became India's first UNDP youth climate champion?

A. Prajakta Koli



B. Riya Singh

C. Priyanka Chaudhary

D. Medha Patkar

_____ covers most of the Deccan Plateau, which includes parts of Maharashtra, Madhya Pradesh, Gujarat and Andhra Pradesh and some parts of Tamil Nadu.

A. Black soil



B. Alluvial soil

C. Laterite soil

D. Peaty soil



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Two trains M and N cross a pole in 30 seconds and 1 minute 45 seconds, respectively. The length of train M is half the length of train N. The respective ratio of the speed of train M to that of train N is:

A. 2 : 3

B. 5 : 4

C. 7 : 4



D. 9 : 4

Q2 Mathematics

The average of the prime numbers between 11 and 30 is:

A. 19.5

B. 19.6

C. 20.2



D. 20.3

Q3 Mathematics

Which of the following is a pair of co-prime numbers?

A. 81, 16



B. 52, 24

C. 455, 49

D. 363, 77

Q4 Mathematics

Rajani borrowed an amount of ₹ 11,550 at an interest rate of 10% per annum, compounded annually. She repaid the entire amount with interest in two equal instalments, the instalments being paid at the end of the first and the second years from the date of borrowing. What is the value of each instalment, if interest is computed on reducing balance?

A. ₹4,455

B. ₹6,655



C. ₹5,775

D. ₹7,755



Q5 Mathematics

In quadrilateral PQRS, the bisectors of $\angle R$ and $\angle S$ meet at the point T (inside the quadrilateral) and $\angle STR = 87.5^\circ$. If the ratio of $\angle P$ to $\angle Q$ is $2 : 3$, then what is the difference between the measures of $\angle Q$ and $\angle P$?

A. 35° ☒B. 40° C. 45° D. 25° **Q6 Mathematics**

The value of $5 + 12 \div 4 - 2 \times (1 + 3)$ is:

A. -1 B. 1 C. 0 ☒D. 2 **Q7 Mathematics**

A man buys a car for ₹2,50,000 and spends ₹30,000 on its repairs. If he sells the car for ₹3,50,000, then his profit percentage is:

A. 33.33% B. 32% C. 28% D. 25% ☒**Q8 Mathematics**

The fourth proportional of 17, 32, and 51 is:

A. 32 B. 64 C. 72 D. 96 ☒

Q9 Mathematics

The ratio of the ages of A and B is 5: 9. After 7 years, B's age will be 52 years. Six years ago, A's age was:

- A. 44 years
- B. 35 years
- C. 24 years
- D. 19 years

**Q10 Mathematics**

One pipe can fill a tank three times as fast as another pipe. Together the two pipes can fill the tank in 32 minutes. The slower pipe alone will be able to fill the tank in _____ minutes.

- A. 128
- B. 64
- C. 144
- D. 96

**Q11 Mathematics**

If $x+y = 18$, Product of x and y is 77, then which of the following pairs of numbers can be the values of x and y , respectively?

- A. 12 and 6
- B. 11 and 7
- C. 9 and 9
- D. 8 and 10

**Q12 Mathematics**

The number of boys and girls in a class are in the ratio 6 : 5. The number of boys is 9 more than the number of girls. The total class strength(only boys and girls are in the class) is:

- A. 99
- B. 89
- C. 100
- D. 129



Q13 Mathematics

The diameter of the base of a cylinder is 3 cm and its height is 14 cm. The volume of the cylinder is:

A. 99 cm^3



B. 79 cm^3

C. 89 cm^3

D. 69 cm^3

Q14 Mathematics

Which of the following has NO pair of parallel sides?

A. Rectangle

B. Trapezium

C. Kite



D. Rhombus

Q15 Mathematics

The number 678954321 is divisible by which of the following?

A. 2

B. 11

C. 6

D. 3



Q16 Mathematics

The arithmetic mean of the observations 39, 49, 59, 60, 70, 80, 90, 93 and 90 is:

A. 79

B. 78

C. 76

D. 70



Q17 Mathematics

The value of $\frac{9}{10} \div \left(\frac{4}{5} + \frac{1}{10}\right)$ is:

A. 1



B. 0

C. $\frac{81}{100}$

D. $\frac{1}{10}$

Q18 Mathematics

The sum of five consecutive numbers is 240. The sum of the first and last numbers is:

A. 126

B. 116

C. 106

D. 96



Q19 Mathematics

The hypotenuse of a right-angled triangle is 2 more than twice of one of the sides, while the third side is 13 more than half of the hypotenuse. The length of the median to the hypotenuse is:

A. 15

B. 18

C. 17



D. 20

Q20 Mathematics

The two numbers whose mean proportional is 14 and third proportional is 4802 are:

A. 8 and 24

B. 7 and 28

C. 4 and 49

D. 2 and 98



Q21 Mathematics

The greatest number which divides 72 and 122 leaving remainders 3 and 7, respectively, is:

A. 17

B. 23



C. 26

D. 29

Q22 Mathematics

Which of the following two successive discounts are equivalent to a single discount of 84%?

A. 10% and 90%

B. 20% and 80%



C. 30% and 70%

D. 40% and 60%

Q23 Mathematics

The perimeter of a circle whose diameter is 50 cm is:

A. 50π cm



B. 40π cm

C. 30π cm

D. 20π cm

Q24 Mathematics

Roots of the equation $x^2 + 2x - 6 = 0$ are:

A. $-1 \pm \sqrt{5}$

B. $-3 \pm \sqrt{7}$

C. $-2 \pm \sqrt{7}$

D. $-1 \pm \sqrt{7}$



Q25 Mathematics

The average of 41 numbers is 62. The average of the first 18 numbers is 65.5 and the average of the last 24 numbers is 61.5. If the 18th number from the beginning is excluded, then what is the average of the remaining numbers?

- A. 60.5
- B. 60.725
- C. 61.325
- D. 61.625

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

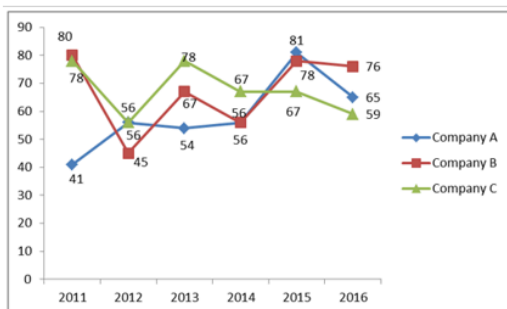
Six friends A, B, C, I, J and K prepared together for an interview and each one scored differently. C didn't score less than K. J didn't score more than A. I scored less than 3 friends only. C scored more than A. B scored less than J but not the least. Who scored the least?

- A. A
- B. C
- C. J
- D. K

**Q27 General Intelligence and Reasoning**

Study the given graph and answer the question that follows.

The graph presents total sales (in ₹ crore) of three companies over six years.



For which of the given pairs of years are the total sales of all three companies together equal?

- A. 2011 and 2015
- B. 2015 and 2012
- C. 2011 and 2013
- D. 2013 and 2016



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Q28 General Intelligence and Reasoning

Five friends C, D, E, F and G are seated around a round table facing the centre. Only D is seated between G and E. D is seated 2nd to the right of F, who is not seated at either side of G. Where is C seated?

- A. To the immediate left of G
- B. To the immediate left of F
- C. To the immediate right of E
- D. To the immediate right of F

Q29 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. All cloths are green.
2. All green are leaves.
3. Some leaves are originals.

Conclusions:

- I. Some originals are green.
- II. Some leaves are cloths.
- III. No cloth is an original.

- A. Only conclusions I and II follow.
- B. Only conclusions I and III follow.
- C. Only conclusion II follows.
- D. Only conclusion III follows.



Q30 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. No rose is a hibiscus.
2. Some hibiscuses are lotuses.

Conclusions:

- I. No rose is a lotus.
- II. Some lotuses are not roses.

- A. Only conclusion I follows.
- B. Both conclusions I and II follow.
- C. Neither conclusion I nor II follows.
- D. Only conclusion II follows. ☒

Q31 General Intelligence and Reasoning

Avadhesh starts from Point A and drives 10 km towards the east. He then takes a left turn, drives 10 km, turns left and drives 10 km. Then he takes a final left turn, drives 3 km and stops at Point M. How far and towards which direction should he drive in order to reach Point A from Point M? (All turns are 90 degree turns only)

- A. 7 km towards the north
- B. 13 km towards the east
- C. 7 km towards the east
- D. 7 km towards the south ☒

Q32 General Intelligence and Reasoning

In a certain code language, 'DIARY' is written as 'FLFXF' and 'READY' is written as 'THFJF'. How will 'ERROR' be written in that language?

- A. GUWUY ☒
- B. GNJUY
- C. JULDJ
- D. JBDYU



Q33 General Intelligence and Reasoning

In a certain code language, 'SHOUT' is written as 'VLTA A' and 'TOTAL' is written as 'WSYGS'. How will 'WHITE' be written in that language?

A. ZLNZL



B. ZJRKL

C. DFJPD

D. DPRHB

Q34 General Intelligence and Reasoning

Which of the below two signs should be interchanged to make the following equation correct?

$$75 \div 8 \times 6 + 24 - 6 = 31$$

A. $\times$ and $-$

B. $\div$ and $-$



C. $+$ and $\div$

D. $-$ and $+$

Q35 General Intelligence and Reasoning

If ' $+$ ' means ' $-$ ', ' $-$ ' means ' $\times$ ', ' $\times$ ' means ' $\div$ ', and ' $\div$ ' means ' $+$ ', what will come in place of the question mark (?) in the following equation?

$$18 \times 3 - 5 \div 6 + 4 = ?$$

A. 32



B. 36

C. 34

D. 30

Q36 General Intelligence and Reasoning

P, Q, R, S, T and U are six participants of an international Olympiad. Each of them scored different marks on the test. T scored more than Q. S scored more than Q. Q scored more than P and P scored more than R. T scored more than S. R scored more than only one participant. Which participant, among the six, scored the second highest?

A. P

B. S



C. R

D. T



Q37 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some sandwiches are pizzas.
2. All burgers are pizzas.
3. Some burgers are pastas.

Conclusions:

- I-Some sandwiches are burgers.
II-Some pastas are pizzas.

- A. Only conclusion I follows.
- B. Only conclusion II follows. ✓
- C. Both conclusions I and II follow.
- D. Neither conclusion I nor II follows.

Q38 General Intelligence and Reasoning

This question is based on the following three-letter words:

(Left) ALL NTE PET ARE (Right)

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel?

- A. One
- B. Two ✓
- C. Three
- D. Four

Q39 General Intelligence and Reasoning

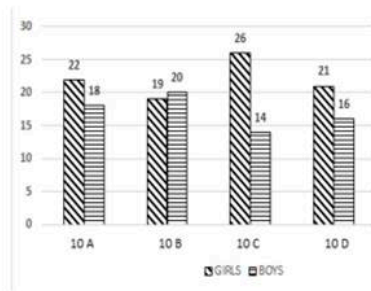
TB 12 is related to QY 20 in a certain way. In the same way, ML 16 is related to JI 24. To which of the following is RD 20 related following the same logic?

- A. BO 26
- B. OA 28 ✓
- C. OA 26
- D. AO 28



Q40 General Intelligence and Reasoning

The given graph provides details of the number of girl students and boy students in four sections of class X of a school. Study the graph and answer the question.



Which section has the maximum percentage of girls of the total students in that section?

A. 10D

B. 10C



C. 10B

D. 10A

Q41 General Intelligence and Reasoning

All 20 students of a class are standing in a straight row facing north. Rohan is 8th from the right end, while Nikhil is 10th from the left end. How many students are standing between Rohan and Nikhil?

A. 5

B. 2



C. 6

D. 3

Q42 General Intelligence and Reasoning

This question is based on the following 3-letter words

(left) BOW SAD LOW RAY (right)

How many letters are there in the English alphabetical order between the second letter of the first word from the right and the second letter of the first word from the left?

A. Eight

B. Twelve

C. Thirteen



D. Fifteen



Q43 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

If the sheep from country K are cross bred with sheep of their neighbouring country Q, the quality of wool produced will be much better than that reared from purebred sheep of either country.

Which of the following can be concluded from the given information?

I. Any two breeds of sheep can be successfully bred with each other.

II. The demand of wool reared by purebred sheep of either of these countries might go down once the wool from the crossbred sheep is easily available in the market at comparable prices.

- A. Only I can be concluded from the given information.
- B. Only II can be concluded from the given information. ✓
- C. Both I and II can be concluded from the given information.
- D. Neither I nor II can be concluded from the given information.

Q44 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

44, 42, 38, 36, 32, 30, 26, 24, ?

- A. 18
- B. 22
- C. 20 ✓
- D. 23

Q45 General Intelligence and Reasoning

A certain number of people are sitting in a row facing north. C sits second to the right of B. Only four people sit between C and A. X sits second to the left of A. Only one person sits between A and Y. Z sits to the immediate right of Y. If no other person is sitting in the row, what is the total number of persons seated?

- A. 11 ✓
- B. 12
- C. 8
- D. 10



Q46 General Intelligence and Reasoning

Preeti walks 30 m towards the east from point P. She takes a left turn and walks 18 m. She takes a left turn again and walks 65 m. Again, she takes a left turn and walks 86 m. She takes a left turn again and walks 65 m. Again, she takes a left turn and walks 18 m. She takes one final left turn and walks 30 m to reach point Q. How far and in which direction is point Q from point P? (All turns are 90 degree turns only)

A. 50 m, North

B. 68 m, North

C. 50 m, South



D. 68 m, South

Q47 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) N 3 % Y 7 & 3 5 G M Q 1 @ 2 C ^ 9 L 2 B (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. 1



B. 2

C. 3

D. 4

Q48 General Intelligence and Reasoning

Which of the following letter-clusters will replace the question mark (?) in the given series to make it logically complete?

GED 14, LJI 17, QON 20, VTS 23, ?

A. FXY 28

B. AYX 26



C. BYX 26

D. DVS 30



Q49 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

$$27 : 36 :: 39 : 52 :: 30 : ?$$

A. 39

B. 43

C. 40



D. 42

Q50 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '+' and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$18 \times 3 - 15 \div 10 + 20 = ?$$

A. 80



B. 60

C. 20

D. 40

Q51 General Intelligence and Reasoning

A certain number of people are sitting around a round table facing the centre. S is sitting 3rd to the right of P, who is 4th to the left of Z. Only M is sitting between A and B. No other people are sitting around the table. How many people are there in total?

A. 8



B. 9

C. 7

D. 6

Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

$$25, 30, 55, 180, 805, ?$$

A. 3400

B. 3960

C. 3930



D. 3935



Q53 General Intelligence and Reasoning

Amir, Bineet, Chandra, Dinesh, Indresh, Farukh, Gurmeet and Hariom are sitting around a square table facing the centre of the table. Four of them are sitting at the corners, while four are sitting at the middle of the sides. Indresh sits third to the left of Gurmeet. Indresh sits at one of the corners. Bineet sits second to the right of Farukh. Farukh does not sit at any of the corners. Farukh is not an immediate neighbour of Indresh. Hariom is an immediate neighbour of Amir. Hariom does not sit at any of the middle of the sides. Only three people sit between Hariom and Chandra. Who sits third to the left of Dinesh?

A. Amir



B. Bineet

C. Indresh

D. Hariom

Q54 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

9 : 90 :: 5 : 30 :: 10 : ?

A. 110



B. 100

C. 105

D. 125

Q55 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word POSITIVE is arranged in alphabetical order?

A. None



B. One

C. Two

D. Three



Q56 General Science

Who disproved the statement, “organic compounds could only be formed within a living system”?

- A. Rutherford
- B. Charles
- C. Wohler
- D. Dalton



Q57 General Science

How can the general public living near the Ganga River participate in the Namami Gange Programme?

- A. By boiling water to kill coliform bacteria before drinking it
- B. By not cutting trees growing on the river banks
- C. By stopping open defecation on river banks
- D. By adding mosquito-larvae-eating fish in the river



Q58 General Science

The correct formula for electric power is:

- A. $P = V \cdot T$
- B. $P = V \cdot I$
- C. $P = V \cdot I \cdot T$
- D. $P = \frac{V}{I}$



Q59 General Science

Which of the following oxides corresponds to the oxide of Eka-aluminium?

- A. Ge_2O_3
- B. B_2O_3
- C. In_2O_3
- D. Ga_2O_3



Q60 General Science

What is the nature of BaSO_4 formed by a reaction of SO_4^{2-} and Ba^{2+} ?

- A. Water soluble
- B. Water insoluble
- C. Black crystals
- D. Red powder



Q61 General Science

Consider the below statements and identify the correct answer.

Statement-I: The compounds formed by the transfer of electrons from a metal to a non-metal are known as electrovalent compounds.

Statement-II: Electrovalent compounds are generally soluble in water and insoluble in solvent such as kerosene, petrol etc.

- A. Both the statements are true.
- B. Both the statements are false.
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.



Q62 General Science

What is the difference between striated and smooth muscle cells?

- A. Smooth muscles are not connected to the nerves while striated muscles are connected.
- B. Striated muscles lack nuclei while smooth muscles are binucleated
- C. Smooth muscles cannot contract at will, while voluntary muscles contract at will
- D. All striated muscles work by reflex action as compared to smooth muscles.



Q63 General Science

Consider the following statements about the force acting on a current-carrying straight conductor placed in a magnetic field:

- (a) The direction of the force remains the same even when the direction of magnetic field is reversed.
- (b) The direction of the force can be determined using Fleming's left-hand rule.

Which of the above statements is/are correct?

- A. Both (a) and (b)
- B. Neither (a) nor (b)
- C. Only (b)**
- D. Only (a)

Q64 General Science

A copper wire AB is made of three parts, AC, CD and DB of resistances in the ratio of 2 : 3 : 4. The wire is connected to a battery. If V_1 , V_2 and V_3 are the potential drops across AC, CD and DB, respectively, then which of the following is correct?

- A. $V_1 : V_2 : V_3 = 1 : 1 : 1$
- B. $V_1 : V_2 : V_3 = 1 : 2 : 3$
- C. $V_1 : V_2 : V_3 = 2 : 3 : 4$**
- D. $V_1 : V_2 : V_3 = 3 : 4 : 2$

Q65 General Science

Which of the following has less opposition to the flow of current?

- A. A good conductor**
- B. A good insulator
- C. A high resistance
- D. A bad conductor



Q66 General Science

Which of the following statements is INCORRECT?

- A. Kidneys are located in the abdomen, one on either side of the backbone
- B. The human excretory system includes a pair of kidneys, a pair of ureters, a urinary bladder and a urethra.
- C. Each kidney has large numbers of the filtration units called neurons packed close together. ✓
- D. Normally, in a healthy adult, the initial filtrate in the kidneys is about 180 L daily

Q67 General Science

Which shell of the nitrogen atom participates in forming N_2 molecule?

- A. K
- B. L ✓
- C. M
- D. N

Q68 General Science

The phenomenon of electromagnetic induction occurs due to:

- A. stationary positions of the magnet and coil
- B. change in magnet flux passing through coil ✓
- C. placement of galvanometer in the system
- D. connecting the system with an electromagnet

Q69 General Science

Which statement is correct for the elements of second period?

- A. They have the same number of valence electrons and they also contain the same number of shells.
- B. They do not have the same number of valence electrons and they do not contain the same number of shells.
- C. They have the same number of valence electrons, but they do not contain the same number of shells.
- D. They do not have the same number of valence electrons, but they contain the same number of shells. ✓



Q70 General Science

Which of the following statements is correct about oxidation reaction?

- A. Oxidation is loss of oxygen or gain of hydrogen.
- B. Oxidation is gain of oxygen and hydrogen.
- C. Oxidation is gain of oxygen or loss of hydrogen. ✓
- D. Oxidation is loss of oxygen and hydrogen.

Q71 General Science

A tree is 10 m in front of a convex mirror of focal length 2.5 m. Its image is formed:

- A. 1.25 m behind mirror
- B. 2.0 m behind mirror ✓
- C. 2.0 m in front of mirror
- D. 1.25 m in front of mirror

Q72 General Science

Which of the following is a wildlife sanctuary?

- A. Manas ✓
- B. Nilgiri
- C. Sundarban
- D. Pachmarhi

Q73 General Science

Which of the following points always lie(s) on the principal axis of a spherical mirror?

- (i) Centre of curvature
- (ii) Point of incidence
- (iii) Pole

- A. Only (i)
- B. Only (ii)
- C. Both (i) and (ii)
- D. Both (i) and (iii) ✓



Q74 General Science

Arrange the following in a food chain.

A. Frog; B. Eagle; C. Rice Plant; D. Snake; E. Locust

A. C – A – E – D – B

B. C – A – E – B – D

C. C – E – D – B – A

D. C – E – A – D – B



Q75 General Science

Which of the following is involved in emulsification of fats?

A. Liver



B. Pancreas

C. Spleen

D. Stomach

Q76 General Science

Which of the following sexually transmitted diseases is caused by a virus?

A. Gonorrhoea

B. Warts



C. Syphilis

D. Tuberculosis (Chlamydia)

Q77 General Science

Which of the following statements is NOT correct for antacids?

A. Antacids are useful to neutralise excess stomach acid.

B. $\text{Mg}(\text{OH})_2$ is an antacid.

C. Antacids are strong acids.



D. NaHCO_3 is an antacid.



Q78 General Science

Dental Caries result in _____.

- A. Foul-smelling breath
- B. Bleeding gums
- C. Softened enamel
- D. Broken tooth



Q79 General Science

During dispersion of light through a triangular prism white light will split into _____ bands of colour.

- A. three
- B. five
- C. eight
- D. seven



Q80 General Science

If the speed of light in water and glass are $2.25 \times 10^8 \text{ m/s}$ and $1.86 \times 10^8 \text{ m/s}$ respectively then the refractive index of glass with respect to water is:

- A. 1.21
- B. 0.83
- C. 1.31
- D. 0.52



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Who among the following won a Gold Medal at UWW Ranking Series in the 62 kg category held in the month of June 2022?

- A. Babita Kumari
- B. Kavita Devi
- C. Vinesh Phogat
- D. Sakshi Malik



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Q82 General Awareness and Current Affairs

As of March 2022, who is the Union Minister of Parliamentary Affairs?

- A. Pralhad Venkatesh Joshi
- B. Piyush Goyal
- C. Raj Kumar Singh
- D. Arjun Munda



Q83 General Awareness and Current Affairs

Which of the following is the largest tiger reserve park of India?

- A. Gir Forest, Gujarat
- B. Nagarjunsagar-Srisailem Tiger Reserve, Telangana & Andhra Pradesh
- C. Mayurbhanj Reserve, Odisha
- D. Katarniaghat Wildlife Sanctuary, Uttar Pradesh



Q84 General Awareness and Current Affairs

What is the number of new jobs that is proposed to be created under the productivity linked incentive scheme in 14 sectors for achieving the vision of Atmanirbhar Bharat?

- A. 50 lakh
- B. 55 lakh
- C. 60 lakh
- D. 65 lakh



Q85 General Awareness and Current Affairs

Venuvan Vihara Buddhist Monastery is in which among the following states of India?

- A. Tripura
- B. Meghalaya
- C. Nagaland
- D. Manipur



Q86 General Awareness and Current Affairs

The First Five-Year Plan in India achieved a growth rate of _____ against a target of 2.1%.

- A. 4.8%
- B. 2.4%
- C. 1.2%
- D. 3.6%



Q87 General Awareness and Current Affairs

ICAR-Indian Institute of Horticultural Research's main research station is located in which city of India?

- A. Ranchi
- B. Bengaluru
- C. Shimla
- D. Bhopal



Q88 General Awareness and Current Affairs

In which of the following states is India's first medical city 'Indrayani Medicity' scheduled to be set up, in March 2022?

- A. Karnataka
- B. Maharashtra
- C. Telangana
- D. Gujarat



Q89 General Awareness and Current Affairs

In the wake of AP microfinance crisis in 2010, RBI had constituted a committee under the chairmanship of _____ to study issues and concerns in the MFI sector.

- A. Shri YH Malegam
- B. Dr YV Reddy
- C. Shri Jagdish Capoor
- D. Shri Mukund M Chitale



Q90 General Awareness and Current Affairs

Which of the following schemes is aimed to ensure comprehensive financial inclusion of all the households in the country by providing universal access to banking facilities with at least one basic banking account to every household, financial literacy, access to credit, insurance and pension facility?

- A. Varishtha Pension Bima Yojana
- B. Pradhan Mantri Vaya Vandana Yojana
- C. Pradhan Mantri Suraksha Bima Yojana
- D. Pradhan Mantri Jan Dhan Yojana



Q91 General Awareness and Current Affairs

In March 2022, _____ became the first woman cricketer in the world to appear in six Worlds Cups.

- A. Mithali Raj
- B. Smriti Mandhana
- C. Harmanpreet Kaur
- D. Jhulan Goswami



Q92 General Awareness and Current Affairs

According to Constitution of India, which article is not related to Fundamental Rights from following?

- A. Article 18
- B. Article 30
- C. Article 40
- D. Article 25



Q93 General Awareness and Current Affairs

On the eve of International Women's Day 2022, the Ministry of Women and Child Development, in collaboration with the Ministry of Education and UNICEF, launched a landmark campaign to reintegrate out-of-school adolescent girls in India. What is the name of this campaign?

- A. Kanya Shiksha Utsav
- B. Kanya Shiksha Pravesh Utsav
- C. Kanya Shiksha
- D. Kanya Shiksha Utthan



Q94 General Awareness and Current Affairs

Who among the following was conferred the Ramanujan Prize for Young Mathematicians 2021?

- A. Ritabrata Munshi
- B. Huang Hilep Pham
- C. Carolina Araujo
- D. Neena Gupta



Q95 General Awareness and Current Affairs

How much reservation is given to women in the panchayat and municipality of Bihar?

- A. 25%
- B. 10%
- C. 50%
- D. 33%



Q96 General Awareness and Current Affairs

In March 2022, the EPFO has proposed to change the interest rate on provident fund deposits from 8.5% in 2020-21 to _____ for 2021-22.

- A. 8.1%
- B. 9.2%
- C. 9.4%
- D. 8.3%



Q97 General Awareness and Current Affairs

Who among the following was the one of the founders of the revolutionary organisation 'Naujawan Bharat Sabha' which was founded in the year 1926?

- A. Lala Hardayal
- B. Bhagat Singh
- C. Subhash Chandra Bose
- D. Chandrashekar Azad



Q98 General Awareness and Current Affairs

Maulana Azad National Urdu University (MANUU) is a Central University established by an Act of Parliament in _____.

A. 1991

B. 1998



C. 2000

D. 2002

Q99 General Awareness and Current Affairs

Utkala Dibasa, is celebrated on 1 April in the Indian State of:

A. Odisha



B. Chhattisgarh

C. Bihar

D. Jharkhand

Q100 General Awareness and Current Affairs

What is the longitudinal valley lying between the lesser Himalayas and the Shivalik's known as?

A. Bugyal

B. Payar

C. Marg

D. Duns



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The value of $(11^0 + 21^0 - 7^0 + 3^0) \times 5^0$ is:

- A. 1
- B. 0
- C. 3
- D. 2



Q2 Mathematics

A dishonest dealer professes to sell his goods at cost price but he uses a weight of 800 g for a weight of 1 kg. His profit percentage is:

- A. 55%
- B. 45%
- C. 35%
- D. 25%



Q3 Mathematics

Which of the following statements is true about the nature of roots for the equation $x^2 + x + 12 = 0$?

- A. Both roots are imaginary or non-real
- B. One root is imaginary, and one is real
- C. Both roots are positive real
- D. Both roots are negative real



Q4 Mathematics

Two times the present age of Anu is 6 years more than the present age of Bina. The present age of Anu's mother (M) is three times the present age of Anu, and Bina is 5 years younger than her sister (S). If the sum of the present ages of M and S is 64 years, then Anu's present age (in years) is:

- A. 13
- B. 14
- C. 15
- D. 17



Q5 Mathematics

A can complete a certain work in the same time in which B and C together can complete it. If A and B together could complete it in 20 days and C alone in 60 days, then B alone could complete the work in:

A. 60 days



B. 72 days

C. 65 days

D. 70 days

Q6 Mathematics

'A' and 'B' invest ₹ 30,000 and ₹ 24,000, respectively, for one year. If they get a profit of ₹ 13,500, then the share of 'B' in the profit is:

A. ₹6,000



B. ₹7,500

C. ₹9,000

D. ₹9,450

Q7 Mathematics

The number of prime numbers lying between 400 and 430 is:

A. 5

B. 4



C. 6

D. 3

Q8 Mathematics

The area of a triangle having base 4 cm and height 7 cm is:

A. 32 cm²

B. 28 cm²

C. 24 cm²

D. 14 cm²



Q9 Mathematics

The quadratic equation for which, sum of the roots is $(-\frac{3}{5})$ and product of the roots is $\frac{2}{5}$, is:

A. $5x^2 - 2x + 7 = 0$

B. $5x^2 - 3x + 2 = 0$ ✓

C. $5x^2 - 7x + 2 = 0$

D. $5x^2 - x + 1 = 0$

Q10 Mathematics

The LCM of the numbers 2.5 and 0.175 is:

A. 1.75

B. 0.0175

C. 175

D. 17.5 ✓

Q11 Mathematics

It is given that, $\triangle ABC \cong \triangle FDE$ and $AB = 6$ cm, $\angle B = 60^\circ$ and $\angle A = 70^\circ$, then which of the following is true?

A. $DF = 6$ cm, $\angle F = 50^\circ$

B. $DF = 6$ cm, $\angle E = 50^\circ$ ✓

C. $DE = 5$ cm, $\angle E = 50^\circ$

D. $DE = 6$ cm, $\angle D = 40^\circ$

Q12 Mathematics

The price of fuel decreases by 15%, 12% and 10% in three successive months, but increases by 25% in the fourth month. What is the percentage increase/decrease in the price of fuel in the fourth month as compared to its original price?

A. Decreases by 12%

B. Increases by 10%

C. Decreases by 15.85% ✓

D. Increases by 15.75%



Q13 Mathematics

The area of a rectangle whose length is 13 cm and breadth is 12 cm is:

A. 186 cm^2

B. 176 cm^2

C. 166 cm^2

D. 156 cm^2 ✓

Q14 Mathematics

Factorise ($x^2 - 16a^2 + 24ab - 9b^2$).

A. $(x + 4a + 3b)(x + 4a - 3b)$

B. $(x - 4a - 3b)(x + 4a - 3b)$

C. $(x + 4a + 3b)(x - 4a + 3b)$

D. $(x - 4a + 3b)(x + 4a - 3b)$ ✓

Q15 Mathematics

If 39 less than 6 times a certain number is 339, then the number is:

A. 83

B. 73

C. 63 ✓

D. 53

Q16 Mathematics

If a shopkeeper sells 25 articles at ₹ 45 per article after giving 10% discount and earns 50% profit. If the discount is not given the percentage profit gained (rounded off to two decimal places) is:

A. 66.67% ✓

B. 65.56%

C. 56.65%

D. 55.55%



Q17 Mathematics

Express $0.\overline{3}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{2}{3}$

B. $\frac{3}{4}$

C. $\frac{2}{5}$

D. $\frac{1}{3}$ ✓

Q18 Mathematics

The product of two positive numbers is 500. If the first number is five times of the second number, then the sum of the two numbers is:

A. 90

B. 80

C. 70

D. 60 ✓

Q19 Mathematics

Five years ago, the average age of A, B and C was 35 years. Five years from now, the average age of A and C will be 48 years. What will be the age (in years) of B, three years from now?

A. 34

B. 35

C. 37 ✓

D. 38

Q20 Mathematics

The average of five numbers is 15. If four of the numbers are 10, 12, 14 and 18, then the fifth number is:

A. 23

B. 36

C. 31

D. 21 ✓



Q21 Mathematics

A and B together can complete a piece of work in 5 days, while X and Y together can complete the same work in 20 days. The number of days A, B, X and Y together will take to complete it is:

A. 4 days



B. 3 days

C. 5 days

D. 6 days

Q22 Mathematics

The median of the observations 20, 23, 25, 30, 20, 31, 32, 35, 20, 41, 42, 43, 20, 20 and 20 is:

A. 28

B. 26

C. 25



D. 23

Q23 Mathematics

The simple interest on a sum for 3 years is two-fifth of the sum. The rate of interest per annum is:

A. $\frac{40}{3}\%$



B. $\frac{20}{3}\%$

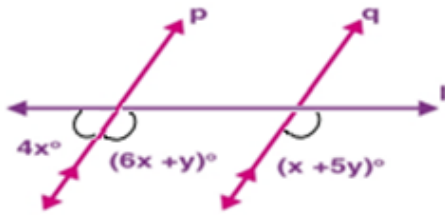
C. $\frac{3}{40}\%$

D. $\frac{10}{3}\%$



Q24 Mathematics

In the given figure, $p \parallel q$ and l is a transversal cutting p and q with angles as specified. The value of $(5x - y)$ is:



A. 60



B. 40

C. 96

D. 116

Q25 Mathematics

$\frac{\sin A - 2\sin^3 A}{2\cos^3 A - \cos A}$ is equal to:

A. $\tan A$



B. $\sin A$

C. $\operatorname{cosec} A$

D. $\cot A$

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

In a certain code language, 'THRICE' is written as 'TRIHEC' and 'SECTOR' is written as 'TSROEC'. How will 'JOYFUL' be written in that language?

A. YUOLFJ

B. YUOLJF



C. UYOLJF

D. YULOJF



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Q27 General Intelligence and Reasoning

Study the following arrangement carefully and answer the question.

(Left) 8 & 2 @ 4 4 f @ 1 ^ £ % 3 8 ¥ 6 # 7 3 (Right)

How many such numbers are there each of which is immediately followed by a symbol and also immediately preceded by a symbol?

A. 1

B. 2

C. 3



D. 4

Q28 General Intelligence and Reasoning

Sohan starts from his home and cycles 2 kilometres on a straight road. Then he turns left and cycles 5 kilometres to reach a square. From the square, again he takes a left and covers 2 kilometres. Now he is facing the south direction. In which direction does he start to cycle from his home? (All turns are 90 degree turns only)

A. North



B. South

C. East

D. West

Q29 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷' and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$18 \div (18 - 2) \times 9 + 16 = ?$$

A. 4

B. 6



C. 8

D. 10



Q30 General Intelligence and Reasoning

Six students are sitting around a circular table facing the centre. Q is an immediate neighbour of both B and C. A is sitting second to the left of C. P is sitting second to the right of Q. R is immediate neighbour of both A and C. Who is an immediate neighbour of both A and B?

A. C

B. Q

C. R

D. P



Q31 General Intelligence and Reasoning

Asmita started walking from the medicine shop towards the south. After walking for 400 metres she turned right and walked for 100 metres to reach the ice-cream parlour. From there she turned right, walked for 500 metres then again turned right and walked for 200 metres to reach the vegetable shop. Finally she turned right and walked for 100 metres to reach her home. How far and in which direction is her home from the medicine shop? (All turns are 90 degree turns only)

A. 200 metres west

B. 100 metres south

C. 200 metres north

D. 100 metres east



Q32 General Intelligence and Reasoning

Three statements are given followed by three conclusions. Consider the statements and conclusions to be true even if they vary from commonly known facts and then decide which of the conclusions follow(s) from the given statements.

Statements:

1. All pens are bags.
2. Some bottles are pens.
3. All shoes are bottles.

Conclusions:

- (I) No bag is a shoe.
- (II) Some pens are shoes.
- (III) Some bags are shoes.

A. Only conclusion III follows.

B. Only conclusion II follows.

C. Only conclusions I and III follow.

D. None of the conclusions follow.



Q33 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

132, 109, 90, 73, 60, ?

A. 46

B. 48

C. 49



D. 52

Q34 General Intelligence and Reasoning

K22P is related to M26N in a certain way. In the same way, O30L is related to Q34J. To which of the following is S38H related, following the same logic?

A. T42F

B. T40G

C. U42F



D. V44E

Q35 General Intelligence and Reasoning

If each of the digits in the number 7349842 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. None

B. One

C. Two



D. Three

Q36 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question that follows.

(Left) Z C & T % 7 D 9 # 6 K & 2 R Y \$ 3 5 E * S (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. 0

B. 1

C. 2

D. 3



Q37 General Intelligence and Reasoning

Select the option in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE: Operations should be performed on the whole numbers without breaking down the numbers into its constituent digits.

E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(8, 19, 22)

(3, 9, 12)

A. (4, 15, 18)

B. (17, 21, 8)



C. (5, 15, 16)

D. (2, 5, 4)

Q38 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

4 : 9 :: 5 : 12 :: 3 : ?

A. 7

B. 8

C. 6



D. 11

Q39 General Intelligence and Reasoning

If we add 9 to each of the following numbers and then write the digits of each number in reverse order and then arrange the numbers in descending order, the position of how many numbers will NOT change?

221, 256, 465, 387, 356

A. Zero



B. One

C. Two

D. Three



Q40 General Intelligence and Reasoning

All 48 students of a class are standing in a row facing the north. Yuvika is 7th from the extreme right end of the row. Malini is 22nd from the extreme left end. How many students are standing between Malini and Yuvika?

A. 17

B. 18

C. 19



D. 20

Q41 General Intelligence and Reasoning

The given graph provides the details of the price of petrol (in rupees) per litre in 4 months in Delhi. Study the graph and answer the question.



Find the approximate percentage increase of the rate of petrol from January to April

A. 18%

B. 19%

C. 12%

D. 17%



Q42 General Intelligence and Reasoning

Refer to the following number series and answer the question.

13 10 17 25 58 63 94 8 92 29

How many prime numbers are immediately followed by even numbers?

A. 4

B. 3

C. 2

D. 1



Q43 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- I. All mobiles are laptops.
- II. All laptops are notebooks.
- III. All notebooks are books.

Conclusions:

- I. All books are laptops.
- II. Some notebooks are mobiles.
- III. All laptops are books.

- A. Conclusions I and II follow
- B. Conclusions I and III follow
- C. Conclusions II and III follow
- D. All conclusions follow



Q44 General Intelligence and Reasoning

35 students of a class are standing in a queue according to the increasing order of their heights. Devyani is standing 11th from the back. If she changes her position with Gauri, she becomes 12th from front. How many students are standing between Devyani and Gauri?

- A. 12
- B. 23
- C. 24
- D. 11



Q45 General Intelligence and Reasoning

Three statements are given followed by two conclusions. Consider the statements and conclusions to be true even if they vary from commonly known facts and then decide which of the conclusions follow(s) from the given statements.

Statements:

1. All squares are roses.
2. Some roses are parrots.
3. No parrot is a square.

Conclusions:

- (I) Some parrots are roses.
(II) Some squares are parrots.

- A. Only conclusion II follows.
- B. Only conclusion I follows. ✓
- C. Both conclusions I and II follow.
- D. None of the conclusions follows.

Q46 General Intelligence and Reasoning

Select the term from among the given options that can replace the question mark (?) in the following series.

B2AFR, SGB4C, D6CHT, UID8E, ?

- A. VJE8F
- B. F10EJU
- C. VJE10F
- D. F10EJV ✓

Q47 General Intelligence and Reasoning

Six people P, Q, R, S, T and U are living on a six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. R lives on the floor immediately below the floor of P. Q does not live on the topmost floor. T lives on the floor immediately below the floor of S. P does not live on any of the floors below S. Only three people live between the floors of U and T. T and U live on even numbered floors. Who lives on the floor number 4?

- A. U
- B. P
- C. R ✓
- D. S



Q48 General Intelligence and Reasoning

Amongst six friends A, D, F, G, L and S, each has a different age. S is older than only four other friends. D is older than only one friend. G is older than L but younger than A. A is not the oldest. Who is the youngest among all the friends?

A. F

B. S

C. L



D. G

Q49 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

23, 28, 35, 46, 59, ?

A. 80

B. 82

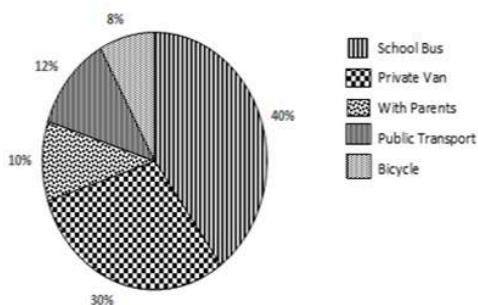
C. 78

D. 76



Q50 General Intelligence and Reasoning

The given pie chart provides details of the percentage distribution of the mode of transport taken by students of a class. Study the pie chart and answer the question.



If 140 students use bicycles, what is the total number of students in the class?

A. 2000

B. 1600

C. 1750



D. 1890



Q51 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the assumptions is/are implicit in the statement.

Statement:

Driving on the wrong side of the road will lead to accidents.

Assumptions:

- I. Driving slow will avoid accidents.
- II. Following traffic rules will keep roads accident free.

- A. Only assumption I is implicit
- B. Only assumption II is implicit ✓
- C. Neither assumption I nor II is implicit
- D. Both assumptions I and II are implicit

Q52 General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$Y \geq R = S \leq T = N > A$$

Conclusions:

- 1. $Y > T$
- 2. $N \geq R$
- 3. $Y < S$
- 4. $T = A$

- A. 1
- B. 2 ✓
- C. 3
- D. 4



Q53 General Intelligence and Reasoning

Six persons O, P, Q, R, S, and T are sitting in a circular arrangement facing the centre of the circle. O is the immediate neighbour of both S and Q. T is sitting second to the right of O and is to the immediate right of Q. P is sitting third to the right of Q. Who among the following is sitting second to the right of Q?

A. O

B. P

C. T

D. R

**Q54** General Intelligence and Reasoning

If 13 October 1995 is a Friday, then what will be the day of the week on 17 November 2000?

A. Friday

B. Saturday

C. Monday

D. Wednesday

**Q55** General Intelligence and Reasoning

In a certain code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	*	1	&	2	&	3	^	4	%	5	\$	5	#	6	@	7	!	8
Code	L	P	O	I	K	M	N	J	U	Y	H	B	G	T	F	V	C	D

Conditions:

- 1.If the first element is an even number and the last an odd number, the codes for these two (the first and the last elements) are to be interchanged.
- 2.If both the second and third elements are odd numbers, the third element is to be coded as the code for the second element.
- 3.If the first element is a number and the last a symbol, the first and last elements are to be coded as A.

What will be the code for 64%37* ?

A. AJUMVA

B. TJUMVL

C. LJUMVT

D. AJUMVL



Q56 General Science

Which of the following is an agricultural waste?

- A. Husk
- B. Plastic
- C. Glass
- D. Vegetable peel

Q57 General Science

Which of the following is NOT a use of sodium hydroxide?

- A. De-greasing metals
- B. Paper making
- C. Detergent making
- D. Sweets making

Q58 General Science

An object is placed at a distance of 30 cm in front of a convex mirror of focal length 10 cm, on its principal axis. Its image is formed at:

- A. a point between 0 cm and 10 cm
- B. a point between 10 cm and 20 cm
- C. 20 cm
- D. a point between 20 cm and infinity (∞)

Q59 General Science

Which of the following is an essential element used by the plants to synthesise proteins?

- A. Nitrogen
- B. Iron
- C. Magnesium
- D. Boron



Q60 General Science

Select the correct option for precipitation reaction.

- A. It always occurs at 80°C.
- B. One reactant should be a carbon compound.
- C. All products are water soluble.
- D. Solid mass separates out on mixing two clear solutions. ✓

Q61 General Science

In Mendeleev's Periodic Table, at which position are the formulae of hydrides and oxides of elements written?

- A. Bottom
- B. Left
- C. Right
- D. Top ✓

Q62 General Science

Cartilage tissue is absent in which of the following organs of the body?

- A. Nose
- B. Ear
- C. Larynx
- D. Kidney ✓

Q63 General Science

The process by which an organism begins life as a female and then transforms into a male is known as:

- A. protandry
- B. protogyny ✓
- C. homozygous
- D. heterozygous



Q64 General Science

The Outer space looks black because of:

- A. scattering of light by large particles
- B. scattering of light by smaller particle
- C. no refraction of light takes place
- D. no scattering of light takes place



Q65 General Science

In group 2 of the Modern Periodic Table, the valency of elements is:

- A. 1
- B. 2
- C. 3
- D. 4



Q66 General Science

Watershed management emphasizes on:

- a. Conservation of water and soil
- b. Improve primary sources of land and soil
- c. Increase production and income of the watershed community
- d. Increasing income only by increasing agriculture and crop yield

Which among the above statements are correct with respect to Watershed management?

- A. a and b
- B. b and c
- C. a, c and d
- D. a, b and c



Q67 General Science

The reaction between lead nitrate and potassium iodide is an example of:

- A. combination reaction
- B. decomposition reaction
- C. displacement reaction
- D. double displacement reaction



Q68 General Science

Select the product when zinc granules react with dilute sulphuric acid:

- A. ZnSO_4
- B. ZnCl_2
- C. O_2 gas
- D. N_2 gas



Q69 General Science

The atomic masses of carbon and hydrogen, respectively, are:

- A. 6 u and 1u
- B. 6 u and 2u
- C. 12 u and 1u
- D. 12 u and 2u



Q70 General Science

A $10\ \Omega$ resistor, A, is connected in series to a $20\ \Omega$ resistor, B, and a 6 V battery. The potential drops across A and B are respectively _____.

- A. 2 V and 4 V
- B. 4 V and 2 V
- C. 3 V and 3 V
- D. 1 V and 5 V



Q71 General Science

Which of the following metals is less reactive than Al?

- A. Mg
- B. Ca
- C. Na
- D. Zn



Q72 General Science

When a ray of light is incident obliquely at the pole, of a concave mirror then the reflected ray will:

- A. pass straight
- B. return without deviation
- C. return with Angle $i = \text{Angle } r$
- D. become perpendicular to incident ray



Q73 General Science

Which of the following sites are used for storage of waste products in plants?

- A. Phloem fibres
- B. Old xylem
- C. Guard cells
- D. Root hairs



Q74 General Science

A rectangular coil is moving in a uniform magnetic field. The direction of the magnetic field is perpendicular to the plane of the coil. If the speed of the moving coil in the magnetic field decreases, then:

- A. it will destroy the magnetic field
- B. induced potential difference increases
- C. induced potential difference decreases
- D. it will strengthen the magnetic field



Q75 General Science

For series combination the correct relation between R , R_1 , R_2 is:

A. $R = R_1 \times R_2$

B. $\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2}$

C. $R = R_1 + R_2$ ✓

D. $R = \frac{1}{R_1} + \frac{1}{R_2}$

Q76 General Science

When light travels from one medium to another medium then:

A. incident ray, normal at the point of incidence and reflected ray are in two planes

B. incident ray, normal at the point of incidence and reflected ray are in the same plane

C. incident ray, normal at the point of incidence and refracted ray all are in the same plane ✓

D. incident ray, normal at the point of incidence and emerged ray, all are in the separate plane

Q77 General Science

Magnetic field lines inside a solenoid are in the form of:

A. spiral

B. curved lines

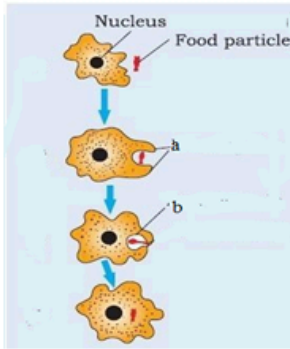
C. parallel lines ✓

D. intersecting lines



Q78 General Science

The following diagram shows nutrition in amoeba. Which option correctly identifies the labelling 'a' and 'b' along with their functions?



- A. a - Pseudopodia (take in food)
b - Food vacuole (digestion of food)



- B. a - Food vacuole (take in food)
b - Pseudopodia (absorption of food)

- C. a - Pseudopodia (take in food)
b - Food vacuole (egestion of food)

- D. a - Food vacuole (absorption of food)
b - Food vacuole (digestion of food)

Q79 General Science

Which plant was used by Mendel for his experiments?

- A. Rose plant
B. Garden peas
C. Lily
D. Chilli



Q80 General Science

The resistance of a conductor remains almost unaffected by change in temperature. This conductor is made of:

- A. silver
B. manganin
C. nickel
D. aluminium



Q81 General Awareness and Current Affairs

Which of the following is a spring festival celebrated in Goa?

A. Shigmotsav



B. Sarok

C. Pongtu

D. Chindang

Q82 General Awareness and Current Affairs

Which of the following is constant along an indifference curve?

A. Output

B. Price

C. Technology

D. Utility



Q83 General Awareness and Current Affairs

Fundamental Duties in the Constitution of India are said to be “borrowed” from the citizen's duties enumerated in the constitution of _____.

A. USSR



B. Canada

C. USA

D. UK

Q84 General Awareness and Current Affairs

On 12 January 2022, the Indian Space Research Organisation (ISRO) successfully conducted the qualification test of the Cryogenic Engine for the Gaganyaan programme for a duration of 720 seconds at the ISRO Propulsion Complex (IPRC) in _____.

A. Mahendragiri, Tamil Nadu



B. Thiruvananthapuram, Kerala

C. Bengaluru, Karnataka

D. Ahmedabad, Gujarat



Q85 General Awareness and Current Affairs

What is the annual dropout rate of secondary school students in India as per the 2020-21 report by Unified District Information System for Education Plus (UDISE+) ?

A. 12.3%

B. 14.6%



C. 15.1%

D. 16.8%

Q86 General Awareness and Current Affairs

A party that secures at least _____ percent of the total votes in Lok Sabha elections or Assembly Elections in four states and wins at least four seats in the Lok Sabha is recognized as a National Party.

A. 6



B. 3

C. 4

D. 2

Q87 General Awareness and Current Affairs

The Pope declared Mother Teresa 'Saint' in the year _____.

A. 2016



B. 2015

C. 2017

D. 2014

Q88 General Awareness and Current Affairs

_____ was the difficulty faced during the barter exchange in large economies.

A. Lack of a common measure of value



B. Maximum satisfaction to the consumers

C. Liquidity

D. Maximum profit to the producers



Q89 General Awareness and Current Affairs

The decision to shift the capital of India from Calcutta to Delhi was announced at a Durbar held in _____ in 1911 to celebrate the coronation of King George V.

- A. Calcutta (Kolkata)
- B. Delhi
- C. Kanpur
- D. Mysore (Mysuru)

Q90 General Awareness and Current Affairs

Which of the following performs the function of Credit Control in India?

- A. Reserve Bank of India
- B. NITI Aayog of India
- C. Ministry of Finance
- D. Ministry of Education

Q91 General Awareness and Current Affairs

On 27 April 2021, Union Finance Minister Nirmala Sitharaman inaugurated the country's first 3D printed house at IIT Madras, which was built in _____.

- A. 5 days
- B. 10 days
- C. 12 days
- D. 15 days

Q92 General Awareness and Current Affairs

What is the term of Panchayat Body in India?

- A. 2 years
- B. 3 years
- C. 4 years
- D. 5 years



Q93 General Awareness and Current Affairs

The 'Malanjkhand' is a famous mines of mineral in India.

- A. Zinc
- B. Manganese
- C. Iron-ore
- D. Copper



Q94 General Awareness and Current Affairs

Who among the following winners of Major Dhyan Chand Khel Ratna Award-2021 is a Hockey goalkeeper?

- A. Ravi Kumar Dahiya
- B. PR Sreejesh
- C. Pramod Bhagat
- D. Manpreet Singh



Q95 General Awareness and Current Affairs

What was the implementation period of the 12th Five-Year Plan in India?

- A. 2012 – 2017
- B. 2007 – 2012
- C. 2002 – 2007
- D. 1997 – 2002



Q96 General Awareness and Current Affairs

In which year was the 'Kanya Shiksha Pravesh Utsav' launched by the Ministry of Women and Child Development, Government of India?

- A. 2022
- B. 2021
- C. 2020
- D. 2019



Q97 General Awareness and Current Affairs

According to the 2011 language census, what is the rank of Telugu in terms of speakers' total number in India?

- A. 6th
- B. 5th
- C. 3rd
- D. 4th



Q98 General Awareness and Current Affairs

Known as the 'sorrow of Bihar', the river _____ causes great destruction due to its frequently changing course.

- A. Subarnarekha
- B. Kosi
- C. Brahmani
- D. Indravati



Q99 General Awareness and Current Affairs

The FIDE World Chess Olympiad 2022 is set to be organised in which country?

- A. India
- B. China
- C. Australia
- D. Canada



Q100 General Awareness and Current Affairs

Which of the following factors does NOT directly affect the climate of India?

- A. Altitude
- B. Latitude
- C. Pressure and winds
- D. Snowfall in European countries



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The LCM and the HCF of two numbers are given as 459 and 3, respectively. If one number is 51, then find the other number.

- A. 33
- B. 21
- C. 37
- D. 27



Q2 Mathematics

A man covers equal distances at the speeds of 5 km/h, 8 km/h and 6 km/h. His average speed for the entire journey is:

- A. $5\frac{6}{59}$ km/h
- B. $6\frac{6}{59}$ km/h
- C. $7\frac{6}{59}$ km/h
- D. $8\frac{6}{59}$ km/h



Q3 Mathematics

Which of the following represents the equation $(x + 2)^3 = x(x^2 - 1)$ in standard form?

- A. $4x^2 + 10x + 7 = 0$
- B. $6x^2 + 13x + 8 = 0$
- C. $6x^2 + 11x + 6 = 0$
- D. $x^2 + 12x + 8 = 0$



Q4 Mathematics

If each interior angle of a regular polygon is 144° , then the number of its sides is:

- A. 12
- B. 10
- C. 8
- D. 14



Q5 Mathematics

One-third of a certain journey is covered at the speed of 25 km/h, one-fourth at 30 km/h and the rest at 50 km/h. The average speed for the whole journey is:

A. 35 km/h

B. $33\frac{1}{6}$ km/h

C. $33\frac{1}{3}$ km/h ✓

D. $30\frac{1}{2}$ km/h

Q6 Mathematics

The surface area of a sphere is $196\pi\text{ cm}^2$. The volume of the sphere is:

A. $\frac{1572\pi}{3}\text{ cm}^3$

B. $\frac{1472\pi}{3}\text{ cm}^3$

C. $\frac{1372\pi}{3}\text{ cm}^3$ ✓

D. $\frac{1272\pi}{3}\text{ cm}^3$

Q7 Mathematics

If the speed of a vehicle decreases by 10 km/h, it takes 2 hours more than what it usually takes to cover a distance of 1800 km. The time it usually takes is:

A. 18 hours ✓

B. 17 hours

C. 19 hours

D. 10 hours

Q8 Mathematics

What is the value of $222.22 + 22.22 + 12 + 0.22 + 0.02$?

A. 256.08

B. 256.68 ✓

C. 255.68

D. 256.86



Q9 Mathematics

If the volume of a cube is 512 cm^3 , then the measure of the main diagonal of the cube will be:

A. $8\sqrt{3} \text{ cm}$



B. $14\sqrt{3} \text{ cm}$

C. $7\sqrt{3} \text{ cm}$

D. $17\sqrt{3} \text{ cm}$

Q10 Mathematics

How much annual instalment will discharge a debt of ₹9,600 in 5 years at 10% simple interest per annum?

A. ₹ 1,450

B. ₹ 1,500

C. ₹ 1,550

D. ₹ 1,600



Q11 Mathematics

The value of 597×603 is:

A. 659991

B. 559991

C. 459991

D. 359991



Q12 Mathematics

Find the value of $\frac{\tan^2 60^\circ + \cot^2 30^\circ}{\tan^2 20^\circ - \sec^2 20^\circ} - \frac{\sin 90^\circ + \cos 0^\circ}{\operatorname{cosec}^2 20^\circ - \cot^2 20^\circ}$.

A. -8



B. -2

C. 4

D. -4



Q13 Mathematics

Which of the following is divisible by 2, 3, and 5?

A. 2240

B. 14175

C. 54332

D. 3150



Q14 Mathematics

The sum of twice a number and three times of 52 is 342. What is the sum of four times the number and two times 52?

A. 776

B. 676

C. 576

D. 476



Q15 Mathematics

The value of $6 \times 7 - \{9 \div 3 + [3 \times (5 - 2)]\}$ is:

A. 11

B. 24

C. 45

D. 30



Q16 Mathematics

The sum of the present ages of A and B is 80 years. If the ratio of their ages after 8 years will be 17: 15, then the present age of B is:

A. 55 years

B. 45 years

C. 35 years

D. 37 years



Q17 Mathematics

The mode of the observations 2, 6, 3, 9, 5, 6, 7, 8, 4, 6, 10, 6 and 11 is:

A. 11

B. 10

C. 7

D. 6



Q18 Mathematics

A shopkeeper has the following 2 schemes.

(I) Two successive discounts of 15% and 20%

(II) Buy 5, get 4 free

The single discount from each scheme, respectively, is:

A. 35%, 40%

B. 30%, 45%

C. 32%, 44.44%



D. 33.33%, 45%

Q19 Mathematics

A boy can complete a piece of work alone in 10 days, but with the help of his friend he can complete it in 6 days. In how much time will his friend be able to complete the same piece of work alone?

A. 4 days

B. 8 days

C. 15 days



D. $4\frac{1}{2}$ days

Q20 Mathematics

If $x - \frac{1}{x} = 6$, then the value of $x^3 - \frac{1}{x^3}$ is:

A. 534

B. 434

C. 334

D. 234



Q21 Mathematics

The mean proportional between $8+4\sqrt{2}$ and $6-3\sqrt{2}$ is:

A. $4\sqrt{6}$

B. $3\sqrt{6}$

C. $2\sqrt{6}$ ✓

D. $\sqrt{6}$

Q22 Mathematics

If the ratio of two numbers is 5: 7, and their HCF is 8, then their LCM is:

A. 480

B. 380

C. 280 ✓

D. 580

Q23 Mathematics

The mean proportional of 25 and 36 is:

A. 36

B. 30 ✓

C. 25

D. 60

Q24 Mathematics

If the cost price of an article is ₹3,200 and its selling price is ₹4,700, then the profit percentage is:

A. $56\frac{7}{8}\%$

B. $56\frac{8}{9}\%$

C. $46\frac{7}{8}\%$ ✓

D. $46\frac{8}{9}\%$



Q25 Mathematics

In which of the following quadrilaterals do diagonals NOT intersect at 90° ?

- A. Rhombus
- B. Square
- C. Parallelogram
- D. Kite

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

3, 16, 5, 13, 9, 8, ?, ?, 23, -8

- A. 13, 2
- B. 15, 1
- C. 11, 3
- D. 12, 3

**Q27** General Intelligence and Reasoning

One morning Yogesh started from his home to visit his sister in another city. He first drove for 20 km towards the north and then turned towards the east and further drove for 10 km. After this he turned towards the north and drove for 30 km. Finally he turned towards the east and drove for 20 km to reach his sister's home. In which direction is his home from his sister's home?

- A. North
- B. South
- C. South-west
- D. North-east



Q28 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the assumptions is/are implicit in the statement.

Statement:

“In order to retain employees, we must reward them with monthly benefits”, company chairman tells the manager.

Assumptions:

- I. Monthly benefits will keep the employees happy.
- II. The employees will be punctual.

- A. Only assumption I is implicit ✓
- B. Only assumption II is implicit
- C. Neither assumption I nor II is implicit
- D. Both assumptions I and II are implicit

Q29 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if ‘+’ and ‘-’ are interchanged and also ‘×’ and ‘÷’ are interchanged?

$$20 \times 5 \div 5 - 5 + 3 = ?$$

- A. 22 ✓
- B. 32
- C. 12
- D. 2

Q30 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

PQ_RRR_SSSTU_VVVW_WW

- A. QRUW
- B. PRVW
- C. QSUW ✓
- D. QSVW



Q31 General Intelligence and Reasoning

Parul started walking towards the north. After walking for 300 metres she turned right and walked for 400 metres. Then she turned right and walked for 500 metres. She then turned left and walked for 200 metres. Again, she turned left and walked for 200 metres. Finally she turned left and walked for 200 metres. In which direction and how far is Parul from her starting position? (All turns are 90 degree turns only)

- A. 400 metres west
- B. 400 metres east
- C. 200 metres west
- D. 200 metres east

**Q32** General Intelligence and Reasoning

Each of Prem, Amit, Ram, Sudheer, Tejas, Uma and Vivek has an exam on a different day of a week, starting from Monday and ending on Sunday of the same week. Prem has the exam on Thursday. Only one person has the exam between Prem and Uma. Ram has the exam on the day immediately before Uma but not on a Monday. Only two people have exams between Ram and Tejas. Vivek's exam is on one of the days before Sudheer and on one of the days after Amit. Who among the following has the exam on Monday?

- A. Amit
- B. Sudheer
- C. Tejas
- D. Prem

**Q33** General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$12 \times 3 - 25 \div 25 + 25 = ?$$

- A. 100
- B. 200
- C. 300
- D. 80



Q34 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

23, 27, 35, 47, 63, ?

A. 80

B. 82

C. 81

D. 83



Q35 General Intelligence and Reasoning

Each of A, B, C, D and E has an exam on a different day of a week, starting from Monday and ending on Friday of the same week.

C has the exam on Thursday. Only one person has the exam between B and A. B has the exam on the day immediately before D. Who has the exam on Wednesday?

A. A



B. B

C. D

D. E

Q36 General Intelligence and Reasoning

Given below are two letter-cluster pairs in which the second letter-cluster is related to the first letter-cluster following a certain logic. Select the letter-cluster pair from among the options that follows the same logic.

QTS : WZY

MPG : SVM

A. HKW : NQC



B. HKW : BEQ

C. HKW : NEC

D. HKW : BQQ



Q37 General Intelligence and Reasoning

Refer to the following letter and number series and answer the question.

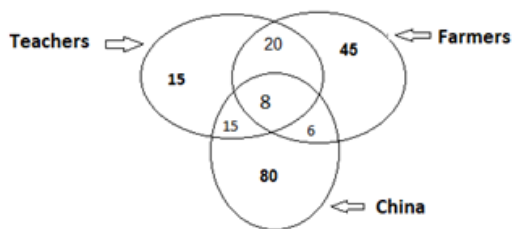
(Left) G C T 7 D 4 6 K 2 R Y 3 5 E S A 4 T Y 7 8 G T (Right)

How many such letters are there in the series which are immediately preceded by a letter and also immediately followed by a number?

- A. None
- B. Four
- C. Two
- D. Three

Q38 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such teachers are there who are also farmers but NOT from China?

- A. 20
- B. 25
- C. 45
- D. 15

Q39 General Intelligence and Reasoning

Study the following number arrangement and answer the question given below. All numbers given below are 2 digit numbers.

78 25 96 36 14 45 76 79 39 34 31 38 29 24 26 16 37 43

What will be the sum of all prime numbers present in the above series?

- A. 190
- B. 219
- C. 248
- D. 261



Q40 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$24 \times 6 \div 5 - 3 + 2 = ?$$

A. 21



B. 11

C. 10

D. 1

Q41 General Intelligence and Reasoning

The given table provides details of the marks obtained by a student in different subjects in two term exams. Study the table and answer the question.

	Term Exam 1	Term Exam 2
Mathematics	80	85
Science	84	89
Social Science	78	82
Hindi	85	88
English	92	91

What is the average of the maximum marks obtained in Mathematics and the minimum marks obtained in Hindi?

A. 80

B. 76

C. 85



D. 88



Q42 General Intelligence and Reasoning

Select the option in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE: Operations should be performed on the whole numbers without breaking down the numbers into its constituent digits.

E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(2, 42, 4)

(7, 57, 5)

A. (3, 83, 8)



B. (5, 57, 7)

C. (1, 19, 9)

D. (8, 46, 4)

Q43 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) B F % 6 J Q 6 H & K M 8 1 5 T Z # @ K L 9(Right)

How many such letters are there which are immediately preceded by a letter and also immediately followed by a number?

A. 1

B. 2

C. 3



D. 4

Q44 General Intelligence and Reasoning

In a certain code language, 'MERGE' is written as 'NHWNN' and 'HEAVY' is written as 'IHFCH'. How will 'MORSE' be written in that language?

A. NLDIE

B. LPRCH

C. LDYTB

D. NRWZN



Q45 General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

L J + K - Y % T # U P

If all symbols are dropped from the series, which letter will be at the middle most position in the newly formed series?

A. K

B. Y



C. T

D. J

Q46 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $T \geq Y > U < I \leq O = P$

A. $U > P$

B. $P = T$

C. $T > U$



D. $Y > I$

Q47 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. F is taller than only two other friends. A is shorter than only one friend. D is shorter than F but taller than C. E is shorter than B. Who is the third tallest among all the friends?

A. F

B. E



C. D

D. A

Q48 General Intelligence and Reasoning

In a certain code language, 'AVOID' is written as '85395' and 'MULTI' is written as '56679'. How will 'EVENT' be written in that language?

A. 45447



B. 45744

C. 45747

D. 47544



Q49 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. All beds are cots.
2. All sofas are beds.

Conclusions:

- I. All sofas are cots.
- II. Some beds are sofas.

- A. Only conclusion I follows.
- B. Only conclusion II follows.
- C. Both conclusions I and II follow. ✓
- D. Neither conclusion I nor II follows.

Q50 General Intelligence and Reasoning

10 friends of a class appeared for a class test. Each friend got different marks in test. Rama scored more than 4 friends only. Usha scored less than 3 friends only. How many friends scored more than Rama but less than Usha?

- A. 1 ✓
- B. 3
- C. 4
- D. 2

Q51 General Intelligence and Reasoning

Six persons are sitting around a circular table facing the centre. Madhura is an immediate neighbour of both Rahim and Amit. Sumit is sitting second to the right of Rahim. David is sitting third to the left of Amit. Prem is an immediate neighbour of both Sumit and Amit. Who is an immediate neighbour of both Madhura and Prem?

- A. Amit ✓
- B. Sumit
- C. David
- D. Rahim



Q52 General Intelligence and Reasoning

P, Q, R, S, T, U and V are sitting on a wall in a straight row, and all of them are facing north. R is on the immediate right of S. Q is at one of the extreme end and has T as his immediate neighbour. V is the immediate neighbour of T and U. S is sitting third from the extreme right end. Which of the following pairs is sitting at each of the extreme end?

A. PQ



B. QR

C. QS

D. QU

Q53 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

12 : 18 :: 28 : 42 :: 10 : ?

A. 16

B. 15

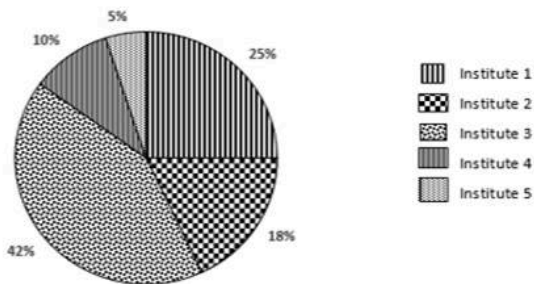


C. 24

D. 18

Q54 General Intelligence and Reasoning

The given pie chart provides details of qualified students for an entrance examination from different institutes. Study the pie chart and answer the question.



If 45 students qualified from Institute 1, how many students qualified from Institute 4?

A. 27

B. 36

C. 29

D. 18



Q55 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. All cups are bottles.
2. All bottles are pans.

Conclusions:

- I. All cups are pans.
- II. All bottles are cups.
- III. All pans are cups.
- IV. Some pans are bottles.

A. Only conclusions I and IV follow.



B. Only conclusions II and III follow.

C. Only conclusion II follows.

D. Only conclusion III follows.

General Science

25 Questions • Answer Key

Q56 General Science

A substance gains hydrogen during a chemical process called:

A. Oxidation

B. Rusting

C. reduction



D. decomposition

Q57 General Science

Why do organic carbon compounds have lower melting points than ionic compounds?

A. Strong force of attraction between molecules

B. Weak force of attraction between molecules

C. Presence of covalent bonds

D. Presence of ionic bonds

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



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Q58 General Science

Which of the following transports food, carbon dioxide and nitrogenous wastes in dissolved form?

- A. Plasma
- B. WBC
- C. RBC
- D. Platelets



Q59 General Science

Which of the following should be managed to ensure sustainability?

- A. By products of Mining
- B. Crop varieties
- C. Natural resources
- D. Industries

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q60 General Science

Consider the magnitudes and directions of the induced potential difference in the following situations:

- (a) A magnet moving with a speed of 1 m/s with its north pole towards a stationary coil.
- (b) The same magnet moving with a speed of 1 m/s with its south pole towards the same stationary coil.

The induced potential differences are of _____ magnitude(s) and have _____ sign(s) in the above two cases

- A. the same, the same
- B. the same, opposite
- C. different, the same
- D. different, opposite



Q61 General Science

You are shocked to see how waste is littered in your society and no one is bothered. As a result, kids of the society fall sick very often. As a science student, how would you react to the situation?

- A. Explain the importance of waste management to all residents, start segregation of waste and start composting
- B. Shout at the staff for not taking care
- C. Turn a blind eye to the situation
- D. Follow their footsteps



Q62 General Science

The reddish appearance of the sun at the time of sunrise is due to:

- A. reflection of light
- B. refraction of light
- C. scattering of light
- D. dispersion of light



Q63 General Science

Energy conversion in water pump is from _____ to _____.

- A. mechanical, electrical
- B. electrical, mechanical
- C. light, electrical
- D. electrical, heat



Q64 General Science

Energy conversion in electromagnet is from _____ to _____.

- A. Electric, heat energy
- B. Electric energy, magnetic energy
- C. Electrical energy, light
- D. Magnetic energy, heat energy



Q65 General Science

If current is doubled and potential difference is reduced to half, then _____.

- A. resistance will be doubled
- B. resistance will be halved
- C. resistance will become four times
- D. resistance will become one-fourth



Q66 General Science

The light from a point source is rendered parallel by a concave mirror. What is the position of the light source?

- A. At Focus
- B. Between focus and centre of curvature
- C. At centre of curvature
- D. At infinity

Q67 General Science

Which of the following is the best definition of 'biodegradable'?

- A. Capable of depolymerization into carbon dioxide and water by the action of enzymes
- B. Capable of being broken down into harmless products by the action of microbes
- C. A suitable and sufficient nutrient source for growth to saprophytic organisms
- D. Easily digested into smaller molecules by action of bacteria or bacterial enzymes

Q68 General Science

Which organic compound does NOT belong to the same homologous series as the other three?

- A. CH_4
- B. C_2H_6
- C. C_3H_8
- D. C_4H_8

Q69 General Science

The refractive indices of two transparent media A and B are $\frac{3}{2}$ and $\frac{4}{3}$, respectively. The refractive index of medium A with respect to medium B is equal to:

- A. $\frac{9}{8}$
- B. $\frac{3}{4}$
- C. $\frac{8}{9}$
- D. $\frac{1}{2}$

Q70 General Science

During the preparation of NaOH by chlor-alkali process, which of the following ions migrates toward the cathode?

A. CO_3^{2-}

B. OH^-

C. Na^+



D. Cl^-

Q71 General Science

At what temperature does gypsum get converted into Plaster of Paris?

A. 473 K

B. 273 K

C. 373 K



D. 573 K

Q72 General Science

Which of the following elements of group 14 is a metalloid?

A. Pb

B. Sn

C. Ge



D. C

Q73 General Science

Identify the FALSE statement regarding circulation of blood in fishes.

A. The two chambered heart provides double circulation.



B. Blood from the ventricle goes only to the gills.

C. Blood is sent from the gills to the rest of the body.

D. Blood from the body enters the auricle.



Q74 General Science

An electrical device that works on the principle of Joule's Law of Heating is:

- A. Speaker
- B. Electromagnet
- C. Immersion rod
- D. Electrical bell

Q75 General Science

Which of the following organelles is/are known as the 'suicide bags' of a cell?

- A. Lysosomes
- B. Endoplasmic reticulum
- C. Golgi apparatus
- D. Ribosomes

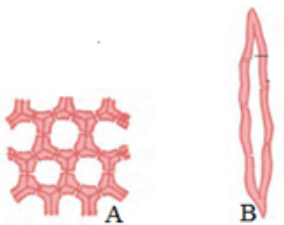
Q76 General Science

Which of the following displacement reactions is NOT possible?

- A. $\text{Fe(s)} + \text{CuSO}_4(\text{aq}) \rightarrow \text{FeSO}_4(\text{aq}) + \text{Cu(s)}$
- B. $\text{Cu(s)} + \text{PbCl}_2(\text{aq}) \rightarrow \text{CuCl}_2(\text{aq}) + \text{Pb(s)}$
- C. $\text{Pb(s)} + \text{CuCl}_2(\text{aq}) \rightarrow \text{PbCl}_2(\text{aq}) + \text{Cu(s)}$
- D. $\text{Zn(s)} + \text{CuSO}_4(\text{aq}) \rightarrow \text{ZnSO}_4(\text{aq}) + \text{Cu(s)}$

Q77 General Science

Both the diagrams A and B given below are of Sclerenchyma tissue in plants, yet they look different. Why?



- A. A – Radial section; B – Transverse section
- B. A – Longitudinal section; B – Transverse section
- C. A – Transverse section; B – Longitudinal section
- D. A – Longitudinal section; B – Oblique section

Q78 General Science

Which statement about effective nuclear charge is NOT correct?

- A. It acts on the valence shell electrons.
- B. It increases across a period from left to right.
- C. It decreases down a group.
- D. It depends only upon the nuclear charge. ✓

Q79 General Science

What is the purpose of establishing 'protected areas'?

- A. To protect endangered animals
- B. To prevent human settlements
- C. To preserve natural ecosystems
- D. To develop tourism spots

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q80 General Science

A concave mirror has a _____ towards the centre of sphere with polish _____ the centre of curvature.

- A. bulge, towards
- B. depression, opposite to ✓
- C. bulge, opposite
- D. depression, towards

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Ramadan or Ramazan is the _____ month of Islamic calendar and is observed by Muslims worldwide as a month of fasting.

- A. 6th
- B. 7th
- C. 8th
- D. 9th ✓



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Q82 General Awareness and Current Affairs

Under which of the following Funds has the scheme 'One Stop Centre (OSC) scheme' been implemented across the country since 1 April 2015?

- A. PM National Relief Fund
- B. Nirbhaya Fund
- C. Durga Vahini Fund
- D. Women Empowerment Fund

Q83 General Awareness and Current Affairs

Javelin thrower Neeraj Chopra became the _____ Indian to win a medal at World Athletics Championships in July 2022.

- A. first
- B. second
- C. third
- D. fourth

Q84 General Awareness and Current Affairs

What does the Right to Constitutional Remedies mean?

- A. Any person has the right to move freely and live anywhere in India.
- B. Each and every person is equal before the law, which means everyone will receive the same protection as per the laws of the country.
- C. If any citizen feels the fundamental rights have been violated by the State, then they can move the court.
- D. All linguistic and religious minorities can set up their own education institutions.

Q85 General Awareness and Current Affairs

Which of the following statements is correct about Petrology?

- A. It has been derived from a Latin word which means brick.
- B. It is the sedimentary rock formed out of deposits of glaciers.
- C. It is the branch of science concerned with the origin, structure and composition of rocks.
- D. It is the branch of science concerned with the origin, structure and composition of petroleum



Q86 General Awareness and Current Affairs

Shevroy Hills are a part of the _____.

- A. Eastern Ghats
- B. Western Ghats
- C. Chotanagpur Plateau
- D. Deccan Plateau

Q87 General Awareness and Current Affairs

Vishu is one of the very famous festivals of which of the following states of India?

- A. Kerala
- B. West Bengal
- C. Odisha
- D. Gujarat

Q88 General Awareness and Current Affairs

In which year was India's first complete census operation undertaken?

- A. 1881
- B. 1875
- C. 1877
- D. 1879

Q89 General Awareness and Current Affairs

As of July 2022 which of the following organisations runs 'School to School' programme that builds a relationship of empathy and dignity between urban and rural children?

- A. Oxfam India
- B. HelpAge India
- C. CARE
- D. Goonj

Q90 General Awareness and Current Affairs

Which of the following is NOT a variable cost for a firm?

- A. Labour
- B. Commissions
- C. Property taxes
- D. Packing



Q91 General Awareness and Current Affairs

In December 2021, Supreme Court stated that the Law Commission can consider the issue for appointment of Dowry Prohibition Officer, equivalent to Right to Information Officer. Who were the justices to give this order?

- A. Justice L Nageswara Rao and Sanjay Kishan Kaul
- B. Justice Uday Umesh Lali and AM Khanwilkar
- C. Justice DY Chandrachud and AS Bopanna
- D. Justice Indira Banerjee and Hemant Gupta



Q92 General Awareness and Current Affairs

_____ means cases that can be directly considered by the Supreme Court without going to the lower courts before that.

- A. Writ Jurisdiction
- B. Original Jurisdiction
- C. Appellate Jurisdiction
- D. Advisory Jurisdiction



Q93 General Awareness and Current Affairs

Which of the following is NOT an example of variable costs?

- A. Packaging
- B. Raw Material
- C. Distribution
- D. Rent



Q94 General Awareness and Current Affairs

The urban local government which works for the development of any Metropolitan City with a population of more than _____ is known as the Municipal Corporation in India.

- A. 2 lakh
- B. 5 lakh
- C. 10 lakh
- D. 12 lakh



Q95 General Awareness and Current Affairs

How many scientists got the Shanti Swarup Bhatnagar Award 2021 for Science & Technology?

- A. 7
- B. 9
- C. 11
- D. 13



Q96 General Awareness and Current Affairs

What is the full name of ADSL, which is a technology that provides high transmission speeds for video and voice to homes over an ordinary copper telephone wire?

- A. Arithmetic Digital Subscriber Line
- B. Algorithm Digital Subscriber Line
- C. Asynchronized Digital Subscriber Line
- D. Asymmetric Digital Subscriber Line



Q97 General Awareness and Current Affairs

Hollong (*Dipterocarpus macrocarpus*) is the tallest tree in the state of ____ and also its State Tree.

- A. Manipur
- B. Nagaland
- C. Assam
- D. Sikkim



Q98 General Awareness and Current Affairs

Which of the following sportspersons was awarded the Padma Bhushan in January 2022?

A. Neeraj Chopra

B. Devendra Jhajharia



C. Pramod Bhagat

D. Sumit Antil

Q99 General Awareness and Current Affairs

Which of the following is/are a capital receipt for the government?

(A) Loans taken by the government from the public

(B) Borrowings from foreign countries and Institutes

(C) Disinvestment of assets

A. Only A

B. Only A and B

C. Only A and C

D. All – A, B and C



Q100 General Awareness and Current Affairs

_____ is a translation service and information site developed jointly by the Central Institute of Indian Languages, Sahitya Akademi and National Book Trust in 2002.

A. Praroop .net

B. Pratilipi .net

C. Anuvaad .net

D. Anukriti .net

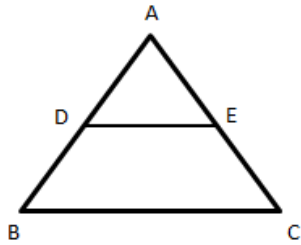


Mathematics

25 Questions • Answer Key

Q1 Mathematics

In the given figure, in $\triangle ABC$, $DE \parallel BC$, $AD = 7$ cm, $AE = 3.5$ cm and $DB = 6$ cm. What is the value of AC ? [Note: Diagram is not drawn to scale or measurements indicated.]



A. 3 cm

B. 4.5 cm

C. 6.5 cm



D. 4 cm

Q2 Mathematics

If the cost price of 24 pencils is equal to the selling price of 16 pencils, then the gain percentage is _____.

A. 25%

B. 50%



C. 42%

D. 38%

Q3 Mathematics

What is the value of $5^5 \times (125)^{-\frac{2}{3}} \times (25)^{-\frac{1}{2}}$?

A. 5

B. $\frac{1}{25}$ C. $\frac{1}{5}$

D. 25



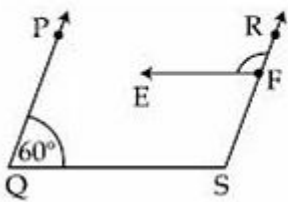
Q4 Mathematics

One-third of a journey is covered at a speed of 25 km/h, the next one-third of the journey is covered at a speed of 40 km/h and the remaining journey is covered at a speed of 50 km/h. The average speed (in km/h, rounded off to 1 decimal place) for the entire journey is:

- A. 25.3
- B. 30.3
- C. 33.3
- D. 35.3

**Q5 Mathematics**

In the given figure, $QS \parallel EF$ and $RS \parallel PQ$. If $m\angle PQS = 60^\circ$, then $m\angle RFE = ?$



- A. 140°
- B. 120°
- C. 110°
- D. 130°

**Q6 Mathematics**

Father's age is three times the sum of ages of his two children. After 6 years, his age will be twice the sum of the ages of both the children. The age of the father is:

- A. 52 years
- B. 54 years
- C. 50 years
- D. 36 years



Q7 Mathematics

The HCF and the LCM of two numbers are 1080 and 30240, respectively. If one of the numbers is 4320, then the other number is _____.

A. 1080

B. 8640

C. 7560



D. 30240

Q8 Mathematics

Which of the following describes the nature of the roots of the quadratic equation $4x^2 - 7\sqrt{3}x + 12 = 0$?

A. No real roots



B. Two equal roots

C. Two distinct real roots

D. One real root and one imaginary root

Q9 Mathematics

A train travels 20 km in 24 minutes. If its speed is increased by 5 km/h, the time taken by it to cover the same distance will be _____ minutes.

A. $27\frac{9}{11}$

B. $21\frac{9}{11}$



C. $26\frac{9}{11}$

D. $29\frac{9}{11}$

Q10 Mathematics

The sum of two numbers is 9 and the sum of their squares are 41. The numbers are:

A. 7, 2

B. 6, 3

C. 5, 4



D. 1, 8



Q11 Mathematics

Find the value of $\sec 33^\circ \operatorname{cosec} 57^\circ - \cot 57^\circ \tan 33^\circ + \cot 47^\circ \cot 43^\circ$.

A. 0

B. 1

C. 2



D. -1

Q12 Mathematics

The sum of five consecutive even numbers is 2720. The sum of the third and fifth numbers is:

A. 1392

B. 1292

C. 1192

D. 1092



Q13 Mathematics

If 63 chocolates are to be divided between A and B in the ratio 4 : 5, then how many chocolates will B get?

A. 28

B. 49

C. 27

D. 35



Q14 Mathematics

The sides of a rectangle are in the ratio 8 : 10 and its perimeter is 90 cm. The area of this rectangle is:

A. 550 cm^2

B. 520 cm^2

C. 450 cm^2

D. 500 cm^2



Q15 Mathematics

Simplify $\frac{12^3 \times 6^2 \times 8}{4^5 \times 3^5}$.

A. 2



B. 4

C. 8

D. 1

Q16 Mathematics

The ratio of the sum of two numbers and their difference is 8: 3. The ratio of the greater number to the smaller number is:

A. 12: 7

B. 7: 12

C. 11: 5



D. 5: 11

Q17 Mathematics

The simple interest on a principal amount is ₹192 for a period of 2 years at the rate of 8% per annum. The principal amount is:

A. ₹1,000

B. ₹1,200



C. ₹1,400

D. ₹1,600

Q18 Mathematics

The length of each of the two equal sides of an isosceles triangle is 5 cm each and the length of its base is 8 cm. The area (in cm^2) of the triangle is:

A. 9

B. 12



C. 15

D. 18



Q19 Mathematics

A man sells a cupboard at a certain price S , 20% of which is his profit. If the price at which he buys the cupboard increases by 10% and he sells it at a 4% higher price than S , then his profit percentage will be:

A. 18.18%



B. 21.8%

C. 22.7%

D. 23.4%

Q20 Mathematics

$(34)^3$ is equal to:

A. 29304

B. 39204

C. 39304



D. 40304

Q21 Mathematics

The sum of the ages of a man and his son is 68 years. After 5 years, the age of man will be five times the age of his son. The present age of the son is:

A. 10 years

B. 9 years

C. 8 years



D. 7 years

Q22 Mathematics

If $1.5x = 0.02y$, then the value of $\frac{1}{\left(\frac{y+x}{y-x}\right)}$ is _____.

A. $\frac{370}{38}$

B. $\frac{37}{380}$

C. $\frac{37}{38}$



D. $\frac{38}{37}$



Q23 Mathematics

If a person covers 10.5 km in 2 hours, then the distance covered by him at the same speed in 5 hours will be:

- A. 25.50 km
- B. 26.25 km
- C. 26.20 km
- D. 25.75 km

**Q24** Mathematics

The arithmetic mean of the observations 3, 6, 8, 10, 12, 14, 18, 24 and 31 is:

- A. 17
- B. 16
- C. 15
- D. 14

**Q25** Mathematics

The sum of the first five prime numbers is:

- A. 28
- B. 29
- C. 27
- D. 26

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $X \leq F \leq U \geq A < Z > J$

- A. $U \geq A \geq F$
- B. $U > Z > J$
- C. $F \leq U \geq A$
- D. $A < Z < X$



Q27 General Intelligence and Reasoning

At 6:00 a.m., a wrist watch's hour hand is showing north-west, which direction will hour hand show at 9:00 p.m.?

- A. North-West
- B. South
- C. South-West
- D. North-East



Q28 General Intelligence and Reasoning

Six boxes, J, K, L, M, N and O, are kept one over the other, but not necessarily in the same order. J is kept immediately above N. Only one box is kept between K and O. O is the bottom-most box, and M is the top-most box. Which box is kept immediately below M?

- A. K
- B. J
- C. L
- D. N



Q29 General Intelligence and Reasoning

P, Q, R, S, T, U and V live on different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 7. U lives on the floor immediately above V. T lives immediately above P and immediately below R. S does not live on any floor immediately above U or above R. P lives on third floor which is immediately above Q. Who lives on the first floor?

- A. T
- B. Q
- C. S
- D. R



Q30 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(6, 30, 54)

(16, 80, 144)

A. (12, 48, 108)

B. (8, 35, 72)

C. (15, 75, 105)

D. (21, 105, 189)



Q31 General Intelligence and Reasoning

If '+' means '×', '×' means '÷', '÷' means '−', and '−' means '+', then what will be the value of the given expression?

$$79 - 87 + 5 \div 48 \times 3$$

A. 512

B. 498

C. 656

D. 452



Q32 General Intelligence and Reasoning

In a certain code language, 'BRICK' is written as 'BCIKR' and 'HOTEL' is written as 'EHLOT'. How will 'SPORT' be written in that language?

A. OPRTS

B. RSTPO

C. OPRST

D. SROTP



Q33 General Intelligence and Reasoning

If 7 September 2012 is a Friday, then what will be the day of the week on 17 December 2014?

- A. Monday
- B. Thursday
- C. Wednesday
- D. Sunday



Q34 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All jugs are cups.
2. All cups are espressos.
3. Some jugs are saucers.

Conclusions:

- I. Some espressos are saucers.
- II. Some cups are jugs.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Either conclusion I or II follow
- D. Both conclusions I and II follow



Q35 General Intelligence and Reasoning

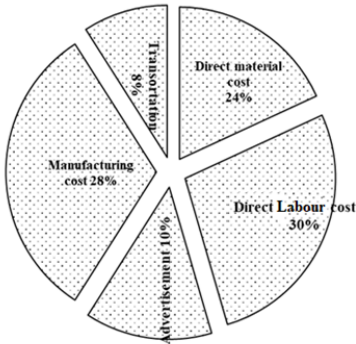
Which of the following numbers will replace the question mark (?) in the given series?
105, 107, 103, ?, 101, 111

- A. 108
- B. 109
- C. 97
- D. 95



Q36 General Intelligence and Reasoning

The following pie chart shows the percentage distribution of the expenditure incurred in manufacturing a certain product. Study the pie chart and answer the question.



If 500 products are manufactured and the direct labour cost on them amounts to ₹ 62,500, then what should be the selling price of the product so that manufacturer can earn a profit of 50%?

- A. ₹550
- B. ₹600
- C. ₹625
- D. ₹700

**Q37 General Intelligence and Reasoning**

Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

NE - MF - LG

LS - KT- JU

- A. ET- FS - GR
- B. AV - ZW - YX
- C. BD - ZE - YF
- D. RG - SH - TI

**Q38 General Intelligence and Reasoning**

In a certain code language, 'POWER' is written as 'RRAJX' and 'HELLO' is written as 'JHPQU'. How will 'NEVER' be written in that language?

- A. PHZXJ
- B. PHZJX
- C. PHZJZ
- D. PHJZX



Q39 General Intelligence and Reasoning

A certain number of people are standing together, each having a different height. A is taller than D, but shorter than F. C is shorter than E and taller than B, who is taller than F. Only one person is taller than E, and only two persons are shorter than D. If no other person is part of the group, what is the total number of people in the group?

- A. Ten
- B. Six
- C. Seven
- D. Nine

**Q40** General Intelligence and Reasoning

Refer to the following letter, number and symbol series and answer the question.

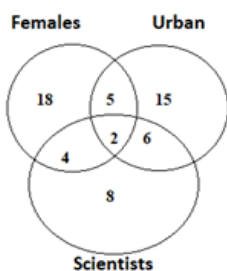
(Left) H T & Q % 9 D 6 @ 6 L & 4 P Z # 5 7 U * Y (Right)

How many such symbols are there in the series which are immediately preceded by a letter and also immediately followed by a number?

- A. One
- B. Two
- C. Three
- D. Four

**Q41** General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



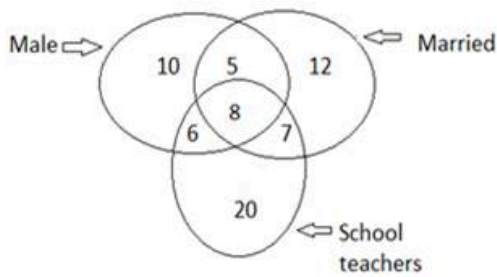
How many such Female Scientists are there who are NOT from an Urban area?

- A. 2
- B. 4
- C. 5
- D. 6



Q42 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



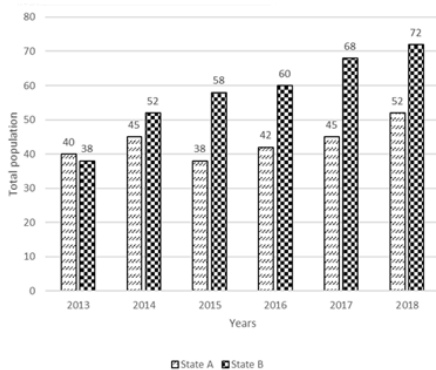
How many married males are school teachers?

- A. 13
- B. 14
- C. 15
- D. 8



Q43 General Intelligence and Reasoning

The column graph given below shows the population of two states (in lakhs) over the years. Study the graph and answer the question.



What is the difference in the population of state A and B together in years 2013 and 2018?

- A. 46 lakhs
- B. 27 lakhs
- C. 28 lakhs
- D. 22.0 lakhs



Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

15, 26, 48, 81, 125, ?

A. 169

B. 180



C. 170

D. 182

Q45 General Intelligence and Reasoning

Select the option in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE: Operations should be performed on the whole numbers without breaking down the numbers into its constituent digits.

E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(6, 7, 8)

(23, 34, 45)

A. (3, 4, 9)

B. (7, 12, 17)



C. (17, 22, 25)

D. (8, 19, 28)

Q46 General Intelligence and Reasoning

Five friends I, J, K, L and M are sitting in a row facing north. Only I is seated between L and M. K is seated 2nd from the left end and is not an immediate neighbour of M. Where is J seated?

A. 3rd from the right end

B. 2nd from the right end

C. At the extreme right end

D. At the extreme left end



Q47 General Intelligence and Reasoning

Select the conclusion that is true based on the given statement.

Statement: $F > N \geq Z \leq S = B < W$

- A. $F > S$
- B. $W > Z$ ✓
- C. $N > B$
- D. $N \geq W$

Q48 General Intelligence and Reasoning

Refer to the following letter arrangement and answer the question that follows.

A W S X Z E C D R V F T B H N M H Y J K I O L

How many letters are there in the given series between the letter that is third from the left end and second vowel from the right end of the given series?

- A. 15
- B. 16
- C. 17 ✓
- D. 19

Q49 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table (but not necessarily in the same order). Four of them are sitting at the corners while four of them are sitting at the exact centre of the sides. A is on the immediate right of H who is sitting at the exact center of one of the sides of the table. D is an immediate neighbour of A. B is sitting on the immediate right of D. F is the immediate neighbor of B and C. E is sitting to the immediate left of G. Who is sitting to the immediate left of H?

- A. F
- B. E
- C. G ✓
- D. D



Q50 General Intelligence and Reasoning

Given below is a statement followed by two possible conclusions I and II. Read the information carefully and select the correct option.

Statement:

In order to minimise the consumption of plastic bags, the supermarkets across a metro city X have announced that all their customers need to bring their own bags or will have to buy jute bags from the supermarket that cost ₹13 per bag. Which of the following can be concluded from the given information?

- I. The revenue of plastic bag manufacturing companies catering to city X may reduce to some extent.
- II. The smaller general stores across city X will not need to ban plastic bags.

- A. Only I can be concluded from the given information. ✓
- B. Only II can be concluded from the given information.
- C. Both I and II can be concluded from the given information.
- D. Neither I nor II can be concluded from the given information.

Q51 General Intelligence and Reasoning

How many such pairs of letters are there in the word MASTER (in the forward direction) which have as many letters between them in the word as there are in the English alphabetical order?

- A. 1
- B. 2 ✓
- C. 3
- D. 4

Q52 General Intelligence and Reasoning

Each of the digits in the number 8759236 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

- A. One ✓
- B. Two
- C. Three
- D. Four



Q53 General Intelligence and Reasoning

Raveena travels 5 km towards South from her house. From there, she goes 7 km towards East, then 4 km towards South, then 7 km towards West and then finally 5 km towards South. How far is Raveena from her house and in which direction?

- A. 14 km, North
- B. 9 km, North
- C. 14 km, South
- D. 5 km, South



Q54 General Intelligence and Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and also 'x' and '÷' are interchanged?

$$17 - 3 \div 2 + 12 \times 4 = ?$$

- A. 20
- B. 21
- C. 22
- D. 24



Q55 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

A _ D F _ A C _ F B _ C D F _ A C D _ D

- A. CADACF
- B. CADFCC
- C. CDFCCA
- D. CDADFA



General Science

25 Questions • Answer Key

Q56 General Science

Which of the following gases is released when zinc oxide reacts with carbon?

- A. Carbon monoxide
- B. Carbon dioxide
- C. Methane
- D. Ozone



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Q57 General Science

Magnetic lines move from west to east direction and the conductor placed horizontally moves towards the upward direction. In such a case, the direction of induced current is towards:

- A. east
- B. west
- C. north
- D. south



Q58 General Science

Which of the following elements have similar properties with Eka-silicon, Eka-boron and Eka-aluminium, respectively?

- A. Germanium, Carbon, and Gallium
- B. Carbon, Scandium, and Indium
- C. Germanium, Scandium, and Gallium
- D. Scandium, Gallium, and Germanium



Q59 General Science

What is the pH of salt containing a mixture of a strong base and a weak acid?

- A. pH less than 7
- B. pH equal to 7
- C. pH more than 7
- D. pH equal to 0



Q60 General Science

Which of the following solid compounds is formed when lead nitrate is heated?

- A. Pb(OH)_2
- B. PbO
- C. $\text{Pb(CO}_3)_2$
- D. Pb



Q61 General Science

Is there any advantage of the structure of the nephron as a long tubular structure?

- A. No, the long tubular structure has no advantage because filtration occurs at the cup-shaped end.
- B. Yes, the long tube gives time and space for re-absorption of excess water from the initial filtrate. ✓
- C. No, all nephrons are not long – some are short and others are long, but all are functional.
- D. Yes, the long tubes can be coiled and packed at high density to give firmness to the kidney.

Q62 General Science

The first Indian Reserve Forest is _____.

- A. Pench National Park
- B. Kaziranga National Park
- C. Jim Corbett National Park
- D. Satpura National Park ✓

Q63 General Science

A ray of light undergoes refraction through a triangular glass prism. The angle between the incident ray and emergent ray is called:

- A. angle of incidence
- B. angle of emergence
- C. angle of deviation ✓
- D. angle of refraction

Q64 General Science

Which of the following balanced equations is correct for the given reaction?

Calcium chloride + Sulphuric acid $\rightarrow$ Calcium sulphate + Hydrogen chloride

- A. $\text{CaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + \text{HCl}$
- B. $\text{CaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + 2\text{HCl}$ ✓
- C. $\text{CaCl}_2 + 2\text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + 2\text{HCl}$
- D. $2\text{CaCl}_2 + \text{H}_2\text{SO}_4 \rightarrow 2\text{CaSO}_4 + 2\text{HCl}$

Q65 General Science

In general, the oxides of non-metals are _____ in nature.

- A. neutral
- B. basic
- C. acidic
- D. amphoteric



Q66 General Science

The first Fullerene to be identified was _____.

- A. C-60
- B. C-160
- C. C-600
- D. C-660



Q67 General Science

What is the effect of bile salts in the digestion of food?

- A. They digest fat globules to release fatty acids.
- B. They break up big fat globules into small globules.
- C. They activate lipases to begin digestion of proteins.
- D. They contains fat-digestive enzymes called lipases.



Q68 General Science

What is an aquifer?

- A. Water stored underground between layers of hard rock
- B. Water that flows through natural channels in an estuary
- C. Pockets of freshwater trapped in sandy beds in a desert
- D. Sheets of frozen water found in rocky caves at high altitudes



Q69 General Science

Which of the following methods is NOT utilised by plants to eliminate waste?

- A. Storage of waste in cell vacuoles
- B. Excretion of waste in the soil
- C. Elimination of waste by sweating
- D. Elimination of waste by falling leaves



Q70 General Science

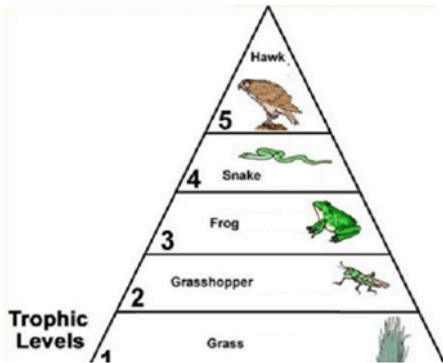
Petroleum is called _____.

- A. a renewable resource since it is derived from dead plants
- B. a non-renewable resource since it cannot be made in a factory
- C. a renewable resource since a single oil well gives oil everyday
- D. a non-renewable resource since conditions that produced it no longer exist



Q71 General Science

A simple food chain of 5 trophic levels is shown below. If the snake which is present in the fourth trophic level gets 10 kJ of energy, then what amount of energy is available at the producers?



- A. 100 kJ
- B. 10,000 kJ
- C. 1,000 kJ
- D. 1,00,00,000 kJ



Q72 General Science

A 5 cm long pin is placed 50 cm far from a concave mirror of focal length 40 cm. Its image will be formed at _____.

- A. 1 m behind the mirror
- B. 2 m in front of the mirror
- C. 1 m in front of the mirror
- D. 2 m behind the mirror

Q73 General Science

When resistors are connected in parallel combination, then resultant resistance will be:

- A. More than largest resistance
- B. Less than least resistance
- C. Equal to highest resistance
- D. Equal to least resistance

Q74 General Science

A point on the principal axis of a concave mirror, from where a ray of light reflects back without any deviation, is:

- A. pole
- B. principal focus
- C. centre of curvature
- D. infinity

Q75 General Science

A real image of equal size is obtained at a distance of 48 cm from the lens. The type of the lens and its focal length is:

- A. concave lens of focal length of 48 cm
- B. convex lens of focal length 24 cm
- C. convex lens of focal length 48 cm
- D. concave lens of focal length 24 cm



Q76 General Science

Which of the following metals is able to liberate hydrogen gas from dilute hydrochloric acid?

A. Cu

B. Pb



C. Hg

D. Ag

Q77 General Science

What are the finger like projections that increase the area of absorption of the small intestine called?

A. Villi



B. Cilia

C. Sphincters

D. Glands

Q78 General Science

Which of the following is an INCORRECT formula for electric power?

A. $P = I^2 R$

B. $P = \frac{V^2}{R}$

C. $P = \frac{V}{I}$



D. $P = IV$

Q79 General Science

The magnitudes of the magnetic field at a point at distance r from a straight conductor carrying current I , $2I$ and $3I$, one by one, are B_1 , B_2 and B_3 , respectively. Which of the following relations is correct?

A. $B_1 > B_2 > B_3$

B. $B_2 > B_3 > B_1$

C. $B_3 > B_2 > B_1$



D. $B_1 = B_2 = B_3$



Q80 General Science

Three resistors of $4\ \Omega$, $8\ \Omega$ and $6\ \Omega$ are connected in parallel combination with a 9 V battery. The total current drawn from the battery is:

A. 4.2 A

B. 4.8 A

C. 6.4 A

D. 8.4 A



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following festivals is mainly celebrated in Vadakkunnathan temple of Kerala?

A. Bastar Dussehra

B. Thiruvathira

C. Thrissur Pooram

D. Kullu Dussehra



Q82 General Awareness and Current Affairs

How many children received the Pradhan Mantri Rashtriya Bal Puraskar 2022 award from PM Narendra Modi on National girl child day?

A. 9

B. 19

C. 29

D. 39



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Q83 General Awareness and Current Affairs

The budget expenditure of the government is broadly classified into how many categories?

A. 2



B. 3

C. 4

D. 5

Q84 General Awareness and Current Affairs

Rigveda consists of a collection of:

A. 1028 hymns



B. 2028 hymns

C. 3028 hymns

D. 4028 hymns

Q85 General Awareness and Current Affairs

During which of the following years the first Five Year Plan was implemented?

A. 1947-1952

B. 1954-1959

C. 1951-1956



D. 1961-1966

Q86 General Awareness and Current Affairs

Banas is a tributary of which of the following rivers?

A. Gandak

B. Rapti

C. Tunga

D. Chambal



Q87 General Awareness and Current Affairs

Hindi continues to be the most widely spoken language in India at _____ of the population, and continues to grow at a rapid pace, mostly driven by higher population growth in Hindi speaking states as per census 2011.

- A. 44.04%
- B. 43.63%
- C. 41.03%
- D. 42.03%



Q88 General Awareness and Current Affairs

_____ from the Indian Institute of Science, Bengaluru, received the Shanti Swarup Bhatnagar Prize for Biological Sciences for 2021.

- A. Amit Singh
- B. Binoy Kumar Saikia
- C. Arun Kumar Shukla
- D. Anish Ghosh



Q89 General Awareness and Current Affairs

As of March 2022, how many High Courts are there in India?

- A. 22
- B. 23
- C. 24
- D. 25



Q90 General Awareness and Current Affairs

Which of the following schemes is formulated to mitigate gender disparity in science and engineering research funding in various Science & Technology programs in Indian academic institutions and R&D laboratories?

- A. SERB-DRIVE
- B. SERB-CONTROL
- C. SERB-POWER
- D. SERB-ENERGY



Q91 General Awareness and Current Affairs

Marginal cost of production refers to the change in total cost to produce _____ additional unit(s).

A. 1



B. 2

C. 3

D. 4

Q92 General Awareness and Current Affairs

Bhima River, which is a major tributary of the Krishna River, flows through:

A. Maharashtra and Karnataka



B. Rajasthan and Haryana

C. Goa and Karnataka

D. Tamil Nadu and Karnataka

Q93 General Awareness and Current Affairs

Which of the following is/are a function of money?

(A) Used as a store of value.

(B) Used as a measure of value.

A. Only A

B. Only B

C. Both A and B



D. Neither A nor B

Q94 General Awareness and Current Affairs

Which of the following fundamental rights is mentioned in Article 32 of the Indian Constitution?

A. Right to Equality

B. Right to Freedom

C. Right to Property

D. Right to Constitutional Remedies



Q95 General Awareness and Current Affairs

The Young Bengal Movement was started by _____, who had come to Calcutta in 1826 and was appointed in the Hindu College as a teacher of English literature and History.

- A. Henry Lui Vivian Derozio ✓
- B. Keshab Chandra Sen
- C. Pandit Ishwar Chandra Vidyasagar
- D. Swamy Dayanand Saraswati

Q96 General Awareness and Current Affairs

Which country was ranked 101st in the Global Hunger Index 2021?

- A. Sri Lanka
- B. India ✓
- C. Nepal
- D. Bangladesh

Q97 General Awareness and Current Affairs

In which country were the 22nd Commonwealth Games held?

- A. India
- B. England ✓
- C. Australia
- D. Canada

Q98 General Awareness and Current Affairs

In which of the following years, the 73rd and 74th Constitutional Amendment Acts came into force, which gave Constitutional status to Panchayati raj institutions (PRIs) and urban local bodies (ULBs) respectively?

- A. 1991
- B. 1992
- C. 1993 ✓
- D. 1994



Q99 General Awareness and Current Affairs

Which of the following is the highest layer of atmosphere?

A. Mesosphere

B. Thermosphere

C. Stratosphere

D. Exosphere



Q100 General Awareness and Current Affairs

Who is the captain of the Indian women's cricket team for the commonwealth game 2022?

A. Mithali Raj

B. Harmanpreet Kaur



C. Jhula Goswami

D. Shafali Verma



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

A man buys a table for ₹2,800 and sells it at a loss of 30%. The selling price (in ₹) of the table is _____.

A. 1,440

B. 1,960



C. 1,890

D. 1,770

Q2 Mathematics

The value of $\sin^2 \theta + \cos^2 \theta - (\sec^2 \theta - \tan^2 \theta) + \tan \theta \cos \theta - \sin \theta$ is _____.

A. $4\sin\theta\cos\theta$ B. $\sec^2 \theta$ C. -1

D. 0



Q3 Mathematics

The ratio of Kamal's to Kiran's age is 4 : 5. Kamal will be 30 years old after 6 years. What is the present age of Kiran?

A. 30 years



B. 24 years

C. 40 years

D. 28 years

Q4 Mathematics

The number of factors of any prime number is:

A. 4

B. 3

C. 2



D. 1



Q5 Mathematics

The total surface area of a solid hemisphere is 42 cm^2 . Its radius (in cm) is:

Take $\pi = \frac{22}{7}$

A. $\frac{7}{\sqrt{11}}$



B. $\frac{7\sqrt{2}}{\sqrt{11}}$

C. $\frac{7\sqrt{2}}{\sqrt{22}}$

D. $\frac{7\sqrt{3}}{\sqrt{22}}$

Q6 Mathematics

A man walking at a speed of 10 km/h crosses a bridge in $7\frac{1}{2}$ minutes. The length of the bridge is _____ metres.

A. 1500

B. 1250



C. 1480

D. 1560

Q7 Mathematics

The value of $\{1 + (1 - 2)^{-1} + 2 - (1 - 2)^{-2}\}^2$ is:

A. 1



B. 0

C. 8

D. 9



Q8 Mathematics

Three chairs and two tables cost ₹1,850. Five chairs and three tables cost ₹2,850. Find the cost of two chairs and two tables.

A. ₹700

B. ₹1,700



C. ₹1,400

D. ₹1,300

Q9 Mathematics

The volume (in cm^3) of a solid right circular cylinder whose diameter of base is 7 cm and height is 20 cm is _____. (Use $\pi = \frac{22}{7}$)

A. 3080

B. 980

C. 770



D. 1440

Q10 Mathematics

The correct expression of $8.\overline{46}$ in the fractional form is _____.

A. $\frac{846}{99}$

B. $\frac{84}{99}$

C. $\frac{838}{99}$



D. $\frac{83}{99}$

Q11 Mathematics

Simplify $x^2 + y^2 + (x - y)^2 + (x + y)^2 - 20$:

A. $3x^2 + 3y^2 - 20$



B. $3x^2 + 3y^2 + 20$

C. $3x^2 - 3y^2 - 20$

D. $3x^2 - 3y^2 + 20$



Q12 Mathematics

100 surnames were randomly picked up from a local telephone directory and the frequency distribution of the number of letters from the English alphabets in the surnames was obtained as follows.

Number of letters	1 – 4	4 – 7	7 – 10	10 – 13	13 – 16	16 – 19
Number of surnames	6	30	40	16	4	4

The median number of letters in the surnames is:

- A. 8.02
- B. 7.09
- C. 7.04
- D. 8.05

**Q13 Mathematics**

Tanvi saves ₹5,000 from her salary every month after spending 80% of her monthly salary. Tanvi's salary is:

- A. ₹20,000
- B. ₹30,000
- C. ₹25,000
- D. ₹35,000

**Q14 Mathematics**

If $13 : 12 :: x : 60$ then, the value of x is:

- A. 65
- B. 78
- C. 56
- D. 91

**Q15 Mathematics**

Which of the following describes the nature of the roots of the quadratic equation $5x^2 - 16x + 10 = 0$?

- A. No real roots
- B. Two equal roots
- C. Two distinct real roots
- D. One real root and one imaginary root



Q16 Mathematics

The mean literacy rate of a few cities as displayed in the following distribution is:

Literacy rate in %	No. of cities
25-35	6
35-45	5
45-55	4
55-65	1

A. 28

B. 32

C. 36

D. 40 ☒**Q17** Mathematics

A pipe can fill an empty tank in 15 minutes while another pipe can empty the same tank, when completely full, in 20 minutes. How much time (in minutes) will it take to completely fill the empty tank if both the pipes are opened simultaneously?

A. 54

B. 56

C. 60 ☒

D. 48

Q18 Mathematics

Mohan borrows a sum of ₹2,20,000 at the rate of 8% per annum simple interest. At the end of the first year, he repays ₹27,600 towards return of principal amount borrowed. If Mohan clears all pending dues at the end of the second year, including interest payment that accrued during the first year, how much does he pay at the end of the second year?

A. ₹2,25,392 ☒

B. ₹2,27,600

C. ₹2,26,800

D. ₹2,25,512



Q19 Mathematics

A person sells a sofa at a certain price. If he sold it at 60% of this price, then there will be a loss of 20%. The percentage profit when sofa was sold at the original selling price is:

A. $15\frac{1}{2}\%$

B. $12\frac{1}{2}\%$

C. $33\frac{1}{3}\%$ ✓

D. 12%

Q20 Mathematics

If the number of sides of a regular polygon is 12, then the measure of each exterior angle is:

A. 48°

B. 36°

C. 30° ✓

D. 40°

Q21 Mathematics

The value of $72 \div (9 - 7)$ of $3 - 6 \times 2 + 8$ is:

A. 104

B. 44

C. 8 ✓

D. 68

Q22 Mathematics

The L.C.M. of 70, 28 and 42 is _____.

A. 700

B. 280

C. 420 ✓

D. 116



Q23 Mathematics

The discriminant of the equation $4x^2 - 5x - 3 = 0$ is:

A. -23

B. 23

C. -73

D. 73

**Q24** Mathematics

$16x^2 + 4y^2 + 25z^2 - 16xy + 20yz - 40zx$ is equal to:

A. $(4x + 2y - 5z)^2$

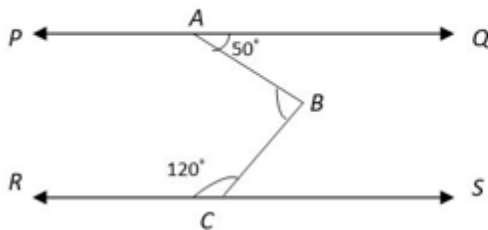
B. $(4x - 2y + 5z)^2$

C. $(4x + 2y + 5z)^2$

D. $(4x - 2y - 5z)^2$

**Q25** Mathematics

What is the measure of $\angle ABC$ in the given figure, given that $PQ \parallel RS$?



A. 90°

B. 140°

C. 110°

D. 70°



Q26 General Intelligence and Reasoning

Eight men L, M, N, O, P, Q, R and S were sitting around a square table, facing the centre. Some of them were sitting at the corners, while some were sitting at the exact centre of the sides. P was sitting fourth to the left of Q. Only O was sitting between M and Q. N was sitting to the immediate right of L. R was sitting to the immediate left of M. L and P were sitting at corners. Who was sitting fourth to the left of R?

A. O

B. N

C. S

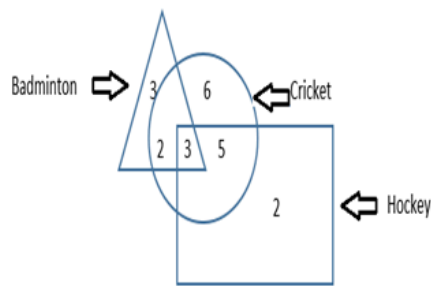


D. L

Q27 General Intelligence and Reasoning

Study the given diagram carefully and answer the question that follows.

The numbers in different sections indicate the number of people who play different sports.



How many people play both Hockey and Cricket but not Badminton ?

A. 5



B. 3

C. 8

D. 2

Q28 General Intelligence and Reasoning

Select the conclusion that is true based on the given statement.

Statement: $A \geq Q > Z \leq S = O < W$

A. $A > O$ B. $W > Z$ C. $Q > O$ D. $W \geq A$ 

Q29 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

54, 149, 294, 489, ?

A. 596

B. 734



C. 674

D. 692

Q30 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ symbol	4	&	5	^	8	@	2	6	%	\$	9	5	3	#
Code Letter	G	B	H	T	V	M	A	K	L	D	F	E	Q	U

Conditions:

(i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.

(ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.

(iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code ^ \$ 9 # 8 ?

A. VDFUT



B. TDFUV

C. VDUFT

D. TDUFV

Q31 General Intelligence and Reasoning

If 5 March 2009 is a Thursday, then what will be the day of the week on 11 March 2016?

A. Thursday

B. Wednesday

C. Monday

D. Friday



Q32 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

14 : 196 :: 16 : 256 :: 18 : ?

A. 328

B. 326

C. 314

D. 324



Q33 General Intelligence and Reasoning

All 30 students are standing in a straight line facing the north. Amit is at 12th position from the extreme left end. What is the position of Amit when considered from the extreme right end?

A. 19th



B. 17th

C. 18th

D. 20th

Q34 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$12.89 + 3.05 \times 84.95 \div 5.07 - 23.88 = ?$$

A. 44

B. 48

C. 35

D. 40



Q35 General Intelligence and Reasoning

Town C is to the north of Town F. Town O is to the east of Town F. Town Z is to the west of Town O. Town Y is to the south of Town Z. Town C is to the north-east of Town Y. What is the position of Town C with respect to Town Z?

A. North-East



B. North-West

C. South-East

D. North



Q36 General Intelligence and Reasoning

Three statements are given followed by three conclusions. Consider the statements and conclusions to be true even if they vary from commonly known facts and then decide which of the conclusions follow(s) from the given statements.

Statements:

1. Some nails are rings.
2. All rings are fingers.
3. All nails are bracelets.

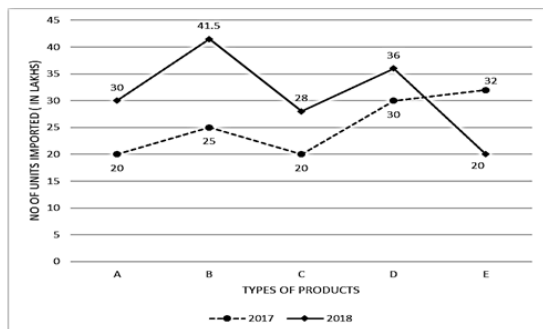
Conclusions:

- (I) Some bracelets are rings.
(II) Some fingers are nails.
(III) No ring is a bracelet.

- A. Only conclusion III follows.
- B. Only conclusion II follows.
- C. Only conclusions I and II follow. ✓
- D. None of the conclusions follow.

Q37 General Intelligence and Reasoning

The line graph given below shows the total number of different products, A, B, C, D and E, (in lakhs) imported by a company in 2017 and 2018. Study the graph and answer the question.



The import of which type of product in 2017 was equal to the average import of A and E types of product in 2018?

- A. A
- B. B ✓
- C. D
- D. E



Q38 General Intelligence and Reasoning

Which two signs should be interchanged to make the following equation correct?

$$28 \div 4 - 12 \times 5 + 11 = 56$$

A. $\times$ and $\div$

B. $+$ and $-$



C. $\times$ and $+$

D. $\div$ and $-$

Q39 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

2, 4, 5, 11, 20, 36, ?

A. 56

B. 67



C. 71

D. 74

Q40 General Intelligence and Reasoning

Farhan started from his home and walked a distance of 'Y' eastwards. Then, he turned right and walked 10 m. After that, he turned right again and walked 25 m. Then, he took a left turn and walked 10 m, followed by a right turn and walking 15 m. He finally took a right turn and walked 20 m to reach his home. What is the value of Y?

A. 55m

B. 50m

C. 40m



D. 30m



Q41 General Intelligence and Reasoning

This question is based on the following 3-letter words:

(left) BAT DIG FIT WIN (right)

If 'T' is added before each word, which of the following will form a meaningful English word?

- A. Only FIT
- B. Only BAT
- C. Only WIN
- D. Only DIG



Q42 General Intelligence and Reasoning

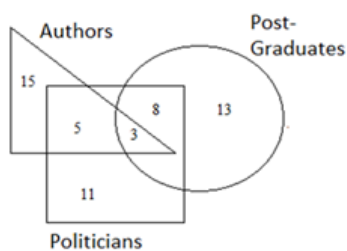
If the digits of the number 31275848 are arranged in decreasing order from left to right, what will be the sum of the first 3 digits from the left?

- A. 20
- B. 12
- C. 6
- D. 23



Q43 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many people are politicians as well as authors but do not have post-graduate degree?

- A. 5
- B. 3
- C. 8
- D. 11



Q44 General Intelligence and Reasoning

Refer to the following letter, number and symbol series and answer the question.

(Left) V 2 5 @ ¢ W ¥ # 2 Ω R Q 1 @ F B 4 # H 6 J % Y 3 Z(Right)

If all the numbers are dropped from the series, which of the following will be fifth from the right?

A. H



B. #

C. J

D. B

Q45 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 12 – Operations on 12 such as adding/ subtracting/multiplying etc. to 12 can be performed. Breaking down 12 into 1 and 2 and then performing mathematical operations on 1 and 2 is not allowed)

(15, 450, 10)

(12, 540, 15)

A. (9, 18, 81)

B. (5, 25, 5)

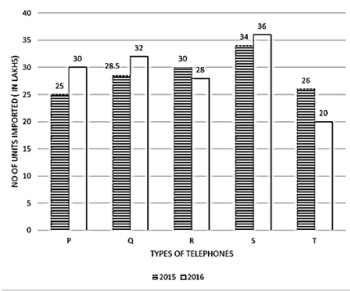
C. (5, 60, 6)

D. (11, 330, 10)



Q46 General Intelligence and Reasoning

The bar graph given below shows the total number of different types of telephones P, Q, R, S and T (in lakh) imported by a company in 2015 and 2016. Study the graph and answer the question.



The average import of Q and R types of telephones in 2016 was equal to the average import of which types of telephone in 2015?

- A. P and Q
- B. Q and R
- C. R and S
- D. S and T



Q47 General Intelligence and Reasoning

Which of the following term will replace the question mark (?) in the given series to make it logically complete?

TR11, QO16, NL21, KI26, ?

- A. HF31
- B. HF33
- C. KG31
- D. KG33



Q48 General Intelligence and Reasoning

All the students of a class are sitting in a queue facing north. Priti is at 17th position from the start of the queue. Poonam is sitting ahead of Priti and there are exactly four students between them. Poonam is at 16th position from the end of the queue. How many students are there in the class?

- A. 27
- B. 29
- C. 37
- D. 26



Q49 General Intelligence and Reasoning

Six people, A, B, C, D, E and F are sitting in a straight line, facing North (but not necessarily in the same order). Only one person sits to the left of D. Only two persons sit between F and C. B sits third to the right of E. D sits to the immediate left of F. E sits at the extreme left end. Who among the following has A and F as his immediate neighbours?

A. C

B. E

C. D

D. B



Q50 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Indian society is a symbol of unity in diversity.

Arguments:

- I. People of different cultures celebrate their identity in Indian society.
- II. Brain-drain in India is an indicator of unity in diversity.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement.



C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.

Q51 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement:

Statement: $E < H < K = G > F > D$

A. $K < E$

B. $D > G$

C. $K < D$

D. $G > E$



Q52 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

DHP : HLT

MSO : QWS

A. SKF : WOJ



B. SEW : WOJ

C. SWE : WJO

D. WSE : WJO

Q53 General Intelligence and Reasoning

Refer to the following number series and answer the question.

6 3 5 3 5 6 3 2 2 2 5 1 9 5 4 8 9 5 2 7

How many such numbers are there in the series each of which is immediately preceded by an odd number and immediately followed by an even number?

A. 2

B. 4

C. 5



D. 3



Q54 General Intelligence and Reasoning

In this question, a group of letters is coded using symbols as per the table given below and the conditions which follow.
The correct combination of codes following the conditions is your answer.

Letters	A	S	V	J	I	L	N	E
Codes	@	>	^	%	=	#	\$	+

Conditions:

1. If both the first and the last letters of the word are vowels, then both these letters will be coded as '&'.
**.
2. If both the first and the last letters of the word are consonants, then the first letter of the word will be coded as

What will be the code for the word 'JAVELINS'?

- A. % > ^ + # = \$ >
- B. % @ ^ + # = \$ *
- C. % @ ^ + # = \$ >
- D. * @ ^ + # = \$ >

**Q55** General Intelligence and Reasoning

A certain number of people are sitting in a row facing north. Y sits fourth to the right of A. Only four people sit between Y and Z. B sits second to the left of Z. Only one person sits between Z and C. X sits to the immediate right of C. X sits at one of the extreme ends of the row. If no other person is sitting in the row, what is the total number of persons seated?

- A. 13
- B. 15
- C. 14
- D. 12

**General Science**

25 Questions • Answer Key

Q56 General Science

Naphthalene balls are prepared from _____.

- A. coke
- B. coal tar
- C. coal gas
- D. petroleum



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Q57 General Science

An electromagnet is formed when:

- A. a current is passed through magnet
- B. a magnet is placed near current carrying conductor
- C. a current is passed through a coil wound around a soft iron core ✓
- D. a current is passed through a coil wound around a glass rod

Q58 General Science

Which of the following waste items should NOT be thrown into general trash?

- A. Old furniture
- B. Old vessels
- C. Old batteries ✓
- D. Old shoes

Q59 General Science

Which of the following circulates around the body and plugs the leaks by helping to clot the blood at the points of injury?

- A. Plasma
- B. Platelets ✓
- C. RBC
- D. WBC

Q60 General Science

The class of compounds with a functional group which has no oxygen atom is:

- A. halo compounds ✓
- B. Ketones
- C. Esters
- D. carboxylic acid



Q61 General Science

To obtain sharp signals from a dish antenna, the receiver of the dish antenna should be placed _____.

- A. behind the dish
- B. in front of the dish at C
- C. in front of the dish at F ☒
- D. in front of the dish between C and F

Q62 General Science

Select the correct example for mechanical barrier method of contraception from the options given below.

- A. Use of contraceptive pills
- B. Use of copper-T
- C. Use of condom ☒
- D. Vasectomy

Q63 General Science

What is the physical state of a precipitate in a chemical reaction?

- A. Liquid
- B. Solid ☒
- C. Aqueous
- D. Gaseous

Q64 General Science

Which of the following elements is a metalloid?

- A. Bismuth
- B. Antimony ☒
- C. Iron
- D. Selenium



Q65 General Science

What happens when calcium sulphate hemihydrate is mixed with water?

- A. It sets as a hard solid mass. ✓
- B. A clear solution is formed.
- C. SO_2 gas is liberated.
- D. Lime water is formed.

Q66 General Science

When a ray of light travels from a denser to a rarer medium, it will:

- A. bend towards the normal
- B. bend away from the normal ✓
- C. have similar angles of incidence and refraction
- D. not hold the phenomenon of refraction

Q67 General Science

Which of the following has the value of pH lower than that of pure water?

- A. Milk of magnesia
- B. NaOH
- C. Gastric juice ✓
- D. NH_4OH

Q68 General Science

In plants the exchange of carbon dioxide and oxygen takes place by:

- A. osmosis
- B. plasmolysis
- C. diffusion ✓
- D. fermentation



Q69 General Science

Two resistors, each of $20\ \Omega$, are connected in parallel. The combination, in turn, is connected in series to a third resistor of $20\ \Omega$ and a battery of 3 V. The power supplied by the battery is:

- A. 0.15 W
- B. 0.30 W
- C. 0.675 W
- D. 1.35 W



Q70 General Science

Which of the following devices is NOT based on the heating effect of electric current?

Electric kettle, Electric bulb, Oven, Electric generator

- A. Electric kettle
- B. Electric bulb
- C. Oven
- D. Electric generator



Q71 General Science

Which of the following molecular formulas is related to cyclic hydrocarbon?

- A. C_7H_{16}
- B. C_6H_{12}
- C. C_4H_{10}
- D. C_5H_{12}



Q72 General Science

A beam of light parallel to the _____ of a concave mirror, after reflection, will pass through the principal focus.

- A. surface of mirror
- B. principal axis
- C. object on the principal axis
- D. focal plane



Q73 General Science

Which of the following is a two-carbon molecule?

- A. Glucose
- B. Lactic acid
- C. Pyruvic acid
- D. Ethanol



Q74 General Science

A strong magnet is moved towards a stationary coil. The induced current in the coil is the minimum when the angle between the direction of motion of the magnet and the plane of the coil is _____.

- A. 0°
- B. 30°
- C. 60°
- D. 90°



Q75 General Science

What is the primary purpose of rainwater harvesting?

- A. Help each raindrop to seep into the ground
- B. Collect pure fresh drinking water
- C. Reduce dependence on municipality water
- D. Promote drip irrigation



Q76 General Science

Systolic pressure is a measure of _____.

- A. ventricular relaxation
- B. ventricular contraction
- C. atrial relaxation
- D. atrial contraction



Q77 General Science

Which of the following aqueous solutions is formed when copper sulphate solution reacts with zinc metal?

- A. Zinc oxide
- B. Zinc sulphide
- C. Zinc cuprite
- D. Zinc sulphate



Q78 General Science

When a photograph of Earth is taken from space its background looks dark because of:

- A. no reflection of light
- B. no refraction of light
- C. no dispersion of light
- D. no scattering of light



Q79 General Science

Which of the following will NOT react with oxygen at high temperature?

- A. Copper
- B. Nichrome
- C. Aluminium
- D. Iron



Q80 General Science

In general, the oxides of metals are _____ in nature.

- A. acidic
- B. basic
- C. neutral
- D. amphoteric



Q81 General Awareness and Current Affairs

_____ of the Constitution of India lays down the qualifications for the membership of Parliament.

- A. Article 81
- B. Article 82
- C. Article 83
- D. Article 84



Q82 General Awareness and Current Affairs

As of March 2022, which of the following is the largest bank in private sector in India?

- A. Kotak Mahindra Bank Ltd
- B. ICICI Bank
- C. HDFC Bank
- D. Axis Bank



Q83 General Awareness and Current Affairs

As of 31 March 2022, the official language of the state of _____ is Hindi.

- A. Rajasthan
- B. Arunachal Pradesh
- C. Goa
- D. Punjab



Q84 General Awareness and Current Affairs

Vesak, the festival that is observed on the full-moon day of the lunar month of Vaisakha, which falls in April or May, is the festival for which religion?

- A. Sikhism
- B. Buddhism
- C. Jews
- D. Jainism



Q85 General Awareness and Current Affairs

Which of the following awards is given for significant contribution in the field of atomic energy?

A. Shanti Swarup Bhatnagar Award

B. Homi Bhabha Award



C. Dr. B.C. Roy Award

D. Borlaug Award

Q86 General Awareness and Current Affairs

In March 2022, the Karnataka Government announced the Vinaya Samarasya Yojana, an awareness programme meant to eradicate _____ in Gram Panchayats across the state.

A. unemployment

B. untouchability



C. poverty

D. illiteracy

Q87 General Awareness and Current Affairs

Which edition of 'Khelo India Youth Games' was held in June 2022?

A. First

B. Second

C. Third

D. Fourth



Q88 General Awareness and Current Affairs

Yajurveda is _____ fold.

A. 4

B. 2



C. 3

D. 5



Q89 General Awareness and Current Affairs

Which of the following statements about the Himalayas is INCORRECT?

- A. The Patkai hills lie between the lesser Himalayas and the Shiwaliks. ✓
- B. The outer-most range of the Himalayas is called the Shiwaliks.
- C. The Brahmaputra marks the eastern-most boundary of the Himalayas.
- D. The Kumaon Himalayas lie between the Satluj and Kali rivers.

Q90 General Awareness and Current Affairs

Sri Bhagavan Mahavir Govt. Museum is located in:

- A. Andhra Pradesh ✓
- B. Karnataka
- C. Maharashtra
- D. New Delhi

Q91 General Awareness and Current Affairs

According to the Ministry of New and Renewable Energy, out of the total estimated potential more than 95% of commercially exploitable wind resources are concentrated in how many states in India?

- A. Seven ✓
- B. Four
- C. Three
- D. Two

Q92 General Awareness and Current Affairs

Where is India's first ever e-waste (electronic waste) clinic set up?

- A. Bhopal ✓
- B. Bengaluru
- C. Hyderabad
- D. Jaipur



Q93 General Awareness and Current Affairs

In July 2021, which Government's Department of Women and Child Development (WCD) came up with a policy to define street children, and asked 10 of its agencies to identify and rehabilitate them?

- A. Delhi ✓
- B. Jammu and Kashmir
- C. Punjab
- D. West Bengal

Q94 General Awareness and Current Affairs

The Industries (Development and Regulation) Act was enacted in _____ in India.

- A. 1951 ✓
- B. 1953
- C. 1954
- D. 1957

Q95 General Awareness and Current Affairs

In the month of March 2022, who was appointed as the Chairman of Air India?

- A. Ratan Tata
- B. N Chandrasekaran ✓
- C. Adi Godrej
- D. M Damodaran

Q96 General Awareness and Current Affairs

Which plateau is spread across Rajasthan, Madhya Pradesh and Gujarat with an average altitude of 500 m?

- A. Deccan Plateau
- B. Malwa Plateau ✓
- C. Chotanagpur Plateau
- D. Marwar Plateau



Q97 General Awareness and Current Affairs

Which of the following awards is given to Gram Panchayats/Village Councils for their outstanding contribution to the socio-economic development by involving Gram Sabhas?

- A. Deen Dayal Upadhyay Panchayat Sashaktikaran Puraskar (DDUPSP)
- B. Nanaji Deshmukh Rashtriya Gaurav Gram Sabha Puraskar (NDRGGSP) ✓
- C. Gram Panchayat Development Plan Award (GPDPA)
- D. Child-friendly Gram Panchayat Award (CFGPA)

Q98 General Awareness and Current Affairs

In March 2022, which Indian cricketer broke Kapil Dev's record for the highest score by an Indian coming to bat at No. 7 or below in Test cricket by scoring an unbeaten 175 in the test match against Sri Lanka?

- A. Ravindra Jadeja ✓
- B. Rishabh Pant
- C. Virat Kohli
- D. Rohit Sharma

Q99 General Awareness and Current Affairs

According to Constitution of India, which is NOT a fundamental duty of a citizen from following?

- A. To value and preserve the rich heritage of our composite culture
- B. To defend the country and render national service when called upon to do so
- C. To treat men and women equally, have the right to an adequate means of livelihood ✓
- D. To cherish and follow the noble ideals which inspired our national struggle for freedom

Q100 General Awareness and Current Affairs

According to the Government budget of 2022-23, what is the estimated growth rate of the Indian economy for financial year 2022-23?

- A. 9.1%
- B. 9.2% ✓
- C. 9.3%
- D. 9.4%



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The sum of the present ages of Bunty and Bubbly is 32 years. After 2 years, Bunty's age will be three times that of Bubbly. Bunty's present age (in years) is:

A. 25



B. 20

C. 13

D. 7

Q2 Mathematics

A vendor offers successive discounts of 12% and 15% on an article whose marked price is ₹2,000. He earns a profit of 20% in the transaction. The cost price (rounded off to the nearest integer) of the article is:

A. ₹1,247



B. ₹1,297

C. ₹1,347

D. ₹1,397

Q3 Mathematics

Which of the following numbers is a divisible by 8?

A. 1245964

B. 1246864



C. 1247564

D. 1248164

Q4 Mathematics

Find the median of 4, 6, 6, 8, 8, 8, 10, 12.

A. 6

B. 10

C. 8



D. 12



Q5 Mathematics

The volume (in cm^3) of a wire of diameter 2 cm and length 7 m is:

Take $\pi = \frac{22}{7}$

A. 2200



B. 2400

C. 1200

D. 1100

Q6 Mathematics

A person sells an article for ₹1,820 and loses 9%. If he wants to sell it a profit of 9%, the selling price of the article should be:

A. ₹2,080

B. ₹2,180



C. ₹2,280

D. ₹2,480

Q7 Mathematics

Pipe A can fill a tank in 15 minutes, while pipe B can empty the completely filled tank in 20 minutes. Initially, pipe A is opened and after 5 minutes pipe B is also opened. In how much time (in minutes) will the remaining tank be filled completely?

A. 20

B. 30

C. 40



D. 50

Q8 Mathematics

Manganese and aluminium are mixed in the ratio of 2 : 3 to make an alloy. The quantity (in kg) of aluminium required to be melted with 24 kg of manganese is _____.

A. 12

B. 36



C. 48

D. 72



Q9 Mathematics

The internal surface area (in m^2) of an open cuboidal tank whose internal length, internal breadth, and internal height are given as 6 m, 4 m, and 3 m, respectively, is:

A. 72

B. 84



C. 108

D. 124

Q10 Mathematics

The value of $\sqrt{0.04} + \sqrt{6.25} + \sqrt{12.25} - 8.2$ is _____.

A. 2

B. 2.2

C. -2



D. -2.2

Q11 Mathematics

Find the value of y if $\frac{1}{(125)^{-y}} = \frac{1}{5^{-4y+1}}$.

A. $\frac{1}{3}$

B. -1

C. 5

D. 1

**Q12 Mathematics**

The value of $(x - y)(x + y) + (y - z)(y + z) + (z + x)(z - x)$ is:

A. $x + y + z$

B. 0

C. $x^2 + y^2 + z^2$

D. 1



Q13 Mathematics

In a triangle, if one angle measures twice the smallest angle and the third one measures three times the smallest angle, then the measure of the greatest angle is _____.

A. 45°

B. 30°

C. 90° ✓

D. 120°

Q14 Mathematics

The roots of the quadratic equation $x^2 - 10x + 21 = 0$ are:

A. 7, -3

B. 3, -7

C. -7, -3

D. 7, 3 ✓

Q15 Mathematics

Find the number of sides of a regular polygon, each interior angle of which is 90° .

A. 5

B. 8

C. 4 ✓

D. 3

Q16 Mathematics

The HCF of 2410 and 2700 is _____.

A. 1

B. 2

C. 5

D. 10 ✓



Q17 Mathematics

When the price of a magazine was reduced by 30%, its sale increased by 70%. The net revenue:

- A. increased by 19% ☒
- B. increased by 17%
- C. decreased by 19%
- D. decreased by 20%

Q18 Mathematics

Manjit is 2 years elder to his friend Ranjit. Manjit's father is twice as old as Manjit and Ranjit is twice as old as his sister. The ages of Manjit's father and Ranjit's sister differ by 43 years. The ages of Manjit and Ranjit, respectively, are:

- A. 26 and 24
- B. 28 and 26 ☒
- C. 36 and 34
- D. 38 and 36

Q19 Mathematics

X is twice as good a workman as Y and together they finish a piece of work in 14 days. In how many days will X alone finish the work?

- A. 28 days
- B. 21 days ☒
- C. 20 days
- D. 22 days

Q20 Mathematics

Simplify $\frac{6 + 6 \times 6}{3 \times 3 + 5} \div \frac{\frac{1}{2} \div \frac{1}{2} \text{ of } \frac{1}{2}}{\frac{1}{2} \div \frac{1}{2} \times \frac{1}{2}}$.

- A. 3
- B. $\frac{3}{4}$ ☒
- C. $\frac{4}{3}$
- D. $\frac{1}{3}$



Q21 Mathematics

At what rate per cent per annum will a certain sum of money double itself in 2 years, the interest being compounded annually? [Give your answer correct to 1 decimal place.]

A. 44.4%

B. 41.4% ☒

C. 40.4%

D. 39.4%

Q22 Mathematics

The quadratic equation whose roots are 3 and $\frac{1}{3}$ is:

A. $3x^2 + 10x + 3 = 0$

B. $3x^2 + 10x - 3 = 0$

C. $3x^2 - 10x + 3 = 0$ ☒

D. $3x^2 - 10x - 3 = 0$

Q23 Mathematics

What is the value of k if $\frac{2^{-2k} \times 4^{k+3}}{4^{-k+2}} = 2^{k-2}$

A. 1

B. 2

C. -1

D. -4 ☒

Q24 Mathematics

If $\cos\theta = \frac{x}{\sin\theta}$, then the value of $\sin^6\theta + \cos^6\theta =$ _____.

A. 0

B. 1

C. $3x^2 - 1$

D. $1 - 3x^2$ ☒



Q25 Mathematics

What is the mode of the data given below? [Give your answer correct to 2 decimal places.]

Age in years	15-25	25-35	35-45	45-55	55-65	65-75	75-85
No. of patients	12	18	20	25	30	20	15

A. 58.33



B. 55.33

C. 63.33

D. 57.33

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

PJC13, KEX20, FZS27, AUN34, ?

A. VIP41

B. VPI41



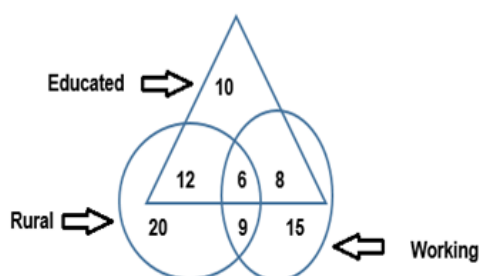
C. PVI39

D. PST39

Q27 General Intelligence and Reasoning

Study the given diagram carefully and answer the question that follows.

The numbers in different sections indicate the number of people.



How many people are both Educated and Working but not Rural ?

A. 8



B. 6

C. 9

D. 14



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Q28 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Fake news has become a problem of the 21st century over the globe.

Arguments:

- I. A global level mechanism is needed to combat this worldwide problem.
- II. Problems related to fake news are only present in India.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement. ☒

C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.

Q29 General Intelligence and Reasoning

In a certain code language, 'RAPID' is written as 'ARPDI' and 'LOCAL' is written as 'OLCLA'. How will 'NEVER' be written in that language?

A. EVNRE

B. ENVRE ☒

C. ENEVR

D. ENVER

Q30 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$12 \times 6 \div 9 - 3 + 2 = ?$$

A. 19 ☒

B. 18

C. 28

D. 29



Q31 General Intelligence and Reasoning

If 5 August 2012 is a Sunday, then what will be the day of the week on 17 September 2015?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Thursday



Q32 General Intelligence and Reasoning

If 1 is added to the first digits and 1 is subtracted from the last digits of each of the following numbers, then in how many numbers will the first digit be exactly divisible by the last digit?

242, 657, 864, 264, 674, 218, 845

- A. 0
- B. 1
- C. 2
- D. 3



Q33 General Intelligence and Reasoning

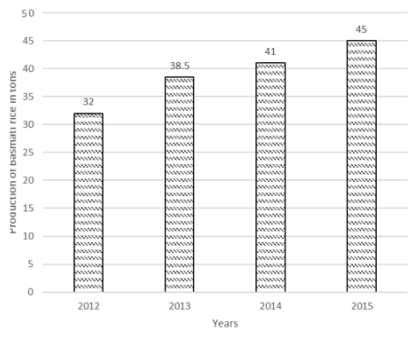
P, R, T, V and W live on different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 5. V lives on the floor immediately below W. P lives on the floor immediately above T. R lives on the floor immediately above P. W lives on the floor immediately below T. Who lives on the third floor?

- A. R
- B. P
- C. T
- D. W



Q34 General Intelligence and Reasoning

The following bar graph shows the production of Basmati rice (in tons) over the years. Based on the following graph answer the question below.



What is the approximate percentage increase in Basmati rice production in 2015 as compared to Basmati rice production in 2012?

- A. 28.4%
- B. 48.38%
- C. 40.6%
- D. 28.12%



Q35 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) T B Y M R E S I C X Z O W A Q D F H G U K (Right)

Which letter is fifth to the right of the twelfth letter from your right end of the given series?

- A. R
- B. X
- C. Q
- D. W



Q36 General Intelligence and Reasoning

If each of the digits in the number 354698329 is arranged in ascending order from left to right, then the position of how many digits will change as compared to that in the original number?

- A. 6
- B. 8
- C. 5
- D. 4



Q37 General Intelligence and Reasoning

In a certain code language, 'STRAIGHT' is written as 'TUSAIHIU' and 'TAKEOVER' is written as 'UBLEOWFS'. How will 'TENDENCY' be written in that language?

A. UFODEODZ



B. UFPDEODZ

C. UFOEDODZ

D. UFODEOEZ

Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

12, 14, 18, 26, 42, ?

A. 72

B. 74



C. 78

D. 76

Q39 General Intelligence and Reasoning

Seven people, P, Q, R, S, T, U, and V are sitting in a straight line, facing north. Exactly two people are sitting to the left of T. Q is sitting second to the right of R who is to the immediate right of someone at the end. Only three people are sitting between T and P. Q is not an immediate neighbour of P. S is sitting to the immediate right of U. Who is sitting at the extreme left end of the line?

A. V



B. P

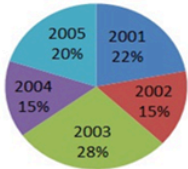
C. S

D. U



Q40 General Intelligence and Reasoning

The given pie chart shows the sales of a company over five years. Study the chart and answer the question.



Total sale in five years = ₹50,00,000

Sale = expenditure + profit

Profit % = (profit/expenditure) x 100 %

If profit of the company in 2005 was 25%, then find the expenditure in 2005?

A. ₹8,00,000



B. ₹7,50,000

C. ₹62,500

D. ₹7,20,000

Q41 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

ABC : EFG

PQR : TUV

A. PKL : RSM

B. MNO : PQR

C. GHI : DEF

D. XYZ : BCD



Q42 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully and decide which of the conclusions logically follow(s) from the statement(s).

Statement:

$$C = A \leq S < H \leq I = G$$

Conclusions:

I. $G \geq S$

II. $C < H$

A. Only conclusion I follows

B. Either conclusion I or II follows

C. Neither conclusion I nor II follows

D. Only conclusion II follows



Q43 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

7, 23, ?, 79, 119, 167

A. 39

B. 47



C. 52

D. 61

Q44 General Intelligence and Reasoning

Each of students, D, F, G, H, S, T and V has an exam on a different day of a week starting from Monday and ending on Sunday of the same week but not necessarily in the same order. D's exam is on the day immediately before G's exam. V's exam is on the day immediately after T's exam. Only one student has exam between D and F. V's exam is on Wednesday and H's exam is on Friday. F's exam is neither on Monday nor on Saturday. Who has exam on Thursday?

A. F



B. D

C. G

D. V



Q45 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below:

(Left) 876 643 453 974 227 (Right)

(Example: 697 – First digit = 6, second digit = 9 and third digit = 7)

(NOTE - All operations to be done from left to right.)

If all the numbers of the given series are arranged in descending order, the position of which of the following numbers will remain unchanged?

A. 876

B. 643

C. 453

D. 227



Q46 General Intelligence and Reasoning

Sapna went 2 km straight from her office in the west direction then took a right turn and travelled 4 km. She again turned right and travelled 5 km and then turned left and reached home after travelling 1 km. Which direction was she facing when reached home?

A. North



B. West

C. East

D. South

Q47 General Intelligence and Reasoning

Five people, A, D, E, F and K, are sitting around a circular table facing the centre. A is the immediate neighbour of D and E. F is the immediate neighbour of E and K. Who is the immediate neighbour of both A and F?

A. D

B. E



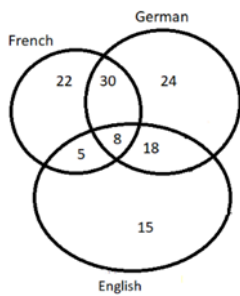
C. K

D. B



Q48 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of people with knowledge of different languages – French, German and English.



How many people know at least two languages?

A. 53

B. 61



C. 35

D. 23

Q49 General Intelligence and Reasoning

Six boxes, D, E, F, G, H, and I, are kept one over the other but not necessarily in the same order.

Only two boxes are kept between D and I. D is kept at the third place from the top. Only one box is between E and I. Also, there is only one box between E and F. Which box is kept at the third place from the bottom?

A. E



B. F

C. H

D. G

Q50 General Intelligence and Reasoning

Amongst six friends O, P, Q, R, S and T, each has a different height. P is taller than O. Q is taller than S but shorter than O. R is shorter than S but taller than T. Who is the tallest among all the friends?

A. O

B. P



C. Q

D. R



Q51 General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

$27 : 13 :: 65 : 32 :: 71 : 35 :: 51 : ?$

A. 26

B. 25



C. 17

D. 15

Q52 General Intelligence and Reasoning

If each digit of the number 72514368 is subtracted from 9, how many even digits will be there in the newly formed number?

A. 6

B. 5

C. 4



D. 3

Q53 General Intelligence and Reasoning

When asked about the direction of the stadium from the bus stop, Akhil said, "One must walk 100 m towards the south. Then one must take a left turn and walk 120 m. Then one must take a left turn again and walk 370 m. Then, again, one must take a left turn and walk 400 m. Then one must take a left turn again and walk 370 m. Then, again, one must take a left turn and walk 110 m. Finally, one must take one last left turn and walk 100 m to reach the stadium". How far and in which direction is the stadium from the bus stop? (All turns are 90 degree turns only)

A. 170 m, East

B. 170 m, West



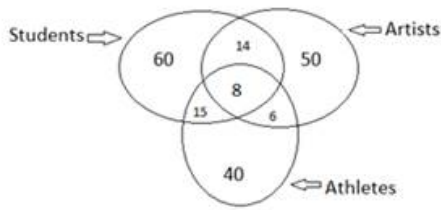
C. 140 m, East

D. 140 m, West



Q54 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many people are Students but neither Artists nor Athletes?

A. 40

B. 60



C. 14

D. 15

Q55 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(28, 33, 48)

(67, 72, 87)

A. (125, 150, 165)

B. (25, 38, 43)

C. (57, 72, 82)

D. (29, 34, 49)

**General Science**

25 Questions • Answer Key

Q56 General Science

What is the solid product formed when ferrous sulphate is heated?

A. Ferrous oxide

B. Iron

C. Ferric oxide



D. Ferrous sulphide



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Q57 General Science

Which of the following foods is called a 'body-building' food?

- A. Food rich in proteins, like peas
- B. Food rich in vitamins, like apples
- C. Food rich in fats, like butter
- D. Food rich in carbohydrates, like wheat

Q58 General Science

If the induced current in the coil of a conductor of resistance $4\ \Omega$ is 1 mA, then EMF induced in the coil is:

- A. 1 mV
- B. 1 V
- C. 4 mV
- D. 4 V

Q59 General Science

If the current and potential difference are tripled in a circuit, keeping the resistance constant, then power will increase:

- A. Three fold
- B. One third
- C. six fold
- D. nine fold

Q60 General Science

When a bar magnet is used as a source of constant magnetic field, the direction of the magnetic field is:

- A. from south pole to the north pole of the magnet
- B. from north pole to the south pole of the magnet
- C. normal to the length of the magnet
- D. normal to the south pole of the magnet



Q61 General Science

The bond generally NOT found in carbon compounds is:

- A. single bond
- B. double bond
- C. triple bond
- D. ionic bond



Q62 General Science

Which of the following statements is correct with respect to phloem?

- A. Sieve tubes in phloem are made up of dead cells.
- B. Phloem carries photosynthetic products from leaves to other plant parts.
- C. Phloem transport is uni-directional.
- D. Companion cells of phloem have perforated walls.



Q63 General Science

Which set of three elements does NOT constitute a Dobereiner's triad?

- A. Li, Na, K
- B. Ca, Sr, Ba
- C. Cl, Br, I
- D. Fe, Co, Ni



Q64 General Science

Which compound is used for faster cooking?

- A. CaOCl_2
- B. NaOH
- C. Na_2CO_3
- D. NaHCO_3



Q65 General Science

The correct relation between P, V and R is:

A. $V = \frac{P}{R}$

B. $P = \frac{V^2}{R^2}$

C. $P = \frac{V^2}{R}$ ✓

D. $P = V^2 R$

Q66 General Science

If an object is placed at 20 cm from a convex mirror of focal length 30 cm, the image will be formed at _____.

A. -16 cm

B. -12 cm

C. +6 cm

D. +12 cm ✓

Q67 General Science

If the size of a spherical mirror increases in such a way that its radius of curvature gets doubled, then its focal length will _____.

A. become infinite

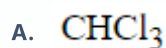
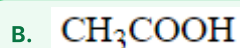
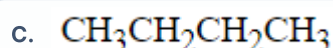
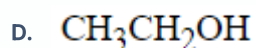
B. increase to double ✓

C. decrease by its half

D. remain same

Q68 General Science

Which of the following compounds has the highest boiling point?



Q69 General Science

The different points mentioned below constitute Reproductive Health. Select the INCORRECT option.

- A. Knowledge of reproductive processes and organs
- B. Safe and effective family planning methods
- C. Determining the sex of the unborn child
- D. Prevention of Sexually transmitted diseases



Q70 General Science

Which of the following chemicals is used in black and white photography?

- A. Silver oxide
- B. Sodium chloride
- C. Sodium oxide
- D. Silver bromide



Q71 General Science

Which of the following is the least important reason for building a large dam?

- A. Guaranteed supply of water for households
- B. Renewable source of electricity for a region
- C. Control of flooding in downstream areas
- D. Site for boating, fishing and picnics for families



Q72 General Science

_____ are responsible for the determination of sex.

- A. Allosomes
- B. Autosomes
- C. Pleiotropic genes
- D. Germ cells



Q73 General Science

A beam of white light passes through a glass prism and a spectrum is obtained. Which of the following colour components bends the least?

Yellow, Orange, Blue, Violet

A. Yellow

B. Orange



C. Blue

D. Violet

Q74 General Science

Which chemical can be used for making germ-free drinking water?

A. NaOH

B. CaOCl_2



C. Ca(OH)_2

D. NH_4OH

Q75 General Science

Why is deoxygenated blood kept separate from oxygenated blood in the hearts of some animals like human beings?

A. To help in keeping the body temperature constant



B. To maximise oxygenation of blood in the lungs

C. To provide oxygen to a large-bodied animal

D. To help in the growth and functioning of muscles

Q76 General Science

When a graph is plotted between V and I:

A. a curved graph is obtained

B. a horizontal straight line is obtained

C. an inclined straight line is obtained



D. a vertical straight line is obtained



Q77 General Science

Sardar Sarovar Dam stands on which river?

- A. Narmada
- B. Godavari
- C. Krishna
- D. Brahmaputra



Q78 General Science

In the Newlands' arrangement of elements in the increasing order of their atomic masses, the last element was:

- A. Th
- B. He
- C. H
- D. Mg



Q79 General Science

If the magnification of an image is -0.65 , then the nature of the image is:

- A. virtual, erect and enlarged
- B. real, erect and smaller
- C. real, inverted and smaller
- D. real, inverted and enlarged



Q80 General Science

Which of the following animals have two-chambered heart?

- A. Mammals
- B. Birds
- C. Reptiles
- D. Fishes



Q81 General Awareness and Current Affairs

In the month of March 2022, who was given the captaincy of Royal Challengers Bangalore for IPL 2022?

A. Faf du Plessis



B. Virat Kohli

C. Glenn Maxwell

D. Finn Allen

Q82 General Awareness and Current Affairs

What is the time limit set to complete probe from day of registration of complaint under the Shakti Criminal Laws (Maharashtra Amendment Bill), 2020 cleared by Maharashtra Assembly in December 2021?

A. 10 Days

B. 15 Days

C. 21 Days

D. 30 Days



Q83 General Awareness and Current Affairs

In which year was the nationalisation of banks done by the Government of India?

A. 1967

B. 1968

C. 1969



D. 1970

Q84 General Awareness and Current Affairs

Vardhamana Mahavira was the _____ Tirthankara of Jainism.

A. 24th



B. 20th

C. 2nd

D. 5th



Q85 General Awareness and Current Affairs

The English and Foreign Languages University located in Hyderabad was founded in the year _____.

- A. 1947
- B. 1950
- C. 1952
- D. 1958



Q86 General Awareness and Current Affairs

Genital herpes infection is caused by:

- A. virus
- B. bacteria
- C. protozoa
- D. fungus



Q87 General Awareness and Current Affairs

Anamudi mountain is located in which of the following states?

- A. Tamil Nadu
- B. Kerala
- C. Karnataka
- D. Telangana



Q88 General Awareness and Current Affairs

In the cabinet of which Prime Minister of India, Dr. Manmohan Singh became the finance minister for the first time?

- A. Vishwanath Pratap Singh
- B. Rajiv Gandhi
- C. Indira Gandhi
- D. PV Narasimha Rao



Q89 General Awareness and Current Affairs

As of July 2022, who among the following is the CEO of Teach for India, an educational non-profit organisation that runs a two year fellowship program and alumni network to foster educational excellence and leadership in India?

- A. Pallavi Rane
- B. Anika Parashar
- C. Shaheen Mistri
- D. Sohini Bhattacharya



Q90 General Awareness and Current Affairs

As per the Indian Minerals Yearbook 2020 released by the Indian Bureau of Mines, at _____, Gujarat was the leading producer of salt in India in the year 2019-20.

- A. 88.59%
- B. 81.45%
- C. 77.96%
- D. 86.83%



Q91 General Awareness and Current Affairs

What is the quorum to constitute a sitting of the Lok Sabha?

- A. One-fourth of the total number of Members of the House
- B. One-fifth of the total number of Members of the House
- C. One-tenth of the total number of Members of the House
- D. Half of the total number of Members of the House



Q92 General Awareness and Current Affairs

The tenure of the chairman of the IPO-bound Life Insurance Corporation (LIC) has been extended by one more year by the government, till March 2023. Who is the chairman of LIC?

- A. Raj Kumar
- B. Arun Kumar Anand
- C. Mangalam Ramasubramanian Kumar ☒
- D. Tablesh Pandey

Q93 General Awareness and Current Affairs

Which of the following is NOT a fundamental right in the Constitution of India?

- A. Right to Equality
- B. Right to Freedom
- C. Right to Constitutional Remedies
- D. Right to Acquire Property ☒

Q94 General Awareness and Current Affairs

The National Bank for Agriculture and Rural Development (NABARD) launched the 'JIVA' programme' in February 2022 to promote _____.

- A. forest gardening
- B. dairy farming
- C. horticulture
- D. natural farming ☒



Q95 General Awareness and Current Affairs

In which of the following states of India is 'Sazo' festival celebrated?

- A. Jharkhand
- B. Himachal Pradesh
- C. Telangana
- D. Karnataka



Q96 General Awareness and Current Affairs

Who among the following was one of the founders of the Congress Socialist Party which was founded in 1934?

- A. Jyotiba Phule
- B. Jatindra Nath Das
- C. Jay Prakash Narayan
- D. Khan Abdul Ghaffar Khan



Q97 General Awareness and Current Affairs

Which of the following rivers does not flow in Punjab?

- A. Beas
- B. Ravi
- C. Chenab
- D. Brahmani



Q98 General Awareness and Current Affairs

As per the Union Budget of India 2022-23, India's economic growth is estimated to be _____.

- A. 7.3%
- B. 8.6%
- C. 9.2%
- D. 10.4%



Q99 General Awareness and Current Affairs

Who among the following won the silver in the World Athletics Championship - 2022?

A. Neeraj Chopra



B. Priyanka Goswami

C. Avinash Sable

D. Mira bai Chanu

Q100 General Awareness and Current Affairs

Which of the following states in India has no Panchayati Raj institution?

A. West Bengal

B. Assam

C. Meghalaya



D. Tripura



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

An alloy is made of aluminium and nickel in the ratio 3 : 4. The quantity (in kg) of nickel required to be melted with 36 kg of aluminium is _____.

- A. 18
- B. 3
- C. 48
- D. 32



Q2 Mathematics

Farah got married 8 years ago. Today her age is $\frac{9}{7}$ times her age at the time of her marriage. At present her daughter's age is $\frac{1}{6}$ of her age. Her daughter's age 3 years ago was:

- A. 3 years
- B. 6 years
- C. 9 years
- D. 12 years



Q3 Mathematics

Find the cost of tiling the verandah, at the rate of ₹ 24 per m², if the length and breadth of the verandah are in the ratio 3 : 1 and its perimeter is 40 m.

- A. ₹ 1,700
- B. ₹ 1,800
- C. ₹ 1,600
- D. ₹ 1,900



Q4 Mathematics

Simplify 12 of 3 – 24 of 4 ÷ 12.

- A. -5
- B. 4
- C. 5
- D. 28



Q5 Mathematics

m and n are two parallel lines. If l is a transversal intersecting m and n, then the sum of the interior angles formed on the same side of l is equal to:

A. 90°

B. 180°



C. 270°

D. 360°

Q6 Mathematics

25% of a number is 1320. Find 35% of the same number.

A. 1260

B. 1166

C. 1644

D. 1848



Q7 Mathematics

The average of the all natural numbers between 12 and 39 which are divisible by 5 is _____.

A. 25.5

B. 21

C. 25



D. 28

Q8 Mathematics

If $\frac{5^{3n+2}}{5^{4n-1}} = 25$, then n = _____.

A. 5

B. -1

C. 2

D. 1



Q9 Mathematics

Two numbers are in the ratio 11 : 17 and the difference between the numbers is 18. The HCF and the LCM of these numbers, respectively, are:

- A. 9 and 567
- B. 5 and 569
- C. 3 and 561
- D. 7 and 563

**Q10 Mathematics**

A train goes from A to B at a speed of 20 km/h and returns from B to A by the same route at 30 km/h. The average speed (in km/h) of the train during the two-way journey is:

- A. 22
- B. 23
- C. 24
- D. 25

**Q11 Mathematics**

The roots of the quadratic equation $x^2 + 10x + 21 = 0$ are:

- A. 7, -3
- B. 3, -7
- C. -3, -7
- D. 7, 3

**Q12 Mathematics**

The value of $2\sqrt{2}\sin 45^\circ \sin 30^\circ + 2\sqrt{3}\cos 60^\circ \tan 60^\circ - \sin 90^\circ$ is _____.

- A. 0
- B. 1
- C. -1
- D. 3



Q13 Mathematics

The value of $(625)^{-1/2}$ is _____.

A. 25

B. 0.25

C. 0.04



D. 2.5

Q14 Mathematics

If $\frac{196}{0.196} = \frac{19.6}{n}$, then the value of n = _____.

A. 0.196

B. 0.00196

C. 0.0196



D. 1.96

Q15 Mathematics

If the interest on a sum of ₹ y at 4% per annum compounded annually for 2 years is ₹612, then the total amount payable at the end of the two-year period will be _____.

A. ₹8,002

B. ₹8,112



C. ₹8,262

D. ₹7,812

Q16 Mathematics

A and B can do a piece of work in 12 days and 8 days, respectively. The number of days required to complete the work if both A and B work together is:

A. 2.4

B. 3.2

C. 4.8



D. 6.4



Q17 Mathematics

If the lengths of the sides of a triangle are $x + 1$, $7 - x$ and $4x - 2$, then the value of x for which the triangle represents an isosceles triangle is _____.

A. 2.4

B. 1

C. 1.8



D. 3

Q18 Mathematics

The LCM of two numbers is 1260 and their HCF is 30. If one of the two numbers is 180, find the other number.

A. 200

B. 210



C. 240

D. 270

Q19 Mathematics

Find the volume (in cm^3) of a sphere having a diameter of 8 cm, giving your answer correct to two places of decimal.

Take $\pi = \frac{22}{7}$

A. 248.19

B. 258.19

C. 268.19



D. 278.19

Q20 Mathematics

The value of $\sqrt{190 + \sqrt{11 + \sqrt{617 + 8}}}$ is _____.

A. 12

B. 16

C. 13

D. 14



Q21 Mathematics

The roots of $6 - 4x^2 + 5x = 0$ are:

A. $-2, -\frac{3}{4}$

B. $2, \frac{3}{4}$

C. $2, -\frac{3}{4}$ ✓

D. $-2, \frac{3}{4}$

Q22 Mathematics

A train travels at an average speed of 30 miles per hour for $2\frac{1}{2}$ hours and then travels at a speed of 60 miles per hour for $1\frac{1}{2}$ hours. The total distance (in miles) covered by the train is _____.

A. 90

B. 180

C. 165 ✓

D. 135

Q23 Mathematics

ABCD is a quadrilateral in which P, Q, R and S are mid-points of the sides AB, BC, CD and DA, respectively. The quadrilateral PQRS is necessarily a:

A. rectangle

B. Trapezium, but not a parallelogram

C. rhombus

D. parallelogram ✓

Q24 Mathematics

A dishonest vendor claims that he is selling goods at their cost price. But he is weighing 850 grams for 1000 grams. What is his profit percentage (rounded off to 2 decimal places)?

A. 14.65%

B. 15.65%

C. 16.65%

D. 17.65% ✓



Q25 Mathematics

A shopkeeper offered a machine at a discount of 10% after setting its marked price at 10% above the cost price. His loss percentage is _____.

- A. 10%
- B. 9.8%
- C. 7.8%
- D. 1%

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(10, 144)

(17, 361)

- A. (12, 169)
- B. (9, 100)
- C. (21, 529)
- D. (11, 144)



Q27 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All pens are sketch-pens.
2. Some sketch-pens are markers.
3. No marker is a drawing.

Conclusions:

- I. Some drawings are markers.
- II. No pen is a drawing.
- III. Some sketch-pens are pens.

A. Only conclusions I and II follow

B. Only conclusions II and III follow

C. Only conclusion I follows

D. Only conclusions III follows



Q28 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All TVs are radios.

Some radios are mobiles.

All mobiles are pen drives.

Conclusions:

(I) Some radios are pen drives.

(II) Some TVs are mobiles.

A. Only conclusion I follows



B. Only conclusion II follows

C. Neither conclusion I nor II follow

D. Both conclusions I and II follow



Q29 General Intelligence and Reasoning

Five persons are sitting in a straight row, facing North. K and N are sitting at the two extreme ends. R is sitting to the immediate left of L. M is sitting to the immediate left of N. K and L are the immediate neighbours of R. What is R's position when counted from the extreme left end?

A. Second



B. Third

C. Fourth

D. Fifth

Q30 General Intelligence and Reasoning

In the given question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $B = T < E \leq G > H > Q$

Conclusions: I. $G > B$

II. $G > Q$

A. Only conclusion I is true

B. Only conclusion II is true

C. Neither conclusion I nor II is true

D. Both conclusions I and II are true



Q31 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Farmers in Village X should switch to crops that require comparatively less water for irrigation as compared to sugarcane.

Arguments:

- I. Availability of water for irrigation has been on a constant decline in Village X for last few years.
- II. Main source of income of farmers in Village X is through sale of sugarcane crop to the nearby sugar factories.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement.

C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.



Q32 General Intelligence and Reasoning

Seven boxes, O, P, Q, R, S, T and U, are kept one over the other, but not necessarily in the same order. Only four boxes are between Q and P. U is exactly in the middle of the pile. R is immediately below Q. S is exactly third from the bottom. Only T is between S and P. Q is immediately below O. Which box is at the top-most position?

A. Q

B. O



C. R

D. P

Q33 General Intelligence and Reasoning

In a row of people all facing north, Mohit is at 20th position from the extreme left end and 30th from the extreme right end of the row. How many people are there in the row?

A. 40

B. 49



C. 50

D. 39

Q34 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement: $Z < X \geq U = Y < V \leq W$

A. $Y > W$

B. $V > U$



C. $Z > X$

D. $X < Y$

Q35 General Intelligence and Reasoning

30 soldiers are standing in a straight row facing the north. Ramsingh is 6th from the right end and Abhimanyu is 14th from the right end as well. How many soldiers are standing between Ramsingh and Abhimanyu?

A. 8

B. 16

C. 24

D. 7



Q36 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

13 : 19 :: 3 : 7 :: 31 : ?

A. 41



B. 47

C. 51

D. 39

Q37 General Intelligence and Reasoning

In a certain code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	1	!	2	@	3	#	4	\$	5	%	6	^	7	&	8	*	9
Code	T	D	C	R	G	B	Y	H	N	J	P	L	Q	S	D	F	Z

Conditions:

- I. If the first element is an even number and the last is an odd number, the code for the first and last elements will be K.
- II. If both the second and third elements are even numbers, the codes for these two are to be interchanged.
- III. If the first element is a number and the last a symbol, the code for the first element is to be used for the last element also.

What will be the code for 2\$4%3&?

A. CHYJGC



B. CHYJGS

C. SHYJGC

D. SHYJGS

Q38 General Intelligence and Reasoning

Town F is to the north of Town M. Town B is to the west of Town M. Town C is to the east of Town M. Town D is to the south of Town C. What is the position of Town F with respect to Town D?

A. North-East

B. North- West



C. South-East

D. South-West



Q39 General Intelligence and Reasoning

Refer to the following letter-symbol series and answer the question that follows.

N S \$ F \$ & H H Y T G B R ^ @ D R S V % ^ V # D % C D @

How many such symbols are there that are immediately preceded by a letter and also immediately followed by a letter?

A. 1

B. 2

C. 3

D. 4



Q40 General Intelligence and Reasoning

If '+' means '×', '×' means '+', '÷' means '−', and '−' means '÷', then what will be the value of the given expression?

$$215 \times 5 \div 4 - 18 \times 3$$

A. 95

B. 39

C. 86

D. 45



Q41 General Intelligence and Reasoning

Six friends, F, G, H, J, K and L are having dinner sitting around a round table in a restaurant facing the center (but not necessarily in the same order). K is the immediate neighbor of H and J. F is sitting to the immediate right of H. L is to the immediate left of J. Who is sitting to the immediate right of G?

A. F

B. L

C. H

D. J



Q42 General Intelligence and Reasoning

If '+' means '×', '×' means '+', '÷' means '−', and '−' means '÷', then what will be the value of the given expression?

$$87 \times 3 - 8 + 5 \div 10$$

A. 59

B. 19

C. 47

D. 57



Q43 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

ZRW21, XPU25, VNS29, TLQ33, ?

A. RJO37



B. JRO37

C. ORJ37

D. OPJ36

Q44 General Intelligence and Reasoning

Refer to the following number-symbol series and answer the question that follows.

(Left) 1 3 & > 3 \$ 8 4 ! > 9 3 4 1 @ \$ 3 5 > @ # 2 9 8 6 9 ! 9 (Right)

If all the numbers are dropped from the series, which of the following symbols will be the seventh to the left of the third from the right?

A. &

B. >

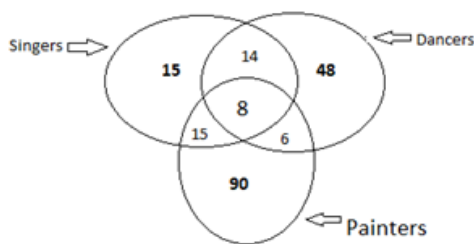


C. \$

D. @

Q45 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many people are Singers as well Dancers but not Painters?

A. 22

B. 8

C. 14



D. 15



Q46 General Intelligence and Reasoning

If 13 May 2007 is a Sunday, then what will be the day of the week on 17 May 2013?

- A. Friday
- B. Monday
- C. Sunday
- D. Wednesday

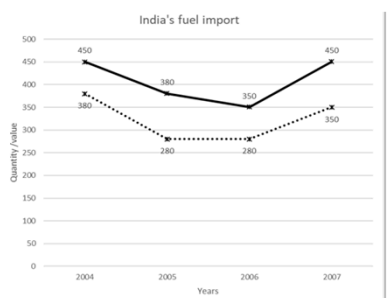
**Q47** General Intelligence and Reasoning

Alok starts from Point B and drives 5 km towards the north. He then takes a right turn, drives 10 km, turns right and drives 5 km. He takes a final right turn, drives 3 km and stops at Point X. How far and towards which direction should he drive in order to reach Point B from Point X? (All turns are 90 degree turns only)

- A. 7 km towards the east
- B. 5 km towards the east
- C. 7 km towards the west
- D. 6 km towards the west

**Q48** General Intelligence and Reasoning

The line graph given below shows India's total quantity of fuel imported (in million tonnes) (dotted line) and the total value of that fuel imported (in USD billion) (solid line) for the year 2004-2007. Study the graph and answer the question.



What was the ratio of the quantity of fuel imported to the value of fuel imported in the year 2006?

- A. 4 : 5
- B. 4 : 6
- C. 7 : 9
- D. 2 : 3



Q49 General Intelligence and Reasoning

If $\times$ stands for $-$, $\div$ stands for $+$, $+$ stands for $\div$ and $-$ stands for $\times$, what will come in place of the question mark (?) in the following equation?

$$24 \div 30 - 9 + 15 \times 18 = ?$$

A. 32

B. 29

C. 24



D. 42

Q50 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

15, 17, 20, 25, 32, ?

A. 45

B. 44

C. 43



D. 40

Q51 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

14, 18, 26, 38, 54, ?

A. 78

B. 70

C. 74

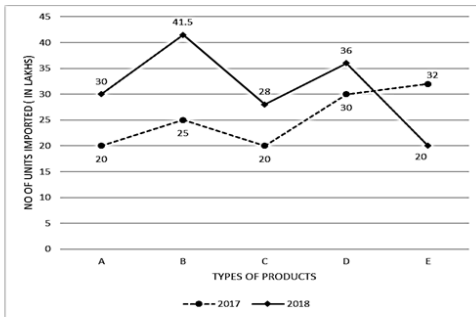


D. 72



Q52 General Intelligence and Reasoning

The line graph given below shows the total number of different products A, B, C, D and E (in lakh) are imported by a company in 2017 and 2018. Study the graph carefully and answer the following question.



What was the ratio of the number of type C products imported in the year 2017 to that in 2018?

A. 5 : 7



B. 4 : 6

C. 7 : 5

D. 2 : 3

Q53 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word HMADIST is arranged in alphabetical order?

A. None

B. One

C. Two



D. Three

Q54 General Intelligence and Reasoning

In a code language, 'mangoes are here' is written as 'tod din mul', 'no fruit is like mangoes' as 'mado si fla pri tod' and 'I am here' as 'lopi din nro'. What code words are written for 'mangoes' and 'here' respectively?

A. tod, mul

B. tod, din



C. din, mul

D. mul, tod



Q55 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

TXB : QWE :: REA: ODD :: DUW : ?

A. BTZ

B. ATZ



C. AQX

D. ATX

General Science

25 Questions • Answer Key

Q56 General Science

In terrestrial animals, exchange of gases takes place by diffusion. Which among the following statements are true about respiration in these animals?

- a. Diffusion through their surface
- b. They have fine and delicate surface that enables exchange of gases
- c. They may have passages for flow of air
- d. They have less surface area but heavy blood flow for respiration

A. a and b

B. a, c and d

C. a, b and c



D. a and d

Q57 General Science

_____ is a suitable mirror that can be used to focus sunlight to a point.

A. A concave mirror



B. A convex mirror

C. A plane mirror

D. A glass plate



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Q58 General Science

Which system is affected the most by AIDS?

- A. Immune system
- B. Excretory system
- C. Nervous system
- D. Circulatory system

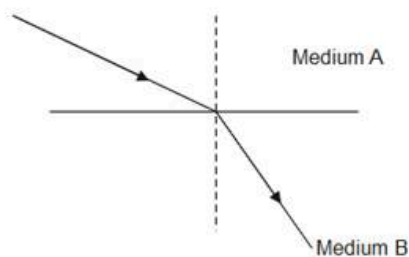
Q59 General Science

If an object is placed 36 cm in front of a concave mirror of focal length 18 cm, then its image will be formed _____.

- A. at 18 cm in front of the mirror
- B. at 18 cm behind the mirror
- C. at 36 cm in front of the mirror
- D. at 36 cm behind the mirror

Q60 General Science

The path of a ray of light incident on an interface separating two transparent media is shown in the figure. The refractive index (n) of medium B with respect to medium A is given by:



- A. $n > 1$
- B. $n = 1$
- C. $0 < n < 1$
- D. $n = 0$

Q61 General Science

Which of the following elements has three shells with two valence electrons?

- A. P
- B. Si
- C. Mg
- D. Cl

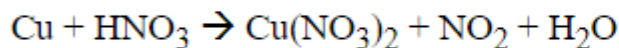
Q62 General Science

How many molecules of carbon dioxide are formed during the breakdown of pyruvate using oxygen in the mitochondria?

- A. Two
- B. Three
- C. Five
- D. Six

Q63 General Science

Copper reacts with conc. nitric acid to produce cupric nitrate and nitrogen dioxide as follows.



Which of the following balanced equations is correct?

- A. $\text{Cu} + 2 \text{HNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + \text{NO}_2 + 2 \text{H}_2\text{O}$
- B. $2 \text{Cu} + 4 \text{HNO}_3 \rightarrow 2 \text{Cu}(\text{NO}_3)_2 + 2 \text{NO}_2 + 2 \text{H}_2\text{O}$
- C. $\text{Cu} + 4 \text{HNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + 2 \text{NO}_2 + \text{H}_2\text{O}$
- D. $\text{Cu} + 4 \text{HNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + 2 \text{NO}_2 + 2 \text{H}_2\text{O}$

Q64 General Science

Autotrophs store their food in the form of:

- A. glycogen
- B. starch
- C. protein
- D. fats

Q65 General Science

Which of the following statements is INCORRECT about plaster of Paris?

- A. It is used in making cosmetics and casts for statues.
- B. It is also known as calcium sulphate dihydrate.
- C. It is used for making surfaces smooth before painting.
- D. It is used for setting fractured bones.



Q66 General Science

Which of the following substances show biological magnification?

- A. Greenhouse gases
- B. Carbon soot deposits
- C. Acidic fumes
- D. Chemical pesticides



Q67 General Science

Which of the following is the Modern Periodic Law?

- A. 'Properties of elements are a periodic function of their atomic number'.
- B. 'Properties of elements are a periodic function of their atomic mass'.
- C. 'Properties of elements are a periodic function of their melting points'.
- D. 'Properties of elements are a periodic function of their boiling points'.



Q68 General Science

Which of the following metals is the most reactive?

- A. Mg
- B. Cu
- C. Fe
- D. Zn



Q69 General Science

If the number of turns in a solenoid increases, then:

- A. magnetic field increases
- B. magnetic field decreases
- C. magnetic field remains constant
- D. magnetic field decreases to zero



Q70 General Science

Conversion of energy in electric motor is:

- A. Sunlight to electrical energy
- B. Electrical energy to mechanical energy ✓
- C. Mechanical energy to electrical energy
- D. Electrical energy to heat energy

Q71 General Science

If the length of the wire is doubled and cross section area of the wire is halved then the resistivity of the material is:

- A. doubled
- B. halved
- C. unchanged ✓
- D. increased by 4 times

Q72 General Science

Which of the following is/are an abiotic component of an ecosystem?

- A. Fungi
- B. Insects
- C. Microorganisms
- D. Soil ✓

Q73 General Science

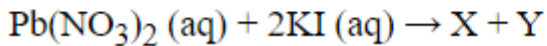
An electric transformer works on the principle of:

- A. electromagnetic induction ✓
- B. photoelectric effect
- C. Joule's heating effect
- D. Ohm's law



Q74 General Science

In the given double displacement reaction, identify the products X and Y.



A. $\text{PbI}_2 (\text{s}) + 2\text{KNO}_3 (\text{aq})$



B. $\text{PbI}_2 (\text{s}) + \text{KCl} (\text{s})$

C. $\text{PbI}_2 + \text{HNO}_3$

D. No reaction occurs

Q75 General Science

What happens when a pencil is immersed in water?

A. Colour of pencil changes

B. Pencil appears bright

C. Pencil appears bent



D. Pencil looks curved

Q76 General Science

In case of N_2 , the molecule has _____.

A. a triple bond between the two nitrogen atoms



B. a single bond between the two nitrogen atoms

C. a double bond between the two nitrogen atoms

D. an ionic bond between the two nitrogen atoms

Q77 General Science

Who was the mastermind behind the Arabari Project of West Bengal, which started in 1972?

A. Sunder lal Bahuguna

B. Dr. Rajendra Singh

C. Dr. AK Banerjee



D. Dr. Sunita Narain



Q78 General Science

Which of the following reactions is an example of double displacement?

- A. $\text{Pb(s)} + \text{CuCl}_2(\text{aq}) \rightarrow \text{PbCl}_2(\text{aq}) + \text{Cu(s)}$
- B. $\text{Zn(s)} + \text{CuSO}_4(\text{aq}) \rightarrow \text{ZnSO}_4(\text{aq}) + \text{Cu(s)}$
- C. $\text{Na}_2\text{SO}_4(\text{aq}) + \text{BaCl}_2(\text{aq}) \rightarrow \text{BaSO}_4(\text{s}) + 2\text{NaCl}(\text{aq})$ ✓
- D. $\text{Fe(s)} + \text{CuSO}_4(\text{aq}) \rightarrow \text{FeSO}_4(\text{aq}) + \text{Cu(s)}$

Q79 General Science

If a toaster is connected to 440 V AC instead of 220 V AC, then the heat produced per second will be _____ of the initial amount.

- A. twice
- B. half
- C. four times ✓
- D. one-fourth

Q80 General Science

Which of the following statements is INCORRECT?

- A. Carbon dioxide is more soluble in water than oxygen.
- B. The respiratory pigment is present in the white blood corpuscles. ✓
- C. The pyruvate is converted into lactic acid which is a three-carbon molecule.
- D. The walls of the alveoli contain an extensive network of blood-vessels.

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The Kanya Shiksha Pravesh Utsav campaign launched by the Government of India in March 2022 aims at enhancing enrolment and retention of girls between _____ of age in schools.

- A. 6 to 10 years
- B. 11 to 14 years ✓
- C. 14 to 16 years
- D. 15 to 18 years



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Q82 General Awareness and Current Affairs

Which of the following fundamental duties is added by the 86th Amendment of the constitution in 2002?

- A. To cherish and follow the noble ideals which inspired our national struggle for freedom
- B. To defend the country and render national service when called upon to do so
- C. To safeguard public property and to abjure violence
- D. Who is a parent or guardian, to provide opportunities for education to his child, or as the case may be, ward between the age of six and fourteen years ☒

Q83 General Awareness and Current Affairs

Which zone separates the troposphere from the stratosphere?

- A. Tropopause ☒
- B. Mesopause
- C. Stratopause
- D. Thermopause

Q84 General Awareness and Current Affairs

How many Indian Institutes of Technology were started under the First Five-Year Plan?

- A. Five ☒
- B. Four
- C. Three
- D. Two

Q85 General Awareness and Current Affairs

In which year was Operation Flood started with an aim to create a nationwide milk grid?

- A. 1970 ☒
- B. 1979
- C. 1981
- D. 1985



Q86 General Awareness and Current Affairs

Which of the following is NOT an example of fixed cost for a firm?

- A. Rental lease
- B. Insurance
- C. Property tax
- D. Maintenance and repair



Q87 General Awareness and Current Affairs

In Economics, Average product = _____ ÷ Labour

- A. Marginal product
- B. Fixed cost
- C. Variable cost
- D. Total product



Q88 General Awareness and Current Affairs

Which of the following Articles discusses the veto power of the President of India?

- A. Article 111
- B. Article 114
- C. Article 122
- D. Article 145



Q89 General Awareness and Current Affairs

January 2022, researchers at the IIT Kharagpur have developed a new highly accurate, portable, yet user-friendly, affordable and non-invasive device for detecting _____ in resource-constrained clinical settings.

- A. oral cancer
- B. lung cancer
- C. blood cancer
- D. breast cancer



Q90 General Awareness and Current Affairs

On 31st January 2022, who was appointed as Director General of the National Institute of Electronics and Information Technology?

- A. Dr. Narayan Pradhan
- B. Dr. Pinaki Talukdar
- C. Dr. Madan Mohan Tripathi
- D. Dr. Amrita Hazra



Q91 General Awareness and Current Affairs

As per the report of the National Rubber Policy 2019, India is the _____ largest producer of Natural Rubber in the world.

- A. fifth
- B. sixth
- C. seventh
- D. eighth



Q92 General Awareness and Current Affairs

In India, _____ is observed as Rashtriya Ekta Diwas or National Unity Day every year.

- A. 31 October
- B. 2 October
- C. 30 January
- D. 15 December



Q93 General Awareness and Current Affairs

Which Indian Chess player was in attendance along with other officials to receive the official hosting rights of FIDE 44th World Chess Olympiad 2022 on behalf of India?

- A. Dibyendu Barua
- B. Koneru Humpy
- C. Abhijit Kunte
- D. Viswanathan Anand



Q94 General Awareness and Current Affairs

Which two languages got the Classical language status in 2008?

- A. Tamil and Sanskrit
- B. Sanskrit and Malayalam
- C. Malayalam and Odia
- D. Kannada and Telugu



Q95 General Awareness and Current Affairs

As of August 2022, which Article of the Constitution of India says “No child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment”?

- A. Article 19
- B. Article 24
- C. Article 27
- D. Article 32



Q96 General Awareness and Current Affairs

In all Panchayat institutions, not less than _____ of the total number of seats reserved, shall be reserved for women belonging to the Scheduled Castes or, as the case may be, the Scheduled Tribes.

- A. One-third
- B. Two-third
- C. Half
- D. Three-fourths



Q97 General Awareness and Current Affairs

Who among the following was the founder of the Arya Samaj?

- A. Bal Gangadhar Tilak
- B. Dayanand Saraswati
- C. Ram Mohan Roy
- D. Ishwar Chandra Vidyasagar

Q98 General Awareness and Current Affairs

Which of the following is a Middle Indian dialect that is closely related to Sanskrit, and is one of the major languages of Buddhist scriptures and literature?

- A. Varhadi
- B. Pali
- C. Paisaci
- D. Saraiki

Q99 General Awareness and Current Affairs

In which of the following cities is the Indian Institute of Tropical Meteorology located?

- A. Delhi
- B. Pune
- C. Mumbai
- D. Kochi

Q100 General Awareness and Current Affairs

Nitu Ghangas won Gold in which sport at the Commonwealth Games 2022?

- A. Wrestling
- B. Athletics
- C. Boxing
- D. Judo



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A dishonest shopkeeper sells goods at cost price but uses a weight of 940 gm for one kg. His gain percentage (rounded off to two decimal places) is:

A. 5.38%

B. 6.08%

C. 6.38%



D. 4.38%

Q2 Mathematics

Two trains are moving in opposite directions at speeds of 80 km/h and 120 km/h. The length of one train is 300 m. The time taken by them to cross each other is 12 seconds. The length (in m) of the other train, correct to 2 decimal places, is:

A. 333.33

B. 366.67



C. 377.77

D. 388.88

Q3 Mathematics

If $-(2/3)$ is a root of the equation $kx^2 - 13x - 10 = 0$, then the value of k is:

A. 1

B. 2

C. 3



D. 4

Q4 Mathematics

Three numbers are in the ratio 5 : 6 : 8 and their LCM is 1200. The sum of the numbers is:

A. 210

B. 200

C. 190



D. 180



Q5 Mathematics

The marks scored by 10 students are given below.

17, 13, 18, 11, 15, 13, 19, 18, 13, 17

The mode of the data is:

A. 13



B. 17

C. 11

D. 19

Q6 Mathematics

The ratio of the lengths of two corresponding sides of two similar triangles is 3 : 1. The ratio of their corresponding angles is:

A. 1 : 1



B. 2 : 1

C. 3 : 1

D. 1 : 3

Q7 Mathematics

The value of $(\sin 32^\circ \cos 58^\circ + \cos 32^\circ \sin 58^\circ)$ is:

A. 0

B. 1



C. 2

D. 3

Q8 Mathematics

A cylindrical rod has an outer curved surface area of 2800 cm^2 . If the length of the rod is 100 cm, then the outer radius (in cm) of the rod, correct to two places of decimal, is:

Take $\pi = \frac{22}{7}$

A. 2.45

B. 3.45

C. 4.45



D. 5.45



Q9 Mathematics

Neeraj and his sister are 12 years and 3 years old, respectively. After how many years will Neeraj's sister be half as old as Neeraj?

A. 3

B. 6

C. 7

D. 9

**Q10 Mathematics**

A, B and C invested ₹ 10,000, ₹12,000, and ₹15,000, respectively, for 5, 6, and 9 months, respectively, in a business. If A's share in the profit is ₹2,500, then the total profit is:

A. ₹12,550

B. ₹12,650

C. ₹12,700

D. ₹12,850

**Q11 Mathematics**

The roots of the equation $\sqrt{3}x^2 - 8x + 5\sqrt{3} = 0$ are:

A. $-\sqrt{3}, \frac{5}{\sqrt{3}}$ B. $\sqrt{3}, \frac{-5}{\sqrt{3}}$ C. $-\sqrt{3}, \frac{-5}{\sqrt{3}}$ D. $\sqrt{3}, \frac{5}{\sqrt{3}}$ **Q12 Mathematics**

A shopkeeper marked the price of an article at 10% higher than its cost price. He then gives two successive discounts of 5% each. What is his loss or profit percentage?

A. 0.725% loss

B. 0.525% loss

C. 0.725% profit

D. 0.525% profit



Q13 Mathematics

The average age of a husband and his wife was 23 years at the beginning of their marriage. After 5 years of marriage, they had a one-year-old child. The average age of the family of three when the child was born was:

- A. 24 years
- B. 23 years
- C. 20 years
- D. 18 years

**Q14** Mathematics

Factorise $49a^2 + 70ab + 25b^2$.

- A. $(7a + 5b)^2$
- B. $(5a + 7b)^2$
- C. $(7a - 5b)^2$
- D. $(5a - 7b)^2$

**Q15** Mathematics

The LCM of 36, 48, 120 and 300 is:

- A. 900
- B. 1200
- C. 1800
- D. 3600

**Q16** Mathematics

The average of 3^2 , 4^2 , 5^2 , 6^2 and 7^2 is _____.

- A. 28
- B. 27
- C. 25
- D. 24



Q17 Mathematics

The volume (in m^3) of a cube, each of whose edges is 9 m, is:

A. 486

B. 527

C. 648

D. 729 ☒**Q18** Mathematics

Simplify $34 - 66 \div 6 + 18 \times 8$.

A. 104

B. 167 ☒

C. 138

D. -600

Q19 Mathematics

Raghav's monthly salary is ₹18,000. Raghav took a loan of ₹30,000 on simple interest for 3 years at the rate of 5% per annum. The amount that he will be paying as simple interest in 3 years is what percentage of his monthly salary?

A. 25% ☒

B. 20%

C. 30%

D. 35%

Q20 Mathematics

Evaluate $0.\overline{696} \times 0.\overline{27}$.

A. $\frac{2083}{10989}$ B. $\frac{2085}{10989}$ C. $\frac{2087}{10989}$ D. $\frac{2088}{10989}$ ☒

Q21 Mathematics

In an isosceles triangle, the vertex angle measures 80° . What is the measure of each of the base angles?

A. 50° and 50°



B. 60° and 40°

C. 60° and 60°

D. 60° and 50°

Q22 Mathematics

Evaluate 999^3 .

A. 997002999



B. 997003999

C. 997004999

D. 997005999

Q23 Mathematics

The value of $\frac{(0.064) + (0.008)}{0.16 + 0.04 - 0.08}$ is _____.

A. 0.05

B. 2.7

C. 0.6



D. 1.4

Q24 Mathematics

If 2, 3, 8 and y are in proportion, find the value of y.

A. 48

B. 24

C. 16

D. 12



Q25 Mathematics

A boy covers 450 m in 2 minutes 30 seconds. How many kilometres will he cover in an hour if he travels at the same speed mentioned above?

A. 13.5

B. 10.8



C. 12.8

D. 9.6

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$5.18 \times 4 + 2.06 \times 5 - 10 \div 2 + 1 = ?$$

A. 30

B. 26



C. 40

D. 15

Q27 General Intelligence and Reasoning

If 19 November 2005 is a Saturday, then what will be the day of the week on 23 November 2008?

A. Wednesday

B. Sunday



C. Friday

D. Tuesday

Q28 General Intelligence and Reasoning

40 students of a class are standing in a queue according to the increasing order of their heights. Suhani is 8th from the front, while Syma is 8th from the back. How many students are standing between Suhani and Syma?

A. 21

B. 23

C. 24



D. 25



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Q29 General Intelligence and Reasoning

Amit starts from Point Y and drives 8 km towards the north. He then takes a right turn, drives 12 km, turns right and drives 11 km. He then takes a right turn and drives 15 km. He takes a final right turn, drives 3 km and stops at Point Z. How far and towards which direction should he drive in order to reach Point Y from Point Z? (All turns are 90 degree turns only)

- A. 3 km towards the north
- B. 2 km towards the east
- C. 3 km towards the east
- D. 2 km towards the west



Q30 General Intelligence and Reasoning

Each vowel in the word THUNDER is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear in the middle of the group of letters thus formed?

- A. O
- B. M
- C. V
- D. N



Q31 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

OKD : RNG

MKS : PNV

- A. RVH : UYK
- B. RVH : VUK
- C. HVK : UKH
- D. HKV : EKH



Q32 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

3, 4, 4, 6, 12, 15, ?, 49, 196, 201

A. 27

B. 32

C. 37

D. 45



Q33 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

BKS36, GPX48, LUC60, QZH72, ?

A. VEM84

B. MVE88

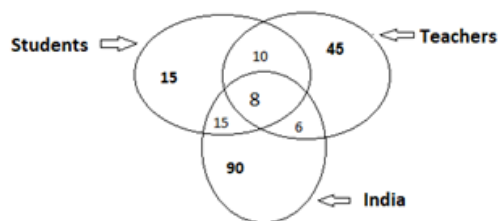
C. VEM88

D. MVE84



Q34 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such students are there who are also teachers but NOT from India?

A. 10

B. 12

C. 20

D. 60



Q35 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

87, 76, 67, 60, 55, ?

A. 50

B. 51

C. 52



D. 53

Q36 General Intelligence and Reasoning

Three statements are given, followed by four conclusions numbered I, II, III and IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All pictures are drawings.
2. No drawing is caricature.
3. All figures are caricatures.

Conclusions:

- I. Some figures are pictures.
- II. No caricature is picture.
- III. No picture is figure.
- IV. Some caricatures are pictures.

A. Only conclusions I follows

B. Only conclusions II and III follow



c. Only conclusions I and IV follow

D. Only conclusion IV follows



Q37 General Intelligence and Reasoning

Read the given statement and arguments carefully and select the appropriate answer from the given options.

Statement:

Unemployment among youth has emerged as the biggest challenge in post-COVID-19 times.

Arguments:

- I. Many small-scale industries stopped working during the COVID period.
- II. People do not want to work in small scale industries.

- A. I weakens while II strengthens the statement.
- B. II weakens while I strengthens the statement.
- C. Both I and II weaken the statement.
- D. Both I and II strengthen the statement.

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q38 General Intelligence and Reasoning

Study the following number arrangement and answer the question given below. All numbers given below are 2 digit numbers.

23 35 76 87 45 28 49 98 56 34 37 48 78 75 64 89 73

What will be the product of numbers that is third from the left end and fifth from the right end in the above series?

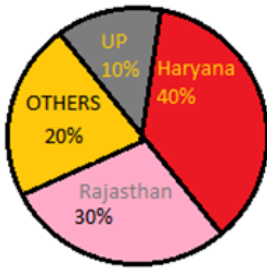
- A. 6525
- B. 2880
- C. 5928
- D. 4586



Q39 General Intelligence and Reasoning

Study the given pie chart and answer the question that follows.

The pie-chart shows the number of tourists visiting from different states. The total tourist traffic is 20 lakh.



Find the difference between the number of tourists visiting from Haryana and Rajasthan.

- A. 3 lakh
- B. 4 lakh
- C. 2 lakh
- D. 5 lakh



Q40 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. Some apricots are peaches.
2. Some kiwis are apricots.
3. All apricots are sweet-limes.

Conclusions:

- I. Some sweet-limes are kiwis.
- II. No peach is sweet-lime.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Either conclusion I or II follow
- D. Both conclusions I and II follow



Q41 General Intelligence and Reasoning

J, L, N, P, R, T, V and W are sitting around a square table facing the centre of the table (but not necessarily in the same order). Some of them are sitting at the corners while some are sitting at the exact centre of the sides. W is on the immediate left of J but not an immediate neighbour of P or R. T is on the immediate right of L. N has R and T as his immediate neighbours, V is immediate neighbour of R. Who is sitting to the immediate left of P?

A. J



B. L

C. R

D. V

Q42 General Intelligence and Reasoning

If the digits 6 and 5 are replaced with 3 and 9, respectively, in the number 265367856, what will be the sum of the 1st and the 5th digits (when counted from the left) in the new number thus formed?

A. 8

B. 5



C. 13

D. 17

Q43 General Intelligence and Reasoning

Read the given statements and conclusions carefully and decide which of the given conclusions logically follows the statements.

Statements:

1. $D \geq S$
2. $X < W$
3. $S = J$
4. $W > Y$
5. $X > D$
6. $J \geq E$

Conclusions:

- I. $D < Y$
- II. $D = E$
- III. $E = S$
- IV. $W > J$

A. Only conclusion I follows

B. Only conclusion II follows

C. Only conclusion IV follows



D. Only conclusion III follows



Q44 General Intelligence and Reasoning

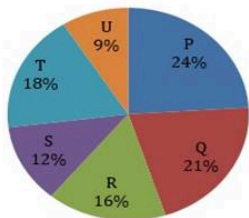
Six friends M, N, O, P, Q and R are seated around a round table facing the centre. P is an immediate neighbour of both N and R. Q is an immediate neighbour of both M and O. N is not seated at either side of O. Where is M seated?

- A. Beside O
- B. Beside N
- C. Beside P
- D. Beside R

Q45 General Intelligence and Reasoning

The given pie chart shows the number of students in six different Houses- P, Q, R, S, T and U of VV International School. Study the chart and answer the question.

Total number of students = 2400



Find the ratio of students in House S to students in House T.

- A. 1 : 2
- B. 3 : 4
- C. 2 : 3
- D. 4 : 7

Q46 General Intelligence and Reasoning

Study the given number series and answer the question that follows.

(Left) 9 6 7 6 8 2 5 7 3 2 5 8 6 2 7 5 4 9 2 4 7 3 8 5 (Right)

How many such even numbers are there each of which is immediately preceded by an odd number and also immediately followed by an odd number?

- A. 4
- B. 8
- C. 6
- D. 2



Q47 General Intelligence and Reasoning

All 24 students of a class are standing in a straight row facing north. Neha is 8th from the right end, while Abhishek is 20th from the left end. How many students are standing between Neha and Abhishek?

A. 2



B. 4

C. 3

D. 1

Q48 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ symbol	4	%	5	8	@	\$	5	4	^	+	#	3	7	9
Code Letter	G	O	H	P	T	M	A	B	L	N	F	S	Q	R

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for 5 @ \$ ^ 8 ?

A. HTMLP

B. HTML©

C. ©TMLP

D. ©TML©

**Q49** General Intelligence and Reasoning

A certain number of persons are standing in a straight row facing North. X is standing to the immediate left of W but immediate right of R. Z is standing to the immediate left of R. There is only one person to the left of P. Q is standing to the immediate left of Y. The person standing at the extreme right end is the only person to the right of Y. Only four persons are standing between P and Q. If no other person is standing in the row, what is the total number of persons standing?

A. Seven

B. Eight

C. Nine



D. Ten



Q50 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

8 : 32 :: 18 : 162 :: 16 : ?

A. 118

B. 130

C. 128



D. 120

Q51 General Intelligence and Reasoning

Amongst six cousins, P, Q, R, S, T and U, each are of a different age. P's age is more than that of only one cousin. Q's age is more than that of S and P but not more than that of R. S's age is immediately more than P's age. R is younger than U. T is the youngest. Who is the oldest among all the cousins?

A. Q

B. U



C. S

D. T

Q52 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions that follow. The correct combination of codes following the conditions is your answer.

Number/ symbol	6	%	8	9	@	\$	5	4	^	+	#	3	7	9
Code Letter	G	O	H	Q	T	M	A	B	L	M	F	S	Q	R

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for 3 @ 4 # 4 ?

A. STBF©

B. SFTF©

C. ©TFBC

D. ©TBF©



Q53 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

72 : 90 :: 48: 60 :: 24: ?

A. 40

B. 24

C. 30



D. 32

Q54 General Intelligence and Reasoning

If 2 is added to each odd digit and 2 is subtracted from each even digit in the number 5374816. What will be the product of the digits which are second from the left and second from the right in the new number thus formed?

A. 20

B. 3

C. 28

D. 15



Q55 General Intelligence and Reasoning

Jyoti starts from the mall and drives 4 km towards West. She then takes a left turn, drives 8 km, turns left and drives 24 km. She then takes a left turn and drives 6 km. She then turns left, drives 6 km and reaches her home. Which direction is the mall with reference to her home?

A. North

B. North- West



C. South- east

D. South - West

General Science

25 Questions • Answer Key

Q56 General Science

In preparation of NaOH by electrolytic method, which solution is used?

A. Lime water

B. Brine



C. Bromine water

D. Chlorine water



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Q57 General Science

What is good way to get relief from leg muscle cramps after intense activity?

- A. Rubbing legs with an ice-pack
- B. Applying a pain reliever ointment
- C. Gentle massage with warm pads
- D. Drinking warm sweet milk or tea



Q58 General Science

On increasing the potential difference applied across a conductor at constant temperature, _____

- A. current decreases
- B. current increases
- C. current remains constant
- D. current becomes zero



Q59 General Science

Garhwal was the birthplace of the _____.

- A. Bishnoi Movement
- B. Narmada Bachao Andolan
- C. Jungle Bachao Andolan
- D. Chipko Movement



Q60 General Science

Which of the following is the most environment-friendly method of disposing of organic wastes?

- A. Landfills
- B. Incineration
- C. Composting
- D. Development of value-added products



Q61 General Science

In a balanced chemical equation, the reactant is always written _____ the arrow.

- A. above
- B. on the left-hand side of
- C. on the right-hand side of
- D. below

Q62 General Science

An object must be placed _____ to obtain a real and inverted image of the same size as that of the object after reflection.

- A. at infinity from a concave mirror
- B. between P and F of a convex mirror
- C. at C of a convex mirror
- D. at C of a concave mirror

Q63 General Science

Which of the following reactions is NOT a combination reaction?

- A. $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
- B. $\text{NH}_3 + \text{HCl} \rightarrow \text{NH}_4\text{Cl}$
- C. $\text{HI} \rightarrow \text{H}_2 + \text{I}_2$
- D. $\text{C} + \text{O}_2 \rightarrow \text{CO}_2$

Q64 General Science

Electromagnetic induction is the phenomenon wherein:

- A. a moving magnet induces an EMF in the closed loop of a conductor
- B. a moving closed loop of a conductor induces an EMF in the closed loop of another conductor
- C. a moving magnet exerts force on the closed loop of a conductor
- D. a moving coil carrying current induces force on the magnet



Q65 General Science

Where is the ozone hole located?

- A. Over the Equator
- B. Over the North and South Poles
- C. Over industrialised Europe
- D. Over Antarctica



Q66 General Science

A rainbow is observed due to refraction of the sunlight through rain drops. This implies that:

- A. sunlight is monochromatic
- B. sunlight is polychromatic
- C. refractive index of rain drop is 1
- D. rain drops are not spherical in shape



Q67 General Science

In humans, the sex of the offspring is determined by the _____.

- A. maternal chromosome
- B. paternal chromosome
- C. both maternal and paternal chromosomes
- D. autosomes



Q68 General Science

Which of the following statements is correct with respect to Newlands law of octaves?

- A. Newlands' law of octaves worked well with lighter elements only.
- B. John Newlands, an English scientist arranged the then known elements in the order of increasing atomic sizes.
- C. Newlands' law of octaves worked well with heavier elements only.
- D. In Newlands' octaves, the properties of fluorine and sodium were found to be the same.



Q69 General Science

Which of the following industries does NOT use washing soda?

A. Soap

B. Glass

C. Cosmetic



D. Paper

Q70 General Science

We can obtain an image that is real and of equal size when an object is placed _____ of a _____ mirror.

A. at F, convex

B. at C, concave



C. at F, concave

D. between P and F, concave

Q71 General Science

Which of the following compounds does NOT belong to the same homologous series?

A. C_3H_6

B. C_4H_8

C. C_5H_{10}

D. C_6H_{11}



Q72 General Science

An electric generator is a device which converts:

A. mechanical energy into light energy

B. light energy into mechanical energy

C. mechanical energy into electrical energy



D. electrical energy into mechanical energy



Q73 General Science

What are the group numbers of halogens and carbon family, respectively, in the modern periodic table?

- A. Group 18 and Group 14
- B. Group 16 and Group 14
- C. Group 16 and Group 17
- D. Group 17 and Group 14



Q74 General Science

Parenchyma tissue is the most common simple permanent tissue in plants. Why is it known as Chlorenchyma and Aerenchyma in some plants?

- A. Chlorenchyma — Has chlorophyll for photosynthesis (leaves)
Aerenchyma — Has air spaces (aquatic plants) and helps them to float



- B. Chlorenchyma — supports the plant
Aerenchyma — Has chlorophyll for photosynthesis (leaves)
- C. Chlorenchyma — Has air spaces (aquatic plants) and helps them to float
Aerenchyma — has chlorophyll for photosynthesis
- D. Chlorenchyma — Has air spaces (aquatic plants) and helps them to float
Aerenchyma — provides mechanical support

Q75 General Science

Which of the following is an INCORRECT relation between V, I and R?

- A. $R = \frac{V}{I}$
- B. $V = \frac{R}{I}$
- C. $V = IR$
- D. $I = \frac{V}{R}$



Q76 General Science

Which of the following carry/carries digested and absorbed fat from the intestine?

- A. Plasma
- B. Lymph
- C. Platelets
- D. Veins



Q77 General Science

In electrical geyser _____ energy is converted to _____.

- A. Electrical, magnetic
- B. Mechanical, electrical
- C. Electrical, heat
- D. Electrical, light



Q78 General Science

Which of the following statements correctly describes water transport in plants?

- A. The process in which loss of water takes place in the form of water vapour through stomata is called transpiration.
- B. The process of water loss from stomata requires energy in the form of ATP.
- C. The process by which water is pulled from the xylem cells of the roots into leaves is called translocation.
- D. The process which is the main driving force of water into the xylem during the day is root pressure.



Q79 General Science

Which of the following coloured precipitates is formed when lead (II) nitrate and potassium iodide are mixed together?

- A. Yellow
- B. Violet
- C. Green
- D. Black



Q80 General Science

An object is placed on the principal axis of a convex lens, at a point beyond $2F_1$. Its image formed is _____.

- A. real and diminished
- B. virtual and diminished
- C. real and enlarged
- D. virtual and enlarged

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The _____ Constitutional Amendment Act of 1992 was responsible for adding Part IX to the Constitution, 'The Panchayats'.

- A. 7th
- B. 73rd
- C. 74th
- D. 83rd

Q82 General Awareness and Current Affairs

The Finance Commission is a constitutionally mandated body, set up under Article _____ of the Constitution of India.

- A. 273
- B. 276
- C. 288
- D. 280

Q83 General Awareness and Current Affairs

Where was the final match of Indian Premier League (IPL) 2022 played?

- A. Green Park Stadium, Kanpur
- B. Wankhede Stadium, Mumbai
- C. Narendra Modi Stadium, Ahmedabad
- D. M Chinnaswamy Stadium, Bengaluru



Q84 General Awareness and Current Affairs

Which of the following features of the Constitution of India is borrowed from the Constitution of the United Kingdom?

- A. Concurrent list
- B. Directive principles of state policy
- C. Single citizenship
- D. Fundamental duties



Q85 General Awareness and Current Affairs

Who among the following Indian cueists won his eighth title at the 19th Asian 100 UP Billiards Championship 2022?

- A. Dhruv Sitwala
- B. Pankaj Advani
- C. Wilson Jones
- D. Alok Kumar



Q86 General Awareness and Current Affairs

As per the Ministry of Mines, as of 2021, 44% of the country's primary gold ore reserves is in _____.

- A. Rajasthan
- B. Karnataka
- C. Jharkhand
- D. Bihar



Q87 General Awareness and Current Affairs

Shri Lal Bahadur Shastri National Sanskrit University is located in:

- A. New Delhi
- B. Jaipur
- C. Pune
- D. Lucknow



Q88 General Awareness and Current Affairs

In which of following states of India is the cultural festival 'LOSAR' celebrated?

A. Nagaland

B. Arunachal Pradesh



C. Goa

D. Karnataka

Q89 General Awareness and Current Affairs

On 7 March 2022, the Ministry of Women and Child Development (MoWCD), in partnership with the Ministry of Education and UNICEF, launched a landmark campaign to bring back out of school adolescent girls in India to the formal education and/or skilling system. What is the name of this campaign?

A. Kanya Pathshala Utsav

B. Kanya Pravesh Utsav

C. Kanya Shiksha Pravesh Utsav



D. Kanya Shikhsan Utsav

Q90 General Awareness and Current Affairs

In which of the following states are the Palitana temples, a Jain pilgrimage site, located?

A. Jharkhand

B. Gujarat



C. Rajasthan

D. Karnataka

Q91 General Awareness and Current Affairs

The 'Lohit' is a tributary of which river from following?

A. Narmada

B. Cauvery

C. Brahmaputra



D. Indus



Q92 General Awareness and Current Affairs

As of August 2022, what is the prescribed maximum age of the subscriber under Atal Pension Yojana (APY) when the minimum prescribed age is 18 years?

- A. 35 years
- B. 40 years
- C. 55 years
- D. 60 years



Q93 General Awareness and Current Affairs

From which of the following countries India has purchased S-400 Missile System?

- A. Russia
- B. Israel
- C. America
- D. Canada



Q94 General Awareness and Current Affairs

Which of the following is the correct period for which the Annual Budget 2021-22 of the Indian Government was announced?

- A. 31 March - 1 April 2021-22
- B. 1 July - 30 June 2021-22
- C. 1 November - 31 October 2021-22
- D. 1 April - 31 March 2021-22



Q95 General Awareness and Current Affairs

What do you call an economic contraction (recession) followed by an expansion?

- A. Balance of payment
- B. Adaptive Expectations
- C. Production function
- D. Business Cycle



Q96 General Awareness and Current Affairs

The Norman Borlaug National Excellence Award is given for excellence in which research field?

A. Agricultural Sciences



B. Energy Sciences

C. Chemical Sciences

D. Physical Sciences

Q97 General Awareness and Current Affairs

Which of the following industries has developed the most on the banks of the Hooghly river?

A. Sugar Industry

B. Dairy Industry

C. Iron-ore Industry

D. Jute Industry



Q98 General Awareness and Current Affairs

The largest peninsular river in India is:

A. Krishna

B. Godavari



C. Cauvery

D. Narmada



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Q99 General Awareness and Current Affairs

The historic place 'Chauri Chaura' is situated in which state?

A. Himachal Pradesh

B. Andhra Pradesh

C. Uttar Pradesh



D. Kerala

Q100 General Awareness and Current Affairs

The Banking Regulation Act, 1949 is a law that regulates banking firms in India. This Act was amended by the Banking Regulation (Amendment) Act of which year?

A. 2018

B. 2016

C. 2020



D. 2014



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A boy goes to school at a speed of 3 km/h. He returns at a speed of 5 km/h. He takes a total of 4 hours for both going to school and returning. The distance (in km) between his home and school is:

- A. 7.2
- B. 7.3
- C. 7.4
- D. 7.5



Q2 Mathematics

If $6 : 18 :: 18 : y$, find the value of y .

- A. 108
- B. 36
- C. 54
- D. 72



Q3 Mathematics

Find the circumference (in m) of the largest circle that can be inscribed in a rectangle whose dimensions are given as 12 m and 7 m.

Take $\pi = \frac{22}{7}$

- A. 37
- B. 22
- C. 19
- D. 11



Q4 Mathematics

A man sells two articles for ₹20,000 each. He gets a profit of 15% on one article and loses 15% on the other article. What is his overall profit or loss (to the nearest integer) in this transaction?

- A. ₹921 profit
- B. ₹921 loss
- C. ₹1,021 profit
- D. ₹1,021 loss



Q5 Mathematics

Two pipes can fill a tank in 25 hours and 35 hours, respectively. The time (in hours) required to fill the tank when both pipes are opened simultaneously is:

A. $\frac{175}{12}$



B. $\frac{165}{12}$

C. $\frac{175}{14}$

D. $\frac{165}{14}$

Q6 Mathematics

During the first year, the population of a town increased by 10% and in the second year it diminished by 10%. At the end of the second year its population was 4,73,220. The population at the beginning of the first year was:

A. 4,78,800

B. 4,78,780

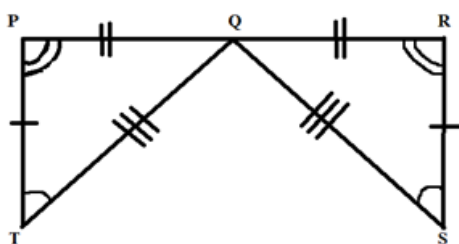
C. 4,78,000



D. 4,78,880

Q7 Mathematics

As per the figure given below, $\Delta QRS \cong$ _____. [Note: Diagram is not drawn to scale or measurements indicated.]



A. ΔQPT



B. ΔPTQ

C. ΔTPQ

D. ΔQTP



Q8 Mathematics

Evaluate $9.4\overline{6} - 2.4\overline{6} + 4.4\overline{6}$.

A. $\frac{10321}{1100}$

B. $\frac{10521}{900}$

C. $\frac{10521}{1100}$

D. $\frac{10321}{900}$ ✓

Q9 Mathematics

Two right-angled triangles are congruent when which of the following conditions is true?

A. When only their hypotenuses are equal

B. When only one of the sides of one of these triangles is equal in length to the corresponding side of the other triangle

C. When their hypotenuses are equal and one of the sides of one of these triangles is equal in length to the corresponding side of the other triangle ✓

D. When one more angle is equal

Q10 Mathematics

There are 50 students (boys and girls only) in a class. The number of boys is 10 more than the number of girls. The number of boys in the class is:

A. 15

B. 20

C. 25

D. 30 ✓

Q11 Mathematics

The HCF of 450, 1500 and 1650 is:

A. 50

B. 100

C. 150 ✓

D. 200



Q12 Mathematics

The quadratic equation $3x^2 - 4\sqrt{3}x + 4 = 0$ has:

- A. two distinct real roots
- B. two equal real roots
- C. no real roots
- D. two imaginary roots



Q13 Mathematics

The area of a square plot is 2916 m^2 . The length of each side of the plot (in m) is

- A. 44
- B. 54
- C. 58
- D. 64



Q14 Mathematics

Write the expanded form of $(3a + 4b + 5c)^2$.

- A. $9a^2 + 16b^2 + 25c^2 + 24ab + 40bc + 30ac$
- B. $9a^2 + 16b^2 + 25c^2 + 24ab + 40bc + 40ac$
- C. $9a^2 + 16b^2 + 25c^2 + 24ab + 40bc + 50ac$
- D. $9a^2 + 16b^2 + 25c^2 + 24ab + 40bc + 60ac$



Q15 Mathematics

The greatest number which divides 1876, 12503, and 6877 leaving remainders 1, 3, and 2, respectively, is:

- A. 625
- B. 675
- C. 555
- D. 655



Q16 Mathematics

The weights (in kg) of 9 members of a school cricket team are 50, 63, x, 62, 64, 48, 51, 55, 48. If the mean weight is 56 kg, then the value of x is _____.

A. 64

B. 48

C. 63



D. 57

Q17 Mathematics

A bronze article having a marked price of ₹1,000 is sold during a festive season sale after three successive discounts of 20% and 30% and 10%. What will be the amount (in ₹) to be paid by a customer if she buys the article during the festival season?

A. 496

B. 508

C. 504



D. 564

Q18 Mathematics

A cricket club bought 12 bats and 18 balls for ₹2,100. After a few days, the cost of the same types of 8 bats and 22 balls purchased at the same rates was ₹1,900. The cost of a bat is:

A. ₹50

B. ₹100



C. ₹150

D. ₹200

Q19 Mathematics

The positive square root of $\left(\frac{2+\sqrt{3}}{2-\sqrt{3}} + \frac{2-\sqrt{3}}{2+\sqrt{3}} + 11\right)$ is _____.

A. $2\sqrt{3}$ B. $2 + \sqrt{3}$

C. 5

D. $5 - \sqrt{3}$ 

Q20 Mathematics

Find the value of $\frac{\cos^2 12^\circ + \cos^2 23^\circ}{2\sin^2 78^\circ + 2\sin^2 67^\circ}$.

A. 0

B. 1

C. $\frac{1}{2}$



D. 2

Q21 Mathematics

If the length of the longest diagonal of a closed cube is $10\sqrt{3}$ cm, then its total surface area (in cm^2) is _____.

A. 300

B. 600



C. 900

D. $100\sqrt{3}$

Q22 Mathematics

Four years ago, Rajesh was three times as old as Naresh. Four years hence he will be twice as old as Naresh will then be. The present age of Rajesh (in years) is:

A. 28



B. 32

C. 33

D. 35

Q23 Mathematics

How many years will it take for a certain sum to get doubled at the rate of $6\frac{1}{4}\%$ simple interest per annum?

A. 6.25

B. 16



C. 4

D. 8.4



Q24 Mathematics

The arithmetic mean of 2.5, 6.5, 4.5, 16.5, 3.5 and 2.5 is:

A. 6



B. 7.25

C. 8.25

D. 5.75

Q25 Mathematics

The quadratic equation $x^2 + 7x - 60$ has:

A. two equal roots

B. two real and unequal roots



C. no real roots

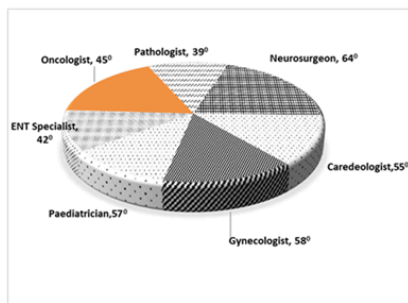
D. two equal imaginary roots

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

The following pie chart shows the different specialists in ABC hospital during the year 2021–2022. Study the pie-chart and answer the question.



If the total number of all these specialists was 60, then how many ENT specialists were there in the hospital?

A. 5

B. 7



C. 10

D. 12



Q27 General Intelligence and Reasoning

Six persons are sitting around a circular table facing the centre. Alok sits to the immediate right of Sonu. Ladoo sits third to the left of Alok. Soni sits third to the right of Sonu. Dimple is an immediate neighbour of both Ladoo and Sonu. Sushma is not an immediate neighbour of Ladoo. Who sits second to the right of Sushma?

A. Ladoo



B. Dimple

C. Alok

D. Sonu

Q28 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 986 432 631 387 267 (Right)

(Example- 123 – First digit = 1, second digit = 2 and third digit = 3)

NOTE - All operations to be done from left to right.

What will be the resultant if the second digit of the third greatest number is added to the third digit of the smallest number?

A. 12

B. 11

C. 10



D. 9

Q29 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

MODERN : RONMED :: GERMAN : AENGMR :: JUNIOR : ?

A. OURJNI

B. OURJIN



C. OUJRIN

D. ORUJIN



Q30 General Intelligence and Reasoning

A certain number of persons are sitting in a row, facing North. Hriday is sitting to the immediate right of Vijay. There are only three persons sitting between Gaurav and Vijay. Vijay is sitting exactly second to the left of Imran, who is sitting at the extreme right end. Kiara and David are immediate neighbours of Lalita. There is only one person to the left of Gaurav. If no other person is sitting in the row, what is the total number of persons seated?

- A. Six
- B. Seven
- C. Eight**
- D. Nine



Q31 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All potatoes are tomatoes.

All tomatoes are onions.

All onions are books.

Conclusions:

(I) Some books are potatoes.

(II) Some onions are tomatoes.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follow
- D. Both conclusions I and II follow**



Q32 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some chairs are tables.

Some tables are pens.

All pens are inks.

Conclusions:

(I) Some chairs are pens.

(II) Some tables are inks.

A. Only conclusion I follows

B. Only conclusion II follows



C. Neither conclusion I nor II follow

D. Both conclusions I and II follow

Q33 General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

R # A \$ G H K % T B M & N Y ÷ X B / L Q @ D

If the second symbol and third letter from the left end of series are combined with the fifth and six terms from the right end of the series, then what letter symbol combination will be formed?

A. \$ # B X

B. # \$ L B

C. # A / B

D. \$ G / B



Q34 General Intelligence and Reasoning

Each of the digits in the number 354982 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. One

B. Two



C. Three

D. None



Q35 General Intelligence and Reasoning

Seven boxes are kept one over the other but not necessarily in the same order. S is fifth from the top. Only two boxes are kept between S and V. R is kept just below V. Only two boxes are kept between P and T. P is placed in one of the positions above T. Only one box is kept between S and Q. Which box is kept fourth from the bottom?

A. S

B. T



C. R

D. U

Q36 General Intelligence and Reasoning

U, V, W, X, Y and Z are sitting in a row facing towards North (but not necessarily in the same order). Z is sitting second to the right of V and immediate left of Y. Only one person is sitting between U and V. W is not the immediate neighbor of U. Who is sitting at second position from the right end?

A. Z



B. Y

C. U

D. X

Q37 General Intelligence and Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$45 \times 15 \div 40 - 30 + 5 = ?$$

A. 126

B. 125

C. 145



D. 146

Q38 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$$14 : 20 :: 26 : 38 :: 18 : ?$$

A. 24

B. 30

C. 26



D. 28



Q39 General Intelligence and Reasoning

In a code language, 'weather is cool' is written as 'nu vu du', 'temperature cool now' is written as 'hu du ru' and 'temperature is high' is written as 'tu vu ru'. What is the code for the word 'high' in that language?

A. tu



B. vu

C. ru

D. du

Q40 General Intelligence and Reasoning

All 20 students of a class are standing in a straight row facing north. Shilpa is 7th from the right end, while Nikhil is 18th from the left end. How many students are standing between Shilpa and Nikhil?

A. 3



B. 2

C. 1

D. 4

Q41 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $N < L > J < K > I = H \leq G$

Conclusions:

I. $J = G$

II. $K > H$

A. Only conclusion I is true

B. Only conclusion II is true



C. Both conclusions I and II are true

D. Neither conclusion I nor II is true



Q42 General Intelligence and Reasoning

Kavya went 1 km straight from her friend's home, then turned left and moved 3 km straight. She again turned left and travelled 4 km, from there she turned left and moved 1 km. If she was moving in the west direction at last, then in which direction she initially moved from her friend's home?

A. South



B. West

C. North

D. East

Q43 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some notebooks are pencils.

All pencils are bags.

All bags are bottles.

Conclusions:

(I) All pencils are bottles.

(II) Some bags are notebooks.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follow

D. Both conclusions I and II follow



Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3, 7, 6, 14, 12, 28, 24, ?

A. 51

B. 54

C. 56



D. 60



Q45 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 734 462 397 354 881 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

If all the numbers are arranged in ascending order, the position of how many numbers will remain unchanged?

A. 0

B. 1



C. 2

D. 3

Q46 General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$H \geq E > S \leq T = P > Q$$

Conclusions:

1. $Q = T$

2. $S < H$

3. $S > P$

4. $E > T$

A. 1

B. 2



C. 3

D. 4



Q47 General Intelligence and Reasoning

Select the combination of letters and numbers that when sequentially placed from left to right in the same sequence in the blanks of the given series, will complete the series.

D _ H 10 L _ P 18 _

A. F N 20

B. 6 14 T



C. 7 12 S

D. 8 S 20

Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?
17, 30, 47, 66, 89, ?

A. 117

B. 118



C. 119

D. 116

Q49 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

6 : 64 :: 11 : 169 :: 8 : ?

A. 81

B. 100



C. 70

D. 72

Q50 General Intelligence and Reasoning

Shyam starts from Point A and drives 15 km towards the north. He then takes a right turn, drives 5 km, turns right and drives 20 km. He then takes a right turn and drives 10 km. He takes a final right turn, drives 5 km and stops at Point P. How far and towards which direction should he drive in order to reach Point A from Point P in a straight line? (All turns are 90 degree turns only)

A. 4 km towards the east

B. 5 km towards the west

C. 5 km towards the east



D. 7 km towards the west



Q51 General Intelligence and Reasoning

The following table shows the sales of different brands of mobiles of a shop during the years 2018-2020. Study the table and answer the question.

Year	Brand (in thousands)		
	A	S	M
2018	175	388	112
2019	312	401	146
2020	202	255	126

What is the percentage decrease in the sales of brand S from the year 2019 to 2020?

A. 36.40%



B. 57.25 %

C. 53.62%

D. 38.32%

Q52 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below:

(Left) 485 746 379 137 254 (Right)

(Example: 697 – First digit = 6, second digit = 9 and third digit = 7)

(NOTE - All operations to be done from left to right.)

If all the numbers of the given series are arranged in ascending order, the position of which of the following numbers will remain unchanged?

A. 137

B. 254

C. 379



D. 746



Q53 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

“If waste management capabilities of Hospital X are dealt with, we will definitely win the ‘excellence in service’ award for year 22-23.” One of the board of directors from Hospital X.

Arguments:

- I. In four separate incidents in the year 22-23, 15 patients lost their lives and 46 were injured due to various incidents such as fire breakout in ICU, lack of oxygen etc.
- II. Hospital A located in the nearby city has won ‘excellence in service’ award for a record five times.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement.

C. I weakens while II is a neutral argument



D. II weakens while I is a neutral argument

Q54 General Intelligence and Reasoning

In a certain code language, ‘KHADI’ is written as ‘OJGNQ’ and ‘DRINK’ is written as ‘QTOXJ’. How will ‘INLET’ be written in that language?

A. YKRTO

B. ZKRTP

C. ZKRTO



D. ZLRTO

Q55 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$14.95 \times 27.05 \div 2.99 - 35.98 + 12.10 = ?$$

A. 112

B. 111



C. 110

D. 109



Q56 General Science

Electric energy consumed in one second is:

- A. work
- B. current
- C. power
- D. potential energy



Q57 General Science

Which of the following properties remain(s) the same in a homologous series?

- A. Molecular mass
- B. Boiling points
- C. Chemical properties
- D. Melting points



Q58 General Science

White AgCl turns grey in presence of:

- A. O_2
- B. sunlight
- C. Water
- D. CO_2



Q59 General Science

If m , v and u , respectively, represent magnification, image distance and object distance, then the correct relation between m , v and u for a lens will be:

- A. $m = u + v$
- B. $m = v \times u$
- C. $m = \frac{v}{u}$
- D. $m = \frac{u}{v}$



Q60 General Science

Chlorophyll pigment is present in which of the following components of a cell?

A. Chloroplasts



B. Ribosomes

C. Mitochondria

D. Lysosomes

Q61 General Science

The heating element of a bulb is made up of:

A. silicon

B. tungsten



C. copper

D. mercury

Q62 General Science

Which of the following elements does NOT belong to period 3 of the Modern Periodic Table?

A. Al

B. Ar

C. S

D. Ge



Q63 General Science

Effective resistance of the series combination of three resistors each with resistance 2Ω is:

A. 2Ω

B. 0.66Ω

C. 1.5Ω

D. 6Ω



Q64 General Science

A solenoid carrying constant current can be used as a:

- A. source of a constant magnetic field ✓
- B. source of a non-uniform magnetic field
- C. source of a light
- D. source of a mechanical energy

Q65 General Science

Which element is NOT included in Group 2 of the Modern Periodic Table?

- A. Be
- B. Na ✓
- C. Mg
- D. Ca

Q66 General Science

Baking powder is a mixture of:

- A. baking soda + mild edible acid ✓
- B. baking soda + strong acid
- C. baking soda + weak base
- D. baking soda + strong base

Q67 General Science

Which of the following tissues is found below the skin and between the internal organs?

- A. Muscular tissue
- B. Adipose tissue ✓
- C. Nervous tissue
- D. Epithelial tissue



Q68 General Science

Working principle of an electric motor is

- A. A coil carrying conductor experiences force in the region of non-uniform magnetic field ✓
- B. Electromagnetic induction
- C. A coil carrying current experiences force in the region of gravitational field
- D. A coil carrying current experiences force in the region of electric field

Q69 General Science

What is the environmental loss if many trees are cut in a forest to get wood?

- A. It will provide open space for other trees to grow.
- B. It will give livelihood to many poor people.
- C. It will lead to soil erosion and degradation. ✓
- D. It will let in more sunlight to let smaller plants to grow.

Q70 General Science

For a spherical mirror, the distance between the pole and the centre of the curvature is:

- A. equal to the focal length
- B. twice the distance between pole and F ✓
- C. equal to the distance between c and F
- D. half of the radius of curvature

Q71 General Science

The colour of CuCl_2 solution is:

- A. blue-red
- B. yellow-green
- C. blue-green ✓
- D. red-green



Q72 General Science

Which of the following elements can form both a double bond and a single bond with a carbon atom?

- A. F
- B. Cl
- C. Br
- D. O



Q73 General Science

Which of the following can cause cramps in our muscles?

- A. Lack of CO_2
- B. Lack of O_2
- C. Excess of O_2
- D. Excess of CO_2



Q74 General Science

The height of the image of an object below principal axis of a spherical mirror _____.

- A. is positive
- B. is negative
- C. depends on position of object
- D. depends on position of image



Q75 General Science

An object is placed on the principal axis of a lens of power 2.0 D, at a distance of 10 cm. The image formed is _____.

- A. real and erect
- B. virtual and erect
- C. real and inverted
- D. virtual and inverted



Q76 General Science

Acid rain has pH value less than:

- A. 7.6
- B. 6.6
- C. 8.6
- D. 5.6



Q77 General Science

Glucose is represented by which of the following formulae?

- A. C_2H_5OH
- B. $C_6H_{12}O_6$
- C. CH_3COOH
- D. $C_6H_{14}O_8$



Q78 General Science

What is a 'bawri'?

- A. A narrow bore tube-well
- B. A traditional way of collecting water
- C. An underground tank to store water
- D. A canal providing water to agricultural land



Q79 General Science

Joint forest management is an example of which of the following?

- A. Economic equality
- B. Political equality
- C. Participatory approach
- D. Single man dominance



Q80 General Science

Formal health education is important for women for various reasons listed below. Which of the following is an **INCORRECT** option with regard to formal health education in women?

- A. Helps to reduce child and maternal deaths
- B. Provides knowledge about sexually transmitted diseases
- C. Provides information about nutritional needs of children
- D. Empowers them to decide about child bearing



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The Government of India has approved the Centrally Sponsored Scheme 'Pradhan Mantri Poshan Shakti Nirman (PM POSHAN)' for providing one hot cooked meal in Government and Government – aided Schools from 2021-22 to _____

- A. 2025-26
- B. 2023-24
- C. 2026-27
- D. 2024-25



Q82 General Awareness and Current Affairs

Which of the following Ministries of India, has created 'Women Safety Division' to address issues of women safety comprehensively?

- A. Ministry of Home Affairs
- B. Ministry of Women and Child Development
- C. Ministry of Labour and Employment
- D. Ministry of Law and Justice



Q83 General Awareness and Current Affairs

Which of the following states was ranked first in Category I of e-Panchayat Puraskar 2021?

- A. Rajasthan
- B. Himachal Pradesh
- C. Uttar Pradesh
- D. Haryana



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Q84 General Awareness and Current Affairs

As per a news report of February 2022, _____ developed a biodegradable nanoparticle to protect crops from fungal and bacterial infections.

- A. IIT Kharagpur
- B. IIT Kanpur
- C. IIT Roorkee
- D. IIT Guwahati



Q85 General Awareness and Current Affairs

Which of the following states has the oldest operating oil refinery in India since 1901?

- A. West Bengal
- B. Mumbai
- C. Madhya Pradesh
- D. Assam



Q86 General Awareness and Current Affairs

Consumers lose satisfaction in a product the more they consume it, this is known as _____.

- A. maximum utilisation
- B. decreasing marginal utility
- C. non-satiation
- D. increasing marginal utility



Q87 General Awareness and Current Affairs

Who among the following was a renowned Indian Statistician, and was instrumental in formulating India's strategy for Industrialisation in the Second Five Year Plan?

- A. Jagdish Natwarlal Bhagwati
- B. Prof. VKRV Rao
- C. VR Gadgil
- D. Prasanta Chandra Mahalanobis



Q88 General Awareness and Current Affairs

In which state is the first Graphene Innovation Centre of the India set up?

A. Kerala



B. Telangana

C. Karnataka

D. Gujarat

Q89 General Awareness and Current Affairs

The river Tapi rises in the _____.

A. Aravali range

B. Nilgiri hills

C. Satpura range



D. Himalayan range

Q90 General Awareness and Current Affairs

Which one of the following is the official language of Goa?

A. Konkani



B. Kokborok

C. Khamti

D. Tamang

Q91 General Awareness and Current Affairs

In which of the following states is the concentration of Buddhism the largest as per 2011 Census data?

A. Andhra Pradesh

B. Maharashtra



C. Goa

D. Uttarakhand



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Q92 General Awareness and Current Affairs

If the saving function is $S = -30 + 0.3Y$, what will be the value of MPC (marginal propensity to consume)?

- A. 0
- B. 0.3
- C. 0.7
- D. 0.9



Q93 General Awareness and Current Affairs

Which of the following states has the largest coal reserves of India?

- A. Jharkhand
- B. Odisha
- C. Chhattisgarh
- D. West Bengal



Q94 General Awareness and Current Affairs

The feature of Quasi Federal Government system in the Constitution of India is borrowed from the constitution of which country?

- A. Canada
- B. South Africa
- C. The UK
- D. The US



Q95 General Awareness and Current Affairs

In which of the following years was Shaktikanta Das appointed as the Reserve Bank of India's Governor?

- A. 2017
- B. 2018
- C. 2019
- D. 2020



Q96 General Awareness and Current Affairs

Who among the following was conferred the Dhyan Chand Award for life time achievement in sports for the year 2021 in the chess discipline?

A. Abhijeet Kunte



B. Radhakrishnan Nair

C. Pritam Siwach

D. Sandhya Gurung

Q97 General Awareness and Current Affairs

Who among the following founded the Satyashodhak Samaj?

A. Narayana Guru

B. Jyotirao Phule



C. Ishwarchandra Vidyasagar

D. Swami Dayanand Saraswati

Q98 General Awareness and Current Affairs

The Jewish festival of lights is called:

A. Hanukkah



B. Hornbill

C. Nauroj

D. Anthurium

Q99 General Awareness and Current Affairs

Priyanka Nutakki is related to which of the following sports events?

A. Chess



B. Badminton

C. Hockey

D. Wrestling



The Supreme Court and High Courts have power to issue writs in the nature of habeas corpus, quo warranto, mandamus, certiorari, prohibition, etc., under _____.

- A. Articles 42 and 26, respectively
- B. Articles 226 and 32, respectively
- C. Articles 32 and 226, respectively
- D. Articles 26 and 42, respectively



Mathematics

25 Questions • Answer Key

Q1 Mathematics

If $4 \sin^2 \theta = 1$ and θ is an acute angle, then the value of $\cos^2 \theta + \tan^2 \theta =$ _____.

A. 1

B. $\frac{1}{4}$ C. $\frac{13}{12}$ D. $\frac{5}{13}$

Q2 Mathematics

Which of the following is NOT necessarily a property of a rhombus?

A. All sides are equal.

B. Opposite sides are parallel.

C. Diagonals are perpendicular bisectors.

D. Diagonals are equal.



Q3 Mathematics

The value of $\sqrt{1225} + \sqrt{6.25} + \sqrt{12.25} - 8$ is _____.

A. 0.16

B. 50

C. 0.75

D. 33



Q4 Mathematics

The equation $(x + 1)^2 - 2(x + 1) = 0$ has:

A. two real roots



B. no real roots

C. one real root

D. two equal roots



Q5 Mathematics

Two parallel lines l and m are intersected by a transversal p . The quadrilateral formed by the bisectors of the interior angles thus obtained is necessarily a:

- A. rhombus
- B. square
- C. parallelogram, but not a rectangle
- D. rectangle ✓

Q6 Mathematics

An article whose marked price is ₹ 800 is sold at a profit of 50% when there are successive discounts of 20%, 10%, and 5% offered by the shopkeeper. The selling price (rounded to the nearest rupee) when the article is sold at a profit of 60%, with the same cost price, is:

- A. ₹684
- B. ₹584 ✓
- C. ₹504
- D. ₹604

Q7 Mathematics

The value of $[(0.413) \div (0.00413)] - 74.27 - 25.72$ is _____.

- A. 0
- B. 1
- C. 0.1
- D. 0.01 ✓

Q8 Mathematics

The value of $\left(\frac{y^{b+c}}{y^{2a}}\right)\left(\frac{y^{c+a}}{y^{2b}}\right)\left(\frac{y^{a+b}}{y^{2c}}\right)$ is _____.

- A. $y^{\frac{ab}{c}}$
- B. y^{abc}
- C. 0
- D. 1 ✓



Q9 Mathematics

3 men or 4 women can do a job in 15 days. 3 men work for 9 days and leave. The number of women required to complete the remaining work in 12 days is:

A. 1

B. 2



C. 3

D. 4

Q10 Mathematics

The roots of the equation $2x^2 - 3x - 20 = 0$ are:

A. 4, $5/2$

B. -4, $5/2$

C. -4, $-5/2$

D. 4, $-5/2$



Q11 Mathematics

A man buys a second-hand car for ₹3,30,000 and spends ₹40,000 on its repairs. What should be its selling price if he wants to earn a 15% profit?

A. ₹4,35,500

B. ₹4,27,000

C. ₹4,25,500



D. ₹4,30,000

Q12 Mathematics

The total surface area (in cm^2) of a closed cube, the length of each of whose sides is 8 cm, is _____.

A. 512

B. 256

C. 384



D. 402



Q13 Mathematics

If interest is ₹3,000, the rate of interest is 6% per annum simple interest, and time period is 4 years, then the principal sum is _____.

A. ₹18,000

B. ₹17,500

C. ₹12,500



D. ₹13,500

Q14 Mathematics

If 5, 15, 20, and y are in proportion, then the value of y is:

A. 40

B. 50

C. 60



D. 80

Q15 Mathematics

Simplify $25 - [7 + 7 \text{ of } (33 - 4 \times 23)]$.

A. -395

B. 431



C. -4651

D. -9313

Q16 Mathematics

A, B and C can complete a piece of work in 48, 12 and 24 days, respectively. Working together, they will complete the work in _____ days.

A. $\frac{51}{7}$

B. 7

C. $\frac{48}{7}$



D. $\frac{47}{7}$



Q17 Mathematics

The correct empirical relationship between the mean, the median, and the mode of a set of data is given by:

- A. $\text{Mean} - \text{Mode} = 3 \times (\text{Mean} - \text{Median})$ ✓
- B. $\text{Mean} - \text{Mode} = 4 \times (\text{Mean} - \text{Median})$
- C. $\text{Mean} - \text{Mode} = 2 \times (\text{Mean} - \text{Median})$
- D. $\text{Mean} - \text{Mode} = 1 \times (\text{Mean} - \text{Median})$

Q18 Mathematics

The numbers obtained when 200 is increased by 5% and decreased by 15% are respectively:

- A. 180 and 170
- B. 210 and 170 ✓
- C. 215 and 150
- D. 210 and 175

Q19 Mathematics

At present, the ratio of the ages of Amit and Sumit is 4 : 3. After 6 years, Amit's age will be 50 years. What is the age of Sumit at present?

- A. 37 years
- B. 24 years
- C. 33 years ✓
- D. 44 years

Q20 Mathematics

The present ages of Kamal and Keerthi are in the ratio 3 : 5. After 9 years, the ratio of their ages will become 3 : 4. The present age of Keerthi is _____.

- A. 17 years
- B. 15 years ✓
- C. 19 years
- D. 12 years



Q21 Mathematics

Which of the following numbers is divisible by 11?

A. 8245964

B. 9246864



C. 7247564

D. 9248164

Q22 Mathematics

The base and the corresponding height of a parallelogram are 10 cm and 6 cm, respectively. The area of the parallelogram (in cm^2) is:

A. 30

B. 45

C. 60



D. 75

Q23 Mathematics

The average age of a class of 50 boys is 12.9 years. It increases to 13 years when one new boy joins the class. The age (in years) of the new boy is _____.

A. 15

B. 16

C. 18



D. 19

Q24 Mathematics

The average of the first 35 natural numbers is _____.

A. 17

B. 17.5

C. 18



D. 18.5



Q25 Mathematics

(6, y) is a pair of co-prime numbers where y is a natural number not exceeding 20. How many possible values of y are there?

A. 5

B. 6

C. 7



D. 8

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Each of the digits in the number 43162857 is arranged in descending order from left to right. What will be the difference of the digits which are second from the left and second from the right in the new number thus formed?

A. 6

B. 5



C. 7

D. 3

Q27 General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

7 : 2 :: 26 : 3 :: 63 : 4 :: 124 : ?

A. 7

B. 6

C. 4

D. 5

**Q28** General Intelligence and Reasoning

Kavita moves 2 km Northwards from her office, then she turned 270 degree clockwise and moved 3 km straight and then she turned left and moved 2 km straight to reach her home. In which direction is she with respect to the starting point?

A. East

B. North-East

C. West



D. South



Q29 General Intelligence and Reasoning

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

X4KT, W8PO, V12UJ, U16ZE, ?

A. T16EZ

B. U20EA

C. T20EZ



D. U16EZ

Q30 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

4, 5, 13, 40, ?, 229, 445, 788, 1300

A. 102

B. 104



C. 106

D. 110

Q31 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below:

(Left) 158 518 182 305 510 (Right)

What will be the resultant if the third digit of the second smallest number is added to the first digit of the largest number?

A. 7



B. 10

C. 8

D. 6



Q32 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some towels are soaps.

All soaps are shampoos.

All shampoos are brushes.

Conclusions:

(I) All soaps are brushes.

(II) Some brushes are shampoos.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follow
- D. Both conclusions I and II follow



Q33 General Intelligence and Reasoning

Refer to the following number series and answer the question.

2 3 5 6 5 7 9 2 4 8 6 5 8 4 8 4 8 3 3 7 8 3

How many such odd numbers are there each of which is immediately preceded by an even number and also immediately followed by an even number?

- A. One
- B. Two
- C. Four
- D. None



Q34 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$17.99 - 16.02 + 19.89 \times 8.19 = ?$$

- A. 162
- B. 122
- C. 42
- D. 330



Q35 General Intelligence and Reasoning

The following table shows the sales volume of three top selling products - A, B and C - of NOM Ltd. over the years 2016-2020. Study the table and answer the question.

Year	Quantity (in lakhs)		
	A	B	C
2016	342	357	370
2017	284	374	400
2018	315	386	315
2019	298	343	416
2020	252	322	290

What is the approximate average number of product C (in lakhs) sold during the years 2016-2020?

A. 358



B. 390

C. 447

D. 500

Q36 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

C @ B N M K J % F K L I & S E W * P O S E A

How many such symbols are there in the above series which are immediately preceded and followed by a vowel?

A. Zero

B. One



C. Two

D. Three

Q37 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$14.96 + 10.96 + 13.16 - 12.89 \times 2.04 = ?$$

A. 13



B. 17

C. 15

D. 19



Q38 General Intelligence and Reasoning

Three statements are given, followed by four conclusions numbered I, II, III and IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements

Statements:

1. All cars are scooters.
2. All scooters are trucks.
3. No helicopter is truck.

Conclusions:

- I. No truck is scooter.
- II. All cars are trucks.
- III. Some trucks are scooters.
- IV. No car is helicopter.

A. Only either conclusions I or IV follow and III follow

B. Only either conclusions I or IV follow

C. Only conclusions II, III and IV follow



D. All the conclusions follow

Q39 General Intelligence and Reasoning

In a certain code language, 'DOCTOR' is written as 'SPUDPE' and 'NURSE' is written as 'FTSVO'. How will 'WOUND' be written in the same code language?

A. EPVOY

B. CMTNV

C. OVPOX

D. EOVPX



Q40 General Intelligence and Reasoning

Amongst six friends, G, K, M, P, R, and V, each has a different height. R is shorter than K but taller than V, who is taller than G. P is taller than M but shorter than G. Who is the shortest of all six friends?

A. P

B. M



C. V

D. G



Q41 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

5, 11, 7, 12, 10, 14, 14, 17, 19, ?

A. 20

B. 21



C. 22

D. 23

Q42 General Intelligence and Reasoning

Avadh starts from Point F and drives 5 km towards the west. He then takes a right turn, drives 5 km, turns right and drives 5 km. Then he takes a final left turn, drives 2 km and stops at Point D. How far and towards which direction should he drive in order to reach Point F from Point D? (All turns are 90 degree turns only)

A. 7 km towards the south



B. 2 km towards the east

C. 7 km towards the east

D. 2 km towards the west

Q43 General Intelligence and Reasoning

Five friends Priyanka, Mrinalini, Gitanjali, Arnav and Shivalika travelled in different months of the same year viz. January, July, August, September and December. Gitanjali was the first one to travel in the year. Mrinalini travelled in the month immediately after Priyanka. Arnav travelled in the month immediately before Shivalika who was the last one to travel in the year. Who travelled in the month of August?

A. Arnav

B. Gitanjali

C. Mrinalini



D. Priyanka



Q44 General Intelligence and Reasoning

Eight friends, A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners while some are sitting at the exact centre of the sides. B is sitting to the immediate right of H who is sitting immediately right of E. C and D are immediate neighbors of A. C and F are immediate neighbors of G. E is immediate neighbour of F and H. If C, D, F and H are sitting at the corners of the table not necessarily in the same order, who is sitting to the immediate left of E?

A. H

B. D

C. C

D. F

**Q45** General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

20 : 5 :: 56 : 8 :: 12 : 4 :: 42 : ?

A. 6

B. 21

C. 7



D. 10

Q46 General Intelligence and Reasoning

In a certain code language, 'DAGGLE' is written as 'GAJGOE' and 'MARKET' is written as 'PAUKHT'. How will 'ACTION' be written in that language?

A. ECWISN

B. DCWIRN



C. ECWIRN

D. DCWISN



Q47 General Intelligence and Reasoning

Seven people, J, K, L, M, N, O and P, live on different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor which is numbered 7. J lives on an odd numbered floor but not on floor number 5. Three people live between K and L, and L lives on the lowermost floor. O lives exactly between K and N. N lives on the topmost floor. P lives immediately above J. Who lives on the second floor?

A. J

B. M

C. P

D. O

Q48 General Intelligence and Reasoning

A shopkeeper has five deliveries of different varieties of dry fruits— cashew nuts, almonds, pistachios, walnuts, and pine nuts- each delivery planned on a different date, viz- 1st, 6th, 12th, 20th and 30th of July 2022. The delivery of pine nuts is planned exactly after the delivery of almonds, which is planned exactly after the delivery of pistachios. The delivery of cashew nuts is planned exactly between the deliveries of pine nuts and walnuts. If the delivery of walnuts is the last delivery planned, on which date is the delivery of almonds planned?

A. 6th July

B. 12th July

C. 20th July

D. 1st July

Q49 General Intelligence and Reasoning

Select the correct conclusion that can be drawn from the given statements.

Statements:

1. $A \leq G < D \geq M$

2. $R > H \geq M$

A. $R \geq D$ B. $D > A$ C. $H \leq G$ D. $R \geq A$ 

Q50 General Intelligence and Reasoning

Five persons are sitting around a circular table facing the centre. Robin is an immediate neighbour of both Sudhakar and Rudra. Rajesh is sitting second to the left of Robin. Rudra is sitting second to the right of Sudhakar. Ramesh is an immediate neighbour of both Rajesh and Rudra. Who is an immediate neighbour of both Ramesh and Robin?

- A. Rudra
- B. Rajesh
- C. Sudhakar
- D. Cannot be determined

Q51 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The number in different sections indicates the number of employees of ABC company owning different types of cars. Total number of employees = 300.



What is the percentage of employees who have both Hatchbacks and Sedans?

- A. 7.0 %
- B. 3.66%
- C. 18.78%
- D. 2.0 %

Q52 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

ALM: EPQ

NSO: RWS

- A. OSD: PCV
- B. FPG: JTK
- C. SLT: RVM
- D. FVD: GOS



Q53 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) F 1 % 5 & 2 L H 8 4 # T * G 2 7 F 8 C 2 Y \$ M 6 F (Right).

How many such numbers are there which are immediately preceded by a letter and also immediately followed by a number?

A. 1

B. 2



C. 3

D. 4

Q54 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Schools should encourage self-discipline among children of all ages.

Arguments:

- I. Children till the age of 7 years are not mature enough to understand the concept of discipline
- II. Discipline lasts longer and more effective when instilled by oneself than by others from outside.

A. I weakens while II strengthens the statement.



B. II weakens while I strengthens the statement.

C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.

Q55 General Intelligence and Reasoning

Which two signs should be interchanged to make the following equation mathematically correct?

$$69 - 23 + 15 \div 11 \times 12 = -114$$

A. - and +

B. - and $\div$



C. $\times$ and -

D. + and $\div$



Q56 General Science

What type of carbohydrate is formed after photosynthesis?

- A. Glycogen
- B. Fructose
- C. Glucose
- D. Mannose



Q57 General Science

The focal length of a spherical mirror is the distance between:

- A. infinity and C
- B. C and pole
- C. F and pole
- D. infinity and F



Q58 General Science

The loss of water in the form of vapour from the aerial parts of the plant is known as:

- A. evaporation
- B. transpiration
- C. translocation
- D. transportation



Q59 General Science

If a constant current of 2 A is maintained in a conductor of resistance $100\ \Omega$, then the potential difference across the conductor is:

- A. 200 V
- B. 50 V
- C. 0.02 V
- D. 20 V



Q60 General Science

Why is the breathing rate of aquatic organisms much faster than the terrestrial ones?

- A. Because of less CO_2 in water
- B. Because water is polluted
- C. Because of less O_2 in water
- D. Because of more O_2 in water



Q61 General Science

Which property does NOT show gradation with increasing molecular mass in any homologous series of carbon compounds?

- A. Combustion
- B. Melting point
- C. Boiling point
- D. Solubility in a particular solvent



Q62 General Science

Calcium sulphate hemihydrates is the chemical name for:

- A. gypsum
- B. plaster of Paris
- C. washing soda
- D. baking powder



Q63 General Science

Magnetic field lines around a straight conductor carrying a current will always be:

- A. parallel to the direction of current
- B. parallel to the length of the conductor
- C. perpendicular to the direction of current
- D. intersecting each other



Q64 General Science

A convex lens forms a sharp image of a distant object on a screen placed at 20 cm from the lens. The power of the lens is nearly equal to:

A. 5 D



B. -5 D

C. 0.05 D

D. -0.05 D

Q65 General Science

One of the contrasting pairs of characters studied by Mendel was _____.

A. purple and white flowers



B. yellow and purple flowers

C. white and yellow flowers

D. blue and white flowers

Q66 General Science

In which of the following is cartilage NOT present?

A. Larynx

B. Kidney



C. Nose

D. Ear

Q67 General Science

The total number of elements known at present is:

A. 118



B. 117

C. 116

D. 115



Q68 General Science

A 12 cm long object is placed at a distance of 15 cm from a concave lens. Its virtual image of 8 cm is obtained at a distance of _____.

- A. +10 cm
- B. -10 cm
- C. +22.5 cm
- D. -22.5 cm



Q69 General Science

What is the chemical formula of marble?

- A. Ca(OH)_2
- B. CaSO_4
- C. CaCO_3
- D. $\text{Ca(HCO}_3)_2$



Q70 General Science

If three wires of tungsten, manganin and hard rubber are identical in dimension then resistance of _____.

- A. Tungsten is highest
- B. Manganin is highest
- C. Hard rubber is least
- D. Tungsten is least



Q71 General Science

Which statement about Mendeleev's Periodic Table is INCORRECT?

- A. Vertical columns are called 'groups'.
- B. Horizontal rows are called 'periods'.
- C. The properties of elements are the periodic functions of their atomic numbers.
- D. Elements are arranged in the order of their increasing atomic masses.



Q72 General Science

The nature of the image produced by the side mirror of an automobile is:

- A. real and erect
- B. real and inverted
- C. virtual and erect
- D. virtual and inverted



Q73 General Science

Which of the following is a natural source of lactic acid?

- A. Tomato
- B. Sour milk
- C. Tamarind
- D. Ant sting



Q74 General Science

Select the correct statement about a Balanced Chemical Equation.

- A. The mass may or may not be the same on both the sides of the equation.
- B. Volume must be the same on both the sides of the equation
- C. Number of reactants and products must be same on both the sides of the equation.
- D. The mass must be the same on both the sides of the equation.



Q75 General Science

For a neutralisation reaction, the reactants should be:

- A. base and water
- B. acid and water
- C. acid and base
- D. salt and water



Q76 General Science

Magnetic field lines can NEVER be:

- A. parallel to each other
- B. perpendicular to each other
- C. uniformly distributed
- D. non uniformly distributed

Q77 General Science

Which of the following is an example of greenhouse gas?

- A. Carbon dioxide
- B. Carbon monoxide
- C. Sulphur dioxide
- D. Phosphorus pentoxide

Q78 General Science

Why was the use of 'kulhads' discontinued?

- A. Use of clay resulted in the loss of the fertile top-soil
- B. They were very expensive
- C. They posed a health risk
- D. They hurt the animals

Q79 General Science

The correct relation for heat produced by electric current is:

- A. $H = \frac{V.I}{T}$
- B. $H = V.I.T$
- C. $H = I^2.R$
- D. $H = \frac{R}{T}$



Q80 General Science

What will be the percentage of tW gametes formed by a plant with genotype TtWw?

A. 25%



B. 50%

C. 75%

D. 37.5%

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

As per the data from the National Statistical Office, as of the year 2021, which Indian state has the lowest female literacy rate?

A. Uttarakhand

B. Himachal Pradesh

C. Rajasthan



D. Gujarat

Q82 General Awareness and Current Affairs

Which river originates from Gaumukh Glacier, and flows for about 193 km before meeting Alaknanda to form the Ganga River at Devprayag?

A. Bhagirathi River



B. Kosi River

C. Gomati River

D. Ghaghara River

Q83 General Awareness and Current Affairs

The Swaran Singh Committee recommended inclusion of which of the following features in the Constitution of India?

A. Fundamental duties



B. Fundamental rights

C. Concurrent list

D. Preamble



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Q84 General Awareness and Current Affairs

The Ankeleshwar region of Gujarat is famous for which energy resource from following?

- A. Thorium
- B. Uranium
- C. Coal
- D. Petroleum



Q85 General Awareness and Current Affairs

Who was the Atmiya Sabha's founder?

- A. Mul Shankar
- B. Narendranath Datta
- C. Raja Ram Mohan Roy
- D. Gadadhar Chattopadhyaya



Q86 General Awareness and Current Affairs

In March 2022, which Indian badminton player won the women's singles title at the Swiss Open Super 300 badminton tournament?

- A. Saina Nehwal
- B. Ashmita Chaliha
- C. Ashwini Ponnappa
- D. PV Sindhu



Q87 General Awareness and Current Affairs

Who among the following is the Comptroller and Auditor General of India as on 5th September 2022?

- A. Gaurav Ahluwalia
- B. Dinesh Bhatia
- C. Girish Chandra Murmu
- D. Pratibha Parkar



Q88 General Awareness and Current Affairs

What is cash reserve ratio?

- A. The portion that banks must maintain before extending credit to customers
- B. The minimum balance to be maintained by a customer in the bank
- C. The minimum amount of deposit that the commercial banks have to hold as reserves with the RBI. ✓
- D. The portion that banks can invest in the market

Q89 General Awareness and Current Affairs

Out of the five constraints in life that the Jains need to follow, which of the following means non-acquisition?

- A. Asteya
- B. Brahmacharya
- C. Aparigraha ✓
- D. Ahimsa

Q90 General Awareness and Current Affairs

What is the full form of NBFC?

- A. Non-Banking Financial Company ✓
- B. Non-Banking Financial Commission
- C. Non-Banking Financial Corporation
- D. Non-Banking Financial Commodity

Q91 General Awareness and Current Affairs

Which among the following Articles of Indian Constitution is related to Gram Sabha?

- A. Article 242 B
- B. Article 243 A ✓
- C. Article 244 A
- D. Article 245 B



Q92 General Awareness and Current Affairs

Identify the state of India in which the Bandipur National Park is located?

- A. Madhya Pradesh
- B. Odisha
- C. Karnataka
- D. Andhra Pradesh



Q93 General Awareness and Current Affairs

Which of the following festivals of Odisha State commemorates the rich maritime history of Odisha that is celebrated throughout the state?

- A. Chhath Puja
- B. Rath Yatra
- C. Bali Yatra
- D. Amla Navami



Q94 General Awareness and Current Affairs

Who was the first Finance Minister of Independent India?

- A. Liaquat Ali Khan
- B. RK Shanmukham Chetty
- C. John Mathai
- D. CD Deshmukh



Q95 General Awareness and Current Affairs

In the absence of indirect taxes or subsidies, the total value of the final goods output is distributed among different factors of production – wages to labour, interest to capital, rent to land, etc. Whatever is left over is appropriated by the entrepreneur and is called _____.

- A. Income
- B. expense
- C. profit
- D. saving



Q96 General Awareness and Current Affairs

Select the correct pair of personalities who are the recipients of the Padma Shri Award 2022 in Science and Engineering.

- A. Sanghamitra Bandyopadhyay and Subbanna Ayyappan
- B. Sumit Antil and JK Bajaj
- C. Pramod Bhagat and Sulochana Chavan
- D. Dr. Lata Desai and Basanti Devi

Q97 General Awareness and Current Affairs

Which of the following states bagged the first prize in the 3rd National Water Awards presented by then President of India, Shri Ram Nath Kovind in March 2022?

- A. Rajasthan
- B. Uttar Pradesh
- C. Tamil Nadu
- D. Assam

Q98 General Awareness and Current Affairs

Which shuttler become the first Indian man to win a silver medal at the BWF (Badminton World Federation) World Championship in the year 2021?

- A. B Sai Praneeth
- B. Lakshya Sen
- C. Prakash Padukone
- D. Kidambi Srikanth

Q99 General Awareness and Current Affairs

As of May 2022, how many languages enjoy the 'Classical' status in India?

- A. Six
- B. Seven
- C. Eight
- D. Nine



Q100 General Awareness and Current Affairs

Bambai Nazariya', a small café situated in Versova, Andheri West, Mumbai hires only trans/non-binary people as staff and is supported by which one of the following organisations?

- A. Sahayatharika
- B. The Humsafar Trust
- C. Sahodari Foundation
- D. Samabhavana Society



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The area of a rectangle is 225 cm^2 . The length (x) of the rectangle is 4 more than 4 times the breadth (y). The area in terms of a quadratic form (in x) is:

A. $x^2 + 4x - 900 = 0$

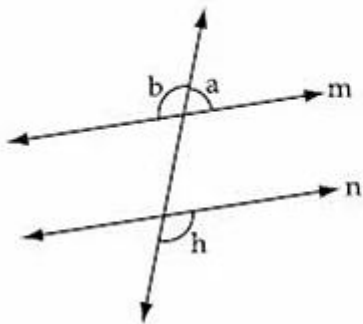
B. $x^2 - 4x + 900 = 0$

C. $x^2 - 4x - 900 = 0$ ✓

D. $x^2 + 4x + 900 = 0$

Q2 Mathematics

In the given figure, if $n \parallel m$ and $m\angle a : m\angle b = 2 : 3$, then what is $m\angle h$?



A. 90°

B. 108° ✓

C. 120°

D. 72°

Q3 Mathematics

The smallest prime number is:

A. 1

B. 2 ✓

C. 3

D. 4



Q4 Mathematics

The positive square root of $(6 + 2\sqrt{3})(6 - 2\sqrt{3})$ is _____.

A. 24

B. 12

C. $6\sqrt{2}$

D. $2\sqrt{6}$ ✓

Q5 Mathematics

The total amount payable after 3 years on a sum of ₹1,000 invested at 10% interest per annum compounded annually is:

A. ₹1,331 ✓

B. ₹1,300

C. ₹1,376

D. ₹1,390

Q6 Mathematics

Ramesh buys a radio for ₹4,000. He sells it at a profit of 10% to Mohan. Mohan spends ₹500 on it. Then he sells it at a profit of 12% to Ritwik. The cost price of the radio to Ritwik is:

A. ₹4,900

B. ₹5,088

C. ₹5,288

D. ₹5,488 ✓

Q7 Mathematics

The perimeter of a circle whose radius is 15 cm is:

A. 50π cm

B. 40π cm

C. 30π cm ✓

D. 20π cm



Q8 Mathematics

If $361 : y :: y : 121$, and $y > 0$, then the value of y is:

A. 381

B. 121

C. 247

D. 209



Q9 Mathematics

Evaluate $984^2 - 16^2$.

A. 967000

B. 968000

C. 969000

D. 966660



Q10 Mathematics

The sum of two numbers is 20 and their difference is 16. The ratio of the larger number to the smaller number is:

A. 11 : 2

B. 2 : 11

C. 9 : 1

D. 1 : 9



Q11 Mathematics

The difference between the compound interest (when interest is compounded annually) and the simple interest if ₹10,000 is deposited at 5% rate of interest per annum for 2 years is:

A. ₹25

B. ₹15

C. ₹35

D. ₹50



Q12 Mathematics

What is the positive difference between the sum of all prime numbers between 11 and 20 (both included) and the sum of all prime numbers between 30 and 50 (both included)?

A. 135

B. 137

C. 139



D. 141

Q13 Mathematics

If the mode of a distribution is 27 and its median is 35, then the mean of the distribution is _____ (using empirical relation).

A. 62

B. 37.5

C. 39



D. 43.5

Q14 Mathematics

At what rate of simple interest per annum will a sum of money get doubled in 10 years?

A. 20%

B. 15%

C. 10%



D. 8.5%

Q15 Mathematics

A and B can do a job in 14 days and 18 days, respectively. A works alone for 6 days and leaves. The number of days required by B to complete the remaining job is:

A. $10\frac{2}{7}$



B. $10\frac{3}{7}$

C. $10\frac{4}{7}$

D. $10\frac{5}{7}$



Q16 Mathematics

A shopkeeper sells wheat at ₹20/kg that he purchased at ₹18/kg and he gives only 900 gm of wheat instead of 1 kg while selling. The actual percentage profit of the shopkeeper is:

A. 24.45%

B. 22.45%

C. 23.45 %



D. 20.45%

Q17 Mathematics

Evaluate $\frac{1}{\frac{4}{5} + \frac{3}{7}} \div \frac{8}{35}$.

A. $3\frac{191}{344}$ B. $3\frac{193}{344}$ C. $3\frac{197}{344}$ D. $3\frac{199}{344}$ **Q18** Mathematics

What is the sum of the measures of the exterior angles of a triangle?

A. 90° B. 180° C. 270° D. 360° **Q19** Mathematics

Which of the following describes the nature of the roots of the quadratic equation $3x^2 - 4x + 10 = 0$?

A. No real roots



B. Two equal roots

C. Two distinct real roots

D. One real root and one imaginary root



Q20 Mathematics

Evaluate 93^2 .

- A. 8349
- B. 8449
- C. 8549
- D. 8649



Q21 Mathematics

The average of 10, 15, 30, 100 is:

- A. 38.75
- B. 39.55
- C. 39.45
- D. 38.65



Q22 Mathematics

If $2\tan \theta = 3$, then the value of $(\sec \theta + \tan \theta - 1)(\sec \theta - \tan \theta + 1) =$ _____.

- A. 2
- B. $\frac{2}{3}$
- C. 3
- D. $\frac{1}{3}$



Q23 Mathematics

A certain amount of money was divided between x and y in the ratio 4 : 3. If y's share is ₹2,400, the total initial amount is _____.

- A. ₹6,000
- B. ₹8,000
- C. ₹5,600
- D. ₹7,200



Q24 Mathematics

The larger of two supplementary angles is 36° more than the smaller. The smaller angle is:

A. 72°



B. 108°

C. 27°

D. 63°

Q25 Mathematics

If we add 1 to the numerator and subtract 1 from the denominator of a given fraction, it becomes 1. It becomes $\frac{2}{3}$ if 1 is added to the denominator of the given fraction while the numerator is left unchanged. The fraction originally given is:

A. $\frac{1}{8}$

B. $\frac{3}{8}$

C. $\frac{5}{8}$

D. $\frac{6}{8}$

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Six boxes, red, green, yellow, pink, blue, and orange, are kept vertically, one over the other (but not necessarily in the same order). The red box is placed at an odd number position when counted from the bottom but it is not in the fifth position. The red box is placed immediately above the yellow box. Only two boxes are placed between the yellow box and the orange box. Only two boxes are placed between the blue box and the pink box and only one box is placed between the blue box and the green box. Which box is placed third from the top?

A. Red

B. Blue



C. Green

D. Pink

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Q27 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 12 – Operations on 12 such as adding/ subtracting/multiplying etc. to 12 can be performed. Breaking down 12 into 1 and 2 and then performing mathematical operations on 1 and 2 is not allowed)

(10, 300, 10)

(11, 165, 5)

A. (10, 400, 20)

B. (11, 188, 6)

C. (9, 243, 9)



D. (8, 20, 8)

Q28 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 478 775 357 183 246 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

What will be the resultant if the third digit of the largest number is added to the second digit of the smallest number?

A. 13



B. 12

C. 10

D. 18

Q29 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

17, 23, 27, 29, ?

A. 29



B. 30

C. 31

D. 25



Q30 General Intelligence and Reasoning

If 11 is subtracted from each of the following numbers and the digits of each number are written in reverse order and then the numbers are arranged in ascending order, the position of how many numbers will NOT change?

167, 876, 567, 187, 873

A. One



B. Two

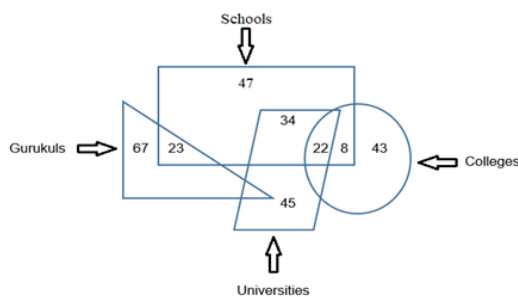
C. Three

D. Four

Q31 General Intelligence and Reasoning

Study the given diagram carefully and answer the question that follows.

The numbers in different sections indicate the number of schools/colleges/universities/gurukuls.



How many Schools are Colleges and Universities but NOT Gurukuls?

A. 23

B. 34

C. 22



D. 8

Q32 General Intelligence and Reasoning

A music school has classes for teaching six different musical instruments - flute, harmonium, guitar, sitar, drum and violin - each on a different day of a week starting from Monday and ending on Saturday of the same week, but not necessarily in the same order. Drum class is scheduled on Monday. Flute class is on Friday. Sitar class is on the day immediately after flute class. Only three classes are scheduled between Guitar and Sitar classes. Only Violin class is scheduled between Flute and Harmonium classes. On which day is Harmonium class scheduled?

A. Tuesday

B. Monday

C. Thursday

D. Wednesday



Q33 General Intelligence and Reasoning

Sumit starts from Point F and drives 5 km towards the east. He then takes a left turn, drives 10 km, turns left and drives 8 km. He then takes a left turn and drives 3 km. He takes a final left turn, drives 3 km and stops at Point G. How far and towards which direction should he drive in order to reach Point F from Point G? (All turns are 90 degree turns only)

A. 7 km towards the south



B. 8 km towards the east

C. 7 km towards the east

D. 5 km towards the west

Q34 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully and decide which of the conclusions logically follow(s) from the statement(s).

Statement:

$$B \leq L \leq U = A > D > E$$

Conclusions:

I. $B < D$

II. $A \geq B$

A. Only conclusion I follows

B. Only conclusion II follows



C. Either conclusion I or II follows

D. Neither conclusion I nor II follows

Q35 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. A is taller than only two other friends. C is shorter than only one friend. E is shorter than A but taller than B. F is shorter than D. Who is the tallest among all the friends?

A. D



B. F

C. E

D. C



Q36 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '+', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$21 + 7 - 3 \div 20 \times 5 = ?$$

A. 2

B. 4



C. 5

D. 10

Q37 General Intelligence and Reasoning

Select the combination of letters that when placed in the same sequence in the blanks of the given series will complete the series.

AGPLH, _____, KOVPJ, PSYRK, UWBTL, ZAEVM

A. BISPM

B. FKSNI

C. FKSNI



D. FISPM

Q38 General Intelligence and Reasoning

In a certain code language, 'YOUTH' is written as 'DUBBQ' and 'AGENT' is written as 'FMLVC'. How will 'CURVE' be written in that language?

A. DOIFJ

B. OUDNE

C. HAYDN



D. HAIRN



Q39 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	2	6	%	@	?	4	<	3	7	=	!	&	9	8
Code	K	S	R	T	U	M	W	Y	A	V	C	X	E	B

Conditions:

- (i) If the first element is a number and the last a symbol, the codes for these two are to be interchanged.
- (ii) If the first element is an even number and the last an odd number, the first and the last elements are to be coded as O.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '3 = 7 4 %' be coded?

A. XCRBY

B. RVAMY

C. MVSBY

D. SVYBR

Q40 General Intelligence and Reasoning

P, Q, R, S, T, X, Y and Z are sitting around a square table facing the centre of the table (but not necessarily in the same order). Some of them are sitting at the corners while some are sitting at the exact centre of the sides. S is the immediate neighbor of Q and X. Y does not have X and P as his immediate neighbours. Z who is to the immediate left of R, has P as immediate neighbours. If S, T, Y and Z are sitting at the exact center of the sides of the table, then who sitting to the immediate right of X?

A. S

B. T

C. Y

D. P

Q41 General Intelligence and Reasoning

How many such pairs of letters are there in the word CONVERTS (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. 2

B. 5

C. 3

D. 4



Q42 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

The impact of social media is very much visible in every sphere of society.

Arguments:

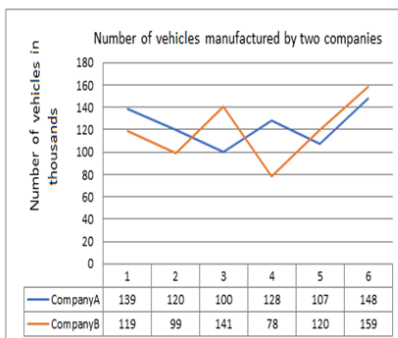
- I. Today, people are connected across different countries through social media.
- II. Different cultures have been explored by people through social media.

- A. I weakens while II strengthens the statement.
- B. II weakens while I strengthens the statement.
- C. Both I and II weaken the statement.
- D. Both I and II strengthen the statement.

**Q43** General Intelligence and Reasoning

Study the given graph and answer the question that follows.

The numbers 1 to 6 represent the years from 2001 to 2006.



In which year was the difference between the production of two companies maximum?

- A. 2001
- B. 2002
- C. 2003
- D. 2004



Q44 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully and from the given options, select the pair that follows the same logic.

HP : MS

DL : IO

A. HT : KY

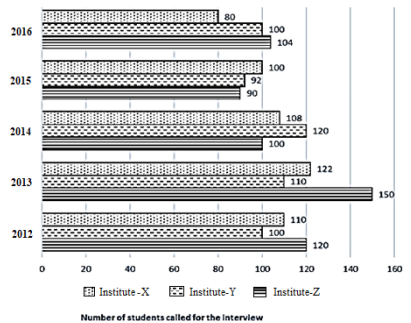
B. GE : LI

C. GR : KT

D. AL : FO

**Q45** General Intelligence and Reasoning

The bar graph given below shows the number of students who were called for a certain job interview by company A from three different institutes, X, Y and Z, over the years.



In which of the following years was the total number of students called for the interview the highest?

A. 2012

B. 2013

C. 2014

D. 2016



Q46 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some chains are knives.

All knives are cats.

All cats are rats.

Conclusions:

(I) Some rats are chains.

(II) All rats are knives.

A. Only conclusion I follows



B. Only conclusion II follows

C. Neither conclusion I nor II follow

D. Both conclusions I and II follow

Q47 General Intelligence and Reasoning

If '×' and '−' are interchanged, what will be the value of the given expression?

$$13 - 7 + 8 \div 2 \times 10$$

A. 85



B. 92

C. 76

D. 53

Q48 General Intelligence and Reasoning

Each of six students, A, B, C, D, E and F, have their class monitor duties on six different days of a week starting from Monday and ending on Saturday of the same week, but not necessarily in the same order. A's monitor duties are on the day immediately after C. D's monitor duties are on the day immediately before E, but it is not on Monday. B's monitor duties are on Saturday. F's monitor duties are on Wednesday. Who among the following has monitor duties on Tuesday?

A. B

B. C

C. A



D. E



Q49 General Intelligence and Reasoning

If Y is to the south of X and Z is to the east of X, then what is the position of Z with respect to Y?

- A. North
- B. North-east
- C. North-west
- D. South-east



Q50 General Intelligence and Reasoning

Five persons are sitting around a circular table facing the centre. Aman is an immediate neighbour of both Ansu and Ajit. Akash sits second to the left of Aman. Ansh sits second to the right of Aman. Akash is an immediate neighbour of both Ansu and Ansh. Who is an immediate neighbour of both Ajit and Akash?

- A. Ansh
- B. Ansu
- C. Aman
- D. Cannot be determined



Q51 General Intelligence and Reasoning

Three statements are given, followed by four conclusions numbered I, II, III and IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. Some cats are pets.
2. All pets are snakes.
3. Some snakes are cats.

Conclusions:

- I. Some snakes are pets.
- II. All cats are snakes.
- III. All pets are cats.
- IV. No snake is a cat.

- A. Only conclusions I follows
- B. Only conclusions II and III follow
- C. Only conclusions I and IV follow
- D. Only conclusion IV follows



Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

13, 16, 22, 31, 43, ?

A. 52

B. 58



C. 55

D. 48

Q53 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

58 : 115 :: 47 : 93 :: 67 : ?

A. 124

B. 113

C. 138

D. 133



Q54 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) F \$ 3 & 4 P W 8 # T * A 2 F 5 M 2 6 \$ Y 9 K (Right)

How many such letters are there which are immediately preceded by a letter and also immediately followed by a number?

A. 1



B. 2

C. 3

D. 4



Q55 General Intelligence and Reasoning

Refer to the following letter and symbol series and answer the question.

(Left) Z # U * Y \$ K W P Q @ G & A % J B L % & H D # V (Right)

Which of the following is the twelfth letter/symbol to the left of the eighteenth letter/symbol from the left end of the given series?

A. K

B. L

C. \$



D. Y

General Science

25 Questions • Answer Key

Q56 General Science

Arabari forest is located in _____.

A. Midnapore



B. Pachmarhi

C. Garhwal

D. Assam

Q57 General Science

The acid and base which form sodium hydrogen carbonate are:

A. H_2CO_3 and NaOH



B. HCl and NaOH

C. H_2CO_3 and Na_2CO_3

D. HCl and NaCl

Q58 General Science

The women who started the Chipko Andolan in the 1970s wanted to save _____.

A. an extremely rare resource

B. a renewable resource



C. a non-biodegradable resource

D. an endangered resource



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Q59 General Science

The magnetic field produced by the long solenoid carrying current is:

- A. uniform inside the solenoid
- B. zero inside the solenoid
- C. maximum at the ends of the solenoid
- D. non-uniform inside the solenoid

Q60 General Science

When white light is passed through a prism it undergoes dispersion. The angle of deviation is:

- A. directly proportional to the wavelength
- B. inversely proportional to the wavelength
- C. independent of the wavelength
- D. maximum for red colour

Q61 General Science

Consider the reaction $\text{KI (aq)} + \text{PbNO}_3 \text{ (aq)} \rightarrow 2 \text{KNO}_3 \text{ (aq)} + \text{PbI}_2 \text{ (s)}$.

This is an example of:

- A. decomposition reaction
- B. combination reaction
- C. double displacement reaction
- D. displacement reaction

Q62 General Science

What role does transpiration play in the transport of water in plants?

- A. It exerts a suction force.
- B. It exerts a pumping force.
- C. It promotes diffusion of water.
- D. It promotes growth of roots.



Q63 General Science

What is the major product when ethanol reacts with potassium dichromate ($K_2Cr_2O_7$) in an acidic medium?

A. Ethanoic acid



B. Ethanal

C. Ethyl ethanoate

D. Ethene

Q64 General Science

An incident ray passes through the focus of a concave mirror. The reflected ray:

A. passes through the focus of the mirror

B. is parallel to the principal axis



C. is normal to the mirror

D. passes through the centre of curvature

Q65 General Science

An electric motor is a device which converts:

A. mechanical energy into electrical energy

B. electrical energy into mechanical energy



C. mechanical energy into solar energy

D. solar energy into electrical energy

Q66 General Science

Electric power consumed by two electric bulbs (each with $5\ \Omega$ resistance) connected in series with a $3\ V$ battery is:

A. $0.9\ W$



B. $0.3\ W$

C. $1\ W$

D. $3\ W$



Q67 General Science

Which of the following statements is INCORRECT about voluntary muscles?

- A. These muscles are also called skeletal muscles.
- B. They are mostly attached to bones.
- C. These muscles show alternate light and dark bands.
- D. Cells are long, cylindrical, unbranched and uninucleate. ✓

Q68 General Science

Out of indigo, green, orange and yellow colours, which colour has the least refractive index?

- A. Yellow
- B. Green
- C. Indigo
- D. Orange ✓

Q69 General Science

When parallel beam of light rays are incident on the convex mirror of focal length 1 m, reflected rays:

- A. appear to diverge from a point at a distance 0.5 m behind the mirror
- B. appear to diverge from a point at a distance 1 m behind the mirror ✓
- C. converge to a point at a distance 0.5 m from the convex surface
- D. converge to a point at a distance 1 m from the convex surface

Q70 General Science

Which of the following elements is the most metallic in nature?

- A. Li
- B. K
- C. Rb
- D. Cs ✓



Q71 General Science

What is meant by non-biodegradable?

- A. Substances that are broken down by biological processes
- B. Substances that are not broken down by chemical processes
- C. Substances that are not broken down by biological processes ✓
- D. Substances that are broken down by biochemical reactions.

Q72 General Science

When electrolysis of brine is done, a gas X is formed at the cathode, which gives a pop sound when a burning splinter is brought near it. The gas X is:

- A. H_2 ✓
- B. Cl_2
- C. CO_2
- D. O_2

Q73 General Science

When 60 KJ heat is produced by a heater in 1 minute and 20 seconds then its power is:

- A. 7.5 kW
- B. 150 W
- C. 750 W ✓
- D. 1.5 kW

Q74 General Science

In the Modern Periodic Table, Tellurium (atomic number 52) is surrounded by elements with atomic numbers:

- A. 35, 51, 54, 85
- B. 34, 51, 53, 84 ✓
- C. 36, 50, 53, 84
- D. 33, 50, 53, 83



Q75 General Science

Which of the following contraceptive methods is useful for controlling both unwanted pregnancies and STDs?

- A. Copper-T
- B. Oral pills
- C. Condom ✓
- D. Surgical method

Q76 General Science

Salivary amylase helps in the digestion of _____.

- A. protein
- B. starch ✓
- C. lipid
- D. Cellulose

Q77 General Science

Which of the following bonds are formed between carbon-carbon atoms of hydrocarbons?

- A. Coordination covalent bonds
- B. Ionic bonds
- C. Covalent bonds ✓
- D. Hydrogen bonds

Q78 General Science

The correct relation between P, V, R and I amongst the following is:

- A. $P = V^2 IR$
- B. $P = I^2 R$ ✓
- C. $P_2 = VI R^2$
- D. $P = V^2 / IR$



Q79 General Science

Where are waste products stored within a plant cell?

- A. Vacuoles
- B. Mitochondria
- C. Lysosomes
- D. Golgi bodies

Q80 General Science

Which of the following reactions releases heat along with the formation of products?

- A. Exothermic reaction
- B. Endothermic reaction
- C. Rearrangement reactions
- D. Sigma tropic reactions

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Each Gram Panchayat is represented by how many sarpanch?

- A. One
- B. Two
- C. Three
- D. Four

Q82 General Awareness and Current Affairs

What is the name of the supercomputer designed and installed by Centre for Development of Advanced Computing (C-DAC) at IIT Roorkee, under Phase II of National Supercomputing Mission (NSM) in March 2022?

- A. PARAM Ganga
- B. PARAM Yuva
- C. PARAM Yamuna
- D. PARAM Bheem



Q83 General Awareness and Current Affairs

As per a news report in March 2022, scientists at the Centre for Nano and Soft Matter Sciences (CeNS) designed an electrocatalyst system for energy-efficient production of _____ with the help of electrolysis of urea.

- A. nitrogen
- B. oxygen
- C. hydrogen
- D. helium



Q84 General Awareness and Current Affairs

If consumption function = $50 + 0.6Y$ and Investment = 20, then find the equilibrium income.

- A. 200
- B. 175
- C. 150
- D. 165



Q85 General Awareness and Current Affairs

In which sport did Abhishek Verma win the Arjuna Award 2021?

- A. Shooting
- B. Table Tennis
- C. Hockey
- D. Golf



Q86 General Awareness and Current Affairs

Who among the following surpassed Argentine superstar Lionel Messi to become the second-highest active international goal-scorer in June 2021?

- A. Gurpreet Singh Sandhu
- B. Sandesh Jhingan
- C. Subrata Pal
- D. Sunil Chhetri



Q87 General Awareness and Current Affairs

The _____ scheme of Rajasthan was launched in collaboration with 'IPE Global', which provides the rural girls of the state with scholarship schemes by enrolling them at the secondary level.

- A. Beti Bachao, Beti Padhao.
- B. Yuvika
- C. Begum Hazrat Scholarship
- D. Udaan



Q88 General Awareness and Current Affairs

The Council of Ministers (Government of India) are headed by the _____.

- A. President
- B. Vice president
- C. Prime Minister
- D. Speaker of Lok Sabha



Q89 General Awareness and Current Affairs

Who is believed to be the first person to bring Christianity to India?

- A. Queen Victoria
- B. Queen Elizabeth
- C. Vasco Da Gama
- D. Saint Thomas



Q90 General Awareness and Current Affairs

In which of the following Five-Year Plans was removal of poverty and attainment of self-reliance the main objective?

- A. Second Five-Year Plan
- B. Third Five-Year Plan
- C. Fourth Five-Year Plan
- D. Fifth Five-Year Plan



Q91 General Awareness and Current Affairs

Where is the Mahatma Gandhi Antarrashtriya Hindi VishwaVidyalaya located?

- A. Madurai
- B. Vijayawada
- C. Wardha ☒
- D. Thiruvananthapuram

Q92 General Awareness and Current Affairs

Which of the following animals is present on the insignia of Reserve Bank of India?

- A. Tiger ☒
- B. Elephant
- C. Zebra
- D. Rhinoceros

Q93 General Awareness and Current Affairs

Konsachem Fest, or the Harvest feast, a thanksgiving ritual wherein farmers pray for gods continued blessings, is celebrated in which of the following states?

- A. Manipur
- B. Sikkim
- C. Goa ☒
- D. Meghalaya

Q94 General Awareness and Current Affairs

The river island of Majuli is a part of the vast dynamic river system of the _____ basin.

- A. Yamuna
- B. Brahmaputra ☒
- C. Ganga
- D. Godavari



Q95 General Awareness and Current Affairs

In the history of India, where did the Black Hole incident take place in the year 1756?

- A. Madras
- B. Surat
- C. Bombay
- D. Calcutta



Q96 General Awareness and Current Affairs

Cash Grant-in-Aid from foreign countries and international organisations are a part of _____.

- A. capital receipt
- B. revenue receipt
- C. planned revenue income
- D. non-planned revenue receipt



Q97 General Awareness and Current Affairs

As notified by Government of India in July 2022, Mission Vatsalya, in partnership with states and districts, will execute a 24×7 helpline service for children, as defined under Juvenile Justice Act, _____.

- A. 2010
- B. 2013
- C. 2015
- D. 2017



Q98 General Awareness and Current Affairs

The strong, gusty, hot, dry winds blowing during the day over the north and northwestern India in summer are known as _____.

- A. Trade winds
- B. Loo
- C. Mango winds
- D. Kaal Baishakhi



Q99 General Awareness and Current Affairs

The _____ is the central stretch of land between Western Ghats and the Arabian Sea in the Western Coast.

- A. Uttkal Plain
- B. Barind Tract
- C. Rohilkhand Plain
- D. Kannad Plain



Q100 General Awareness and Current Affairs

Ten Fundamental Duties have been added in Part-IV of the Constitution under _____ in the year 1976 through the 42nd Constitutional Amendment.

- A. Article 36
- B. Article 51
- C. Article 51A
- D. Article 52



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Find the value of $3^{-5} \times 4^{-5} \times 5^{-5}$.

A. $\frac{1}{30^5}$

B. $\frac{1}{40^5}$

C. $\frac{1}{50^5}$

D. $\frac{1}{60^5}$ ✓

Q2 Mathematics

If two parallel lines are intersected by a transversal, then the internal bisectors of two pairs of interior angles necessarily enclose a _____.

A. square

B. circle

C. rectangle ✓

D. triangle

Q3 Mathematics

A diver rowing at the speed of 3 km/h in still water takes double the time going 50 km upstream compared to going 50 km downstream. The speed of the stream is:

A. $\frac{4}{3}$ km/h

B. 1 km/h ✓

C. $\frac{7}{3}$ km/h

D. 3 km/h



Q4 Mathematics

16 men can do a piece of work in 5 days. The number of men required to complete the same work in 20 days is:

A. 3

B. 4



C. 5

D. 6

Q5 Mathematics

The cost price of 42 articles is equal to the selling price of 36 articles. What is the gain or loss made in the transaction?

A. $16\frac{2}{3}\%$ loss

B. $14\frac{1}{7}\%$ gain

C. $16\frac{2}{3}\%$ gain



D. $14\frac{1}{7}\%$ loss

Q6 Mathematics

What will be the total amount payable on a sum of ₹12,500 after two years at the rate of 10% per annum if the interest is compounded annually?

A. ₹25,000

B. ₹15,125



C. ₹18,500

D. ₹17,790

Q7 Mathematics

The number of non-square numbers between 87^2 and 88^2 is:

A. 154

B. 164

C. 174



D. 184



Q8 Mathematics

The salary of a person is ₹2,00,000. If he saves an amount of ₹88,000, then the person saves _____ of his salary.

- A. 44.20%
- B. 44.00%
- C. 42.74%
- D. 42.85%



Q9 Mathematics

The sum of all the interior angles of a heptagon is equal to

- A. 540°
- B. 720°
- C. 810°
- D. 900°



Q10 Mathematics

The average weight of 6 persons increases by 2 kg when one of them whose weight is 72 kg is replaced by a new man. The weight of the new man is:

- A. 104 kg
- B. 94 kg
- C. 84 kg
- D. 74 kg



Q11 Mathematics

A's age is seven times B's age. If the sum of their ages is 48 years, then their ages are:

- A. 35 and 5
- B. 46 and 6
- C. 40 and 8
- D. 42 and 6



Q12 Mathematics

If α, β are the roots of the quadratic equation $x^2 - 11x + 18 = 0$, then the value of $\alpha^2 + \beta^2$ is:

A. 105

B. 95

C. 85



D. 75

Q13 Mathematics

Two plates and three spoons cost is ₹86. The cost of four plates and a spoon is ₹112. The difference between the cost of a plate and that of a spoon is _____.

A. ₹26

B. ₹18

C. ₹13



D. ₹16

Q14 Mathematics

Naresh deposited a sum of ₹10,000 at 10% rate of interest per annum, compounded annually. The total amount received by Naresh after 2 years is:

A. ₹12,200

B. ₹12,100



C. ₹12,010

D. ₹12,000

Q15 Mathematics

If $5^{n+2} = 3125$, then $n =$ _____.

A. 5

B. 4

C. 2

D. 3



Q16 Mathematics

The average of the numbers 15, 17, 20, 25, 32 and 35 is:

- A. 18
- B. 28
- C. 24
- D. 14



Q17 Mathematics

A vendor sells 10 pens for ₹7. He earns a profit of 40%. The cost price of one pen is:

- A. ₹0.60
- B. ₹0.56
- C. ₹0.45
- D. ₹0.50



Q18 Mathematics

The HCF and the LCM of two numbers are 44 and 264, respectively. If one of the numbers is $\frac{3}{2}$ times of the other, what is the smaller number?

- A. 44
- B. 88
- C. 132
- D. 176



Q19 Mathematics

The value of $\frac{\sqrt{1296}}{\sqrt{121}} \times \frac{15}{(216)^{1/3}} \times \frac{11}{\sqrt{225}}$ is _____.

- A. 11
- B. 15
- C. 6
- D. 36



Q20 Mathematics

If ₹1,368 is divided into two parts in the ratio of 5 : 3, then the amount (in ₹) in the greater part is _____.

A. 268.80

B. 444.72

C. 855.00



D. 585.00

Q21 Mathematics

$\sec^2 \theta + (\operatorname{cosec}^2 \theta - 1) - (1 + \tan^2 \theta) - \cot^2 \theta =$ _____.

A. $\cot^2 \theta$

B. $\sec^2 \theta$

C. 0



D. 1

Q22 Mathematics

The total surface area (in m^2) of a cube, each of whose edges measures 4 m, is:

A. 64

B. 72

C. 96



D. 108

Q23 Mathematics

If the three sides of a triangle are in the ratio 7 : 5 : 4 and its perimeter 48 m, then the area of triangle is:

A. $37\sqrt{6} \text{ m}^2$

B. $39\sqrt{6} \text{ m}^2$

C. $36\sqrt{6} \text{ m}^2$



D. 34 m^2



Q24 Mathematics

Evaluate 95×103 .

A. 9785



B. 9685

C. 9755

D. 9655

Q25 Mathematics

If the sum of the LCM and the HCF of two numbers is 1050 and if their HCF is 630 less than their LCM, then the product of those two numbers is _____.

A. 661500

B. 176400



C. 630000

D. 10500

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Seven businessmen, G, H, I, J, K, L and M, travelled in the same month on different dates 4th, 8th, 11th, 14th, 17th, 22nd and 28th (but not necessarily in the same order). L travelled the last. K travelled just after I but before J. K travelled on the 11th. Only two people travelled between K and M. Exactly one person travelled between G and K, and K travelled after G. On which date did M travel?

A. 17th

B. 22nd



C. 4th

D. 28th



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Q27 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

All zoos should be banned except for endangered species of animals.

Arguments:

- I. Animals are not for human entertainment but for coexistence with humans.
- II. Endangered species need our concern to maintain an ecological balance.

- A. I weakens while II strengthens the statement.
- B. II weakens while I strengthens the statement.
- C. Both I and II weaken the statement.
- D. Both I and II strengthen the statement. ☒

Q28 General Intelligence and Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$4 \div 4 - 45 \times 5 + 12 = ?$$

- A. 15
- B. 28
- C. 13 ☒
- D. 35

Q29 General Intelligence and Reasoning

The percentages of people qualifying the driving test to get a license in different years is shown in the following graph. Study the graph and answer the question.



In the years 1996 and 1997 together, 45,000 people qualified the driving test. If in the year 1996, a total of 25,000 people took the driving test, then how many people took the test in the year 1997?

- A. 30,000
- B. 45,000
- C. 60,000
- D. 70,000

**Q30** General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. R is taller than only two other friends. T is shorter than only one friend. Q is shorter than R but taller than P. S is shorter than U. Who is the second tallest among all the friends?

- A. U
- B. T
- C. S
- D. R



Q31 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	*	2	@	5	^	+	7	#	%	9
Letter code	J	P	A	F	D	N	R	K	M	Z

Conditions:

- (i) If the first element is a symbol and the last, a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last, an even number, the first and last elements are to be coded as S.

Which of the following will be the code for 75#2 ?

A. RFKS

B. SFMS

C. SFKS



D. RFKP

Q32 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$76 + 5 - 6 \times 3 \div 4 = ?$$

A. 70



B. 71

C. 72

D. 68



Q33 General Intelligence and Reasoning

In this question, a statement is followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$I \geq R > U \leq T > Q \geq O$$

Conclusions:

1. $I > U$
2. $O > T$
3. $R > T$
4. $U < Q$

A. 1



B. 2

C. 3

D. 4

Q34 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

9, 13, 22, 38, 63, ?

A. 63

B. 99



C. 72

D. 100

Q35 General Intelligence and Reasoning

Akshay starts from the restaurant and travels 2 km southwards and then turns right and travels 4 km. He then turns left and travels 10km, then he turns left and travel 4km to reach his home. What is the shortest distance between the restaurant and home and what is restaurant's direction with respect to the home?

A. 12 km, North



B. 12 km, South

C. 8 km, North

D. 8 km, South



Q36 General Intelligence and Reasoning

Study the following table and answer the question.

Name of the Student	Marks		
	English	Maths	Computer
Arav	74	82	72
Toshita	71	92	49
Pranay	59	65	66
Vibhor	81	78	82

By what percentage is the total marks of Arav in the three subjects more than the total marks of Pranay in the three subjects?

A. 24%

B. 20%



C. 23%

D. 27%

Q37 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(76, 171, 95)

(28, 63, 35)

A. (60, 105, 70)

B. (52, 117, 65)



C. (44, 88, 55)

D. (24, 48, 30)



Q38 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All statements are books.
2. Some books are copies.
3. No copy is a thesaurus.

Conclusions:

- I. Some thesauruses are copies.
- II. No statement is a thesaurus.
- III. Some books are statements.

A. Only conclusions I and II follow

B. Only conclusions II and III follow

C. Only conclusion I follows

D. Only conclusions III follows



Q39 General Intelligence and Reasoning

Three statements are given, followed by four conclusions numbered I, II, III and IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements

Statements:

1. Some pants are coats.
2. All coats are red.
3. All red are shirts.

Conclusions:

- I. All pants are shirts.
- II. All coats are shirts.
- III. Some red are coats.
- IV. Some shirts are pants.

A. Only conclusions I, II and III follow

B. Only conclusions II, III and IV follow



C. Only conclusions I, III and IV follow

D. All the conclusions follow



Q40 General Intelligence and Reasoning

Five persons are sitting in a straight row facing the north. Ram is sitting at the extreme left end and Sita is sitting at the extreme right end of the row. Kamal sits exactly in the middle of the row. Ravi is sitting exactly third to the left of Sita. Ritu is sitting exactly third to the right of Ram. Who is the immediate neighbour of Sita?

- A. Kamal
- B. Ram
- C. Ravi
- D. Ritu

**Q41** General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$18 : 36 :: 42 : 51 :: 25 : ?$

- A. 41
- B. 43
- C. 45
- D. 48

**Q42** General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷' and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$88 \times 22 - 15 \div 40 + 19 = ?$

- A. 81
- B. 91
- C. 101
- D. 201



Q43 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 653 831 933 476 715 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

If 2 is added to the third digit of every number, in how many numbers will the third digit be exactly divided by the second digit of that number?

A. 1

B. 2

C. 3



D. 4

Q44 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

_ _ b a d c _ _ d _ b a d c b _

A. dcbaac

B. dcbaca



C. cdabca

D. dbcaca

Q45 General Intelligence and Reasoning

Radhika moves 30 metres in West direction. Then she turns to her right and moves 10 metres and then she turns to her left and moves 30 metres. In which direction is she now from the starting point?

A. East

B. North- East

C. North-West



D. South



Q46 General Intelligence and Reasoning

In this question, a group of letters is coded using symbols as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letters	D	C	U	Q	I	A	R	E
Codes	@	>	^	%	=	#	\$	+

Conditions:

- If the first letter of the word is a vowel and last letter is a consonant, then both these letters will be coded as '*'.
- If the second letter of the word is a vowel and the fifth letter is a consonant, then both these letters will be coded as '&'.

What will be the code for the word 'ACQUIRED'?

A. # > % ^ = \$ + @

B. * > % ^ = \$ + *

C. * > % ^ = \$ + @

D. * > % = ^ \$ + *

Q47 General Intelligence and Reasoning

Six friends C, D, E, F, G and H are sitting in a row facing north. F is 2nd to the left of E, who is 2nd to the left of G. D is 2nd to the right of H, who is an immediate neighbour of E and G. Where is C seated?

A. Between E and F

B. Between H and D

C. At the left end

D. At the right end

Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

22, 34, 48, 64, 82, ?

A. 98

B. 100

C. 101

D. 102



Q49 General Intelligence and Reasoning

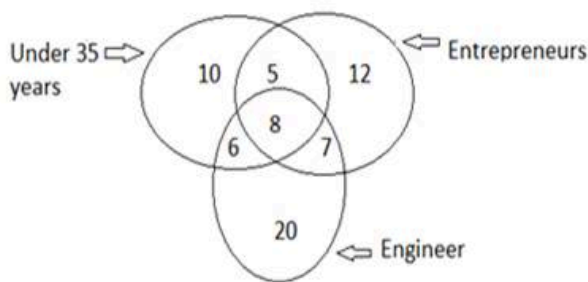
A certain number of people are sitting in a row, facing North. P is an immediate neighbour of both V and T, while R is an immediate neighbour of both T and Q. V is at the extreme right end. There are only two people on the left of Q. If no other person is sitting in the row, what is the total number of persons seated?

- A. Eight
- B. Nine
- C. Six
- D. Seven



Q50 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many person under 35 years of age are Engineers but NOT Entrepreneurs?

- A. 5
- B. 6
- C. 7
- D. 8



Q51 General Intelligence and Reasoning

This question is based on the following 3-letter words.

AIN, ONK, AST, EJO

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel ?

- A. 2
- B. 3
- C. 4
- D. 1



Q52 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question that follows.

(Left) A D 4 F @ T 5 H \$ B R @ V T 6 # 7 H 6 D 8 \$ % & G \$ 3 C F (Right)

If all the symbols are dropped from the series, which of the following will be ninth to the left of the fifth from the right?

A. H

B. B



C. R

D. V

Q53 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word ARGUMENT is arranged in alphabetical order?

A. One

B. Two



C. Three

D. None

Q54 General Intelligence and Reasoning

U, V, W, X, Y and Z live on different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 6. Z lives on the floor immediately above Y. Only one person lives between U and V. W lives immediately above Z and immediately below V. Who lives on the second floor?

A. U

B. V

C. W

D. Z



Q55 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

MCD : PZG

LKG : OHJ

A. QDH : TGK

B. NYB : QVY

C. TJQ : WGT



D. PBX : SEA

General Science

25 Questions • Answer Key

Q56 General Science

What is the suffix in the name Propanoic Acid?

A. Prop

B. Propane

C. oic acid



D. ane

Q57 General Science

In which year was Mendeleev's Periodic Table published in a German journal?

A. 1872



B. 1852

C. 1892

D. 1862



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Q58 General Science

In an electric circuit, if power, voltage and resistance are represented by P, V and R, respectively, then the correct relation between them is:

A. $P = V^2 R$

B. $P = VR^2$

C. $P = \frac{V^2}{R}$



D. $P = \frac{V^2}{R^2}$

Q59 General Science

Why is carbon monoxide an air pollutant?

A. Because it can kills RBCs

B. Because it reduces oxygen carrying capacity of blood



C. Because it is present in vehicle exhaust

D. Because it is converted into carbon dioxide

Q60 General Science

Which of the following compounds is formed when lead nitrate is mixed with potassium iodide?

A. Lead oxide

B. Lead iodide



C. Lead nitride

D. Lead carbide

Q61 General Science

When a beam of light of wave lengths $4500 \text{ \AA}$, $5400 \text{ \AA}$, and $6000 \text{ \AA}$ respectively are passed through a prism then the angle of deviation is:

A. more in light of $4500 \text{ \AA}$



B. equal in all

C. more in light of $6000 \text{ \AA}$

D. more in light of $5400 \text{ \AA}$



Q62 General Science

When magnetic lines of forces are more crowded in the region of magnetic field, this indicates the presence of:

- A. strong magnetic field ✓
- B. weak magnetic field
- C. magnetic north pole alone
- D. magnetic south pole alone

Q63 General Science

When an object is kept at the centre of curvature of a concave mirror, the image will be formed at:

- A. infinity
- B. the principal focus
- C. the centre of curvature ✓
- D. the position behind the mirror

Q64 General Science

Which of the following types of epithelial tissues form a lining of lung alveoli?

- A. Squamous ✓
- B. Cuboidal
- C. Columnar
- D. Ciliated columnar

Q65 General Science

In a house, a refrigerator set rated as 350 W is operated for 8 hours/day, a TV set rated as 150 W is operated for 5 hours/day, and an electric heater rated as 1500 W is operated for 30 minutes/day. If the energy cost per unit is ₹5.00, then the total expenditure of that house for 10 days for the TV set, refrigerator and electric heater will be:

- A. ₹215 /- ✓
- B. ₹220/-
- C. ₹225/-
- D. ₹230/-



Q66 General Science

How many elements are present in the 7th period of the Modern Periodic table?

- A. 2
- B. 8
- C. 32
- D. 18



Q67 General Science

What is the full form of UNEP

- A. United Nations Empowerment Programme
- B. United Nations Educational Programme
- C. United Nations Environment Programme
- D. United Nations Environmental Protection



Q68 General Science

Complete the given homologous series of alcohols by choosing the correct option.

CH_3OH , $\text{C}_2\text{H}_5\text{OH}$, _____, $\text{C}_4\text{H}_9\text{OH}$

- A. $\text{C}_3\text{H}_6\text{OH}$
- B. $\text{C}_3\text{H}_7\text{OH}$
- C. $\text{C}_5\text{H}_{10}\text{OH}$
- D. $\text{C}_5\text{H}_{12}\text{OH}$



Q69 General Science

The rules of inheritance of traits in human beings are related to certain facts mentioned below. All of them are correct except one. Select the INCORRECT option.

- A. Both mother and father contribute equal amount of genetic material to the child
- B. Each trait can be influenced by paternal and maternal DNA
- C. For each trait, there would be two versions in each child
- D. For each trait, there would be a single version in each child



Q70 General Science

What happens when quick lime reacts vigorously with water?

- A. Displacement reaction
- B. Dissociation reaction
- C. Double displacement reaction
- D. Exothermic reaction



Q71 General Science

reflected ray passes through principal focus when incident ray:

- A. is passing through C of convex mirror
- B. is parallel to principal axis of concave mirror
- C. is parallel to principal axis of convex mirror
- D. is incident at the pole of plane mirror



Q72 General Science

In which season would sugar stored in root or stem tissue be transported to the buds which need energy to grow in plants?

- A. Winter
- B. Spring
- C. Summer
- D. Monsoon



Q73 General Science

Which of the following is similar to the plasma of blood but is colourless and contains less protein?

- A. RBC
- B. WBC
- C. Lymph
- D. Platelets



Q74 General Science

The refractive index of fluid A is 1.47. This means:

- A. the speed of light in fluid A is increased 1.47 times than the speed of light in water
- B. the speed of light in fluid A is reduced by 1.47 times than the speed of light in vacuum ✓
- C. the speed of light in fluid A is 1.47 times greater than the speed of light in water
- D. the speed of light in fluid A is 1.47 times greater than the speed of light in air

Q75 General Science

Which of the following is related to the Chipko Andolan Movement?

- A. Water
- B. Forest ✓
- C. Pollution
- D. Coal

Q76 General Science

Consider the below statements and identify the correct answer.

Statement-I: The metals high up in the reactivity series are not reactive.

Statement-II: The metals high up in the reactivity series can be obtained from their compounds by heating with carbon.

- A. Both the statements are true.
- B. Both the statements are false. ✓
- C. Statement-I is true, and Statement-II is false.
- D. Statement-II is true, and Statement-I is false.

Q77 General Science

When zinc granules react with dilute sulphuric acid, a colourless gas is produced which burns with a:

- A. yellow flame
- B. green flame
- C. pop sound ✓
- D. reddish flame



Q78 General Science

Consider two wires of the same material, but the ratio of their cross-sectional areas is 1 : 10 and the ratio of their lengths is 2 : 5. If the same 10 V battery is connected across these two wires separately, what will be the ratio of the current flow in these two wires?

A. 1 : 4



B. 4 : 1

C. 1 : 25

D. 25 : 1

Q79 General Science

Where can a tall tree store its waste products?

A. In the bark tissue

B. In old xylem (heartwood)



C. In old roots

D. In intercellular spaces

Q80 General Science

A bulb draws 36 W when connected to a 12- V supply. If it is connected to a 6V supply then power consumed will be:

A. 12W

B. 24 W

C. 9W



D. 6W

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In the year 2021, the Indian men's hockey team defeated which country to win the bronze medal in Tokyo Olympics?

A. Pakistan

B. Germany



C. Belgium

D. Australia



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Q82 General Awareness and Current Affairs

Which of the following Acts was aimed to provide for the extension of the provisions of Part IX of the Constitution relating to the Panchayats to the Scheduled Areas?

A. PESA Act 1996



B. DESA Act 1996

C. MESA Act 1996

D. NESA Act 1996

Q83 General Awareness and Current Affairs

In 2022 scientists from which campus of Indian Institute of Science Education and Research (IISER) have successfully extracted more than 95 per cent of uranium from natural seawater during an experiment?

A. Pune



B. Mohali

C. Bhopal

D. Tirupati

Q84 General Awareness and Current Affairs

Who was awarded the 2021 DST-ICTP-IMU Ramanujan Prize for Young Mathematicians from developing countries for her outstanding work in affine algebraic geometry and commutative algebra?

A. Ramdorai Sujatha

B. Amalendu Krishna

C. Ritabrata Munshi

D. Neena Gupta



Q85 General Awareness and Current Affairs

By which year does the National Education Policy 2020 aim for a 100% Gross Enrolment Ratio (GER) in school education?

A. 2023

B. 2025

C. 2027

D. 2030



Q86 General Awareness and Current Affairs

Who among the following became the first Indian woman sailor to qualify for the Olympics in April 2021?

A. Nethra Kumanan



B. Varsha Gautham

C. Aishwarya Nedunchezhiyan

D. Sweta Shervegar

Q87 General Awareness and Current Affairs

Which of the following Five-Year Plans was based on the Mahalanobis model?

A. First Five-Year Plan

B. Second Five-Year Plan



C. Third Five-Year Plan

D. Fourth Five-Year Plan

Q88 General Awareness and Current Affairs

Which of the following is India's coldest inhabited place?

A. Shimla

B. Drass



C. Jammu

D. Mount Abu

Q89 General Awareness and Current Affairs

Who among the following is considered as the first Tirthankara of Jainism?

A. Vardhaman Mahavira

B. Parshvanath

C. Neminath

D. Rishabhanatha



Q90 General Awareness and Current Affairs

As per the Railway Budget of India 2022-23, the Finance Minister announced the production of 400 new Vande Bharat trains in three years and _____ km of the rail network will be brought under 'Kavach'.

A. 2000



B. 3000

C. 3500

D. 4000

Q91 General Awareness and Current Affairs

Who was the Chairman of the Drafting Committee which had the task to prepare the draft of the Constitution?

A. Dr. BR Ambedkar



B. N Goipalswami

C. Alladi Krishnaswami Ayyas

D. Saijio Mola Saadulla

Q92 General Awareness and Current Affairs

Which was the first microfinance institution in the country to win a bank license in 2014 by RBI?

A. Madura Micro Finance Ltd

B. Annapurna Financial Services Pvt Ltd

C. Bandhan Financial Services Pvt Ltd



D. BSS Microfinance Bangalore Pvt Ltd

Q93 General Awareness and Current Affairs

As of the year 2021, which of the following states/union territories produces the largest quantity of apples?

A. Jammu & Kashmir



B. Himachal Pradesh

C. Uttarakhand

D. Ladakh



Q94 General Awareness and Current Affairs

The concept of judicial review in Constitution of India has been taken from the Constitution of which country?

A. United states of America



B. United Kingdom

C. New Zealand

D. Australia

Q95 General Awareness and Current Affairs

In December 2021 to improve the leadership skills of grassroot women political leaders, which of the following organisations launched a pan-India capacity building programme called 'She is a Changemaker' for women representatives at all levels?

A. National Commission for Women



B. National Commission for Minorities

C. National Commission for Backward Classes

D. National Human Rights Commission

Q96 General Awareness and Current Affairs

The *Swaminarayan Sampraday* was established by Bhagwan Swaminarayan over 200 years ago in the present day state of _____.

A. Rajasthan

B. Madhya Pradesh

C. Gujarat



D. Himachal Pradesh

Q97 General Awareness and Current Affairs

Where in India is the Sree Sankaracharya University of Sanskrit situated?

A. Assam

B. Kerala



C. Maharashtra

D. West Bengal



Q98 General Awareness and Current Affairs

As per National Statistics office , the work population ratio (WPR) in India is at _____ for July 2020 - June 2021.

A. 39.8%



B. 49.1%

C. 35.6%

D. 45.7%

Q99 General Awareness and Current Affairs

The _____ range is bounded by the Satpura range on the south and the Aravalis on the northwest.

A. Kailash

B. Shivalik

C. Vindhyan



D. Gir

Q100 General Awareness and Current Affairs

Gurpurab is one of the holiest festivals of Sikhism, celebrated to commemorate the birth anniversary of:

A. Guru Amar Das

B. Guru Gobind Singh

C. Guru Nanak Dev



D. Guru Tegh Bahadur



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Ravi's salary was first reduced by 50% and subsequently raised by 50%. How much lower was his final salary compared to his initial salary?

A. 21%

B. 24%

C. 25%



D. 32%

Q2 Mathematics

The area (in cm^2) of an equilateral triangle of side 3 cm is:

A. $\frac{\sqrt{243}}{4}$ B. $\frac{\sqrt{243}}{2}$ C. $\frac{\sqrt{243}}{6}$ D. $\frac{\sqrt{243}}{3}$

Q3 Mathematics

Find the value of $\left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^{-2} + \left(\frac{1}{4}\right)^{-2}$.

A. 25

B. 29



C. 21

D. 13



Q4 Mathematics

The sum of the digits of a two-digit number is 12. The number obtained by interchanging its digits exceeds the given number by 18. The number is:

A. 27

B. 57



C. 67

D. 76

Q5 Mathematics

The volumes of two spheres are in the ratio of 27 : 8. The ratio of the surface areas of these spheres, in the order in which they are mentioned here, is _____.

A. 2 : 3

B. 3 : 2

C. 4 : 9

D. 9 : 4

**Q6 Mathematics**

The ratio of the lengths of two corresponding sides of two similar triangles is 2 : 1. The ratio of the areas of these two triangles, in the order mentioned, is:

A. 2 : 1

B. $2\sqrt{2} : 1$

C. 3 : 1

D. 4 : 1

**Q7 Mathematics**

Five years from now, father's age will be three times the age of his son. Five years ago, father was seven times as old as his son. Their present ages are:

A. 40 and 10



B. 30 and 5

C. 40 and 5

D. 30 and 10



Q8 Mathematics

The value of $\sin x + \frac{\cos x}{\tan(90 - x)}$ is _____.

A. $2\operatorname{cosec}x$

B. $\tan x$

C. $\cot x$

D. $2\sin x$ ✓

Q9 Mathematics

Two trains having lengths of 200 m and 300 m are running at speeds of 100 km/h and 120 km/h, respectively, in the same direction. The time taken (in minutes) by the faster train, coming from behind, to completely cross the other train is:

A. 0.5

B. 1

C. 1.5 ✓

D. 2

Q10 Mathematics

The smallest natural number which is divisible by 8, 12, 28 and 36 is:

A. 168

B. 504 ✓

C. 252

D. 336

Q11 Mathematics

If the volume of a solid right circular cylinder is 198 m^3 and the radius of its base is 3 m, then its height (in m) is _____. Take $\pi = \frac{22}{7}$.

A. 6

B. 27

C. 7 ✓

D. 9



Q12 Mathematics

If $25 - (x^2 - 9) = (81)^{1/2}$, then the positive value of $x =$ _____.

A. 2.5

B. 2

C. 5



D. 4.7

Q13 Mathematics

A farmer planted an identical number of saplings of each of three types of trees in a garden. All saplings of one type were planted in the form of a single rectangle, with no rectangle having saplings of more than one type of tree, and no sapling of any type remaining unplanted. Once planted, there were 70 rows in the rectangle of saplings of Tree A, 28 rows in the rectangle of saplings of Tree B, and 42 rows in the rectangle of saplings of Tree C. Find the minimum number of saplings of each type that was planted in the garden by the farmer.

A. 70

B. 210

C. 420



D. 140

Q14 Mathematics

A vendor claims to sell wheat at a loss of 20%. But he cheats by using weights that weigh 40% less than what is mentioned on them. What is his profit percentage (rounded off to 2 decimal places)?

A. 16.67%

B. 33.33%



C. 34.33%

D. 35.33%

Q15 Mathematics

Find the median from the following data.

Age in years	15-25	25-35	35-45	45-55	55-65	65-75	75-85
No. of patients	12	18	20	25	30	20	15

A. 51

B. 53



C. 55

D. 57



Q16 Mathematics

A shopkeeper purchased 70 kg of onions for ₹560 and sold the whole lot at the rate of ₹10 per kg. What will be his gain percentage?

A. 17.5%

B. 28%

C. 25% 

D. 20%

Q17 Mathematics

Find the value of $\left[\left(\frac{5}{8}\right)^{-7} \times \left(\frac{8}{5}\right)^{-4} \times \left(\frac{1}{4}\right)^{-3}\right]^{-3}$

A. $\left(\frac{5}{32}\right)^9$ B. $\left(\frac{5}{4}\right)^9$ C. $\left(\frac{32}{5}\right)^9$ D. $\left(\frac{5}{4}\right)^7$ **Q18** Mathematics

Manish deposited a certain sum of money at 5% rate of interest per annum, compounded annually. At the end of 3 years, Manish received a total amount of ₹92,610. What was the sum of money deposited by Manish?

A. ₹82,610

B. ₹80,000 

C. ₹80,530

D. ₹79,460



Q19 Mathematics

Simplify $(4pq + 3q)^2 - (4pq - 3q)^2$.

A. $48p^2q^2$

B. $48pq^2$ ✓

C. $24pq^2$

D. $24p^2q^2$

Q20 Mathematics

A man deposits ₹8,000 at 10% rate of simple interest per annum. The total amount he will get at the end of 2 years is:

A. ₹9,760

B. ₹9,200

C. ₹9,800

D. ₹9,600 ✓

Q21 Mathematics

If 35% of $x = 40\%$ of y , then $x : y$ is _____.

A. 7 : 8

B. 8 : 7 ✓

C. 8 : 9

D. 9 : 8

Q22 Mathematics

Mahesh withdrew ₹2,000 from a bank. He received a total of 32 notes of ₹50 and ₹100 denominations. The number of ₹50 notes received by him was:

A. 8

B. 16

C. 24 ✓

D. 32



Q23 Mathematics

The average weight of 32 parcels was recorded as 96 kg. If the weight of one more parcel is included, the average is increased by 2 kg. The weight of the new parcel is:

A. 192 kg

B. 182 kg

C. 172 kg

D. 162 kg

**Q24** Mathematics

If α, β are the roots of the quadratic equation $2x^2 - 3x - 35 = 0$, then the value of $\alpha^3 + \beta^3$ is:

A. $\frac{957}{8}$

B. $\frac{857}{8}$

C. $\frac{757}{8}$

D. $\frac{657}{8}$

**Q25** Mathematics

Ramu is younger than Sunil by 8 years. If their present ages are in the ratio of 7 : 9, then how old is Ramu?

A. 56 years

B. 72 years

C. 36 years

D. 28 years



Q26 General Intelligence and Reasoning

Refer to the following number, symbol series and answer the question.

(Left) & % 7 4 @ 6 # & 2 # % 5 * (Right)

How many such symbols are there that are immediately preceded by a number and also immediately followed a number?

A. One



B. Two

C. None

D. Three

Q27 General Intelligence and Reasoning

Which two numbers should be interchanged to make the following equation correct?

$$12 + 7 - (8 \div 4 - 5) \times 11 = 54$$

A. 5 and 12

B. 8 and 7

C. 8 and 11

D. 12 and 11

**Q28** General Intelligence and Reasoning

ZR 18 is related to UW 11 in a certain way. In the same way, YM 24 is related to TR 17. To which of the following is KJ 35 related following the same logic?

A. FO 28



B. FP 27

C. GO 28

D. GP 27



Q29 General Intelligence and Reasoning

A certain number of persons are sitting in a row, facing North. G is sixth to the right of D.

G is an immediate neighbour of both H and E. C is to the immediate right to E. If no other person is sitting in the row, what is the total number of persons seated?

A. Eight

B. Nine



C. Ten

D. Eleven

Q30 General Intelligence and Reasoning

Six people, S, T, V, W, X and Y are sitting in a straight line, facing North (but not necessarily in the same order). Only two people sit to the right of S. Only two people sit between W and S. V sits at one of the extreme ends. Y sits to the immediate left of V. T is not an immediate neighbour of S. Who is sitting at the extreme left end?

A. S

B. T

C. W



D. X

Q31 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $M > N > O = P$, $Q < C = D < O$

A. $C > M$

B. $N < D$

C. $P = Q$

D. $Q < M$



Q32 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g.13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(14, 336, 8)

(12, 324, 9)

A. (18, 378, 7)



B. (18, 368, 7)

C. (18, 478, 7)

D. (18, 398, 7)

Q33 General Intelligence and Reasoning

Which of the following term will replace the question mark (?) in the given series to make it logically complete?

QDA19, UHE38, YLI57, CPM76, ?

A. HTQ97

B. HTQ95

C. GTQ95



D. GTQ97



Q34 General Intelligence and Reasoning

Study the following table and answer the question given below.

Name of the Company	Sale (in lakhs)		
	1999	2000	2001
ACG	32	43	35
TYD	61	52	29
POD	54	25	36
BKN	19	38	52

Which company has the highest total sale value over the three years. What is the difference between the value of the highest combined sales and the lowest combined sales registered by any company from 1999 to 2001.

A. TYD, ₹27,00,000

B. BKN, ₹27,00,000

C. TYD, ₹33,00,000



D. BKN, ₹33,00,000

Q35 General Intelligence and Reasoning

Seven boxes X, Y, Z, A, B, C and D are kept one over the other but not necessarily in the same order. A is kept third from the bottom. Only one box is kept between A and X. Only three boxes are kept between B and D. B is kept at one of the positions above D. Y is kept immediately below Z. How many boxes are kept between C and A?

A. Three



B. Four

C. Two

D. One



Q36 General Intelligence and Reasoning

In this question, a group of letters is coded using symbols as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letters	G	T	Y	H	O	R	P	I	C
Codes	@	>	^	%	=	#	\$	+	<

Conditions:

1. If both the first and the last letters of the word are vowels, then both these letters will be coded as '&'.
&
2. If both the first and the last letters of the word are consonants, then both these letters will be coded as '*'.
&

What will be the code for the word 'COPYRIGHT'?

A. < = \$ ^ # + @ % >

B. * = \$ ^ # + @ % *

C. < = \$ ^ # + @ % *

D. = \$ ^ # + @ % >

Q37 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Real education is an awakening of the mind.

Arguments:

- I. Academic achievement is the only indicator of real education.
- II. Human values reflect real education.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement.

C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.



Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

49, 60, 82, 115, 159, ?

A. 187

B. 214

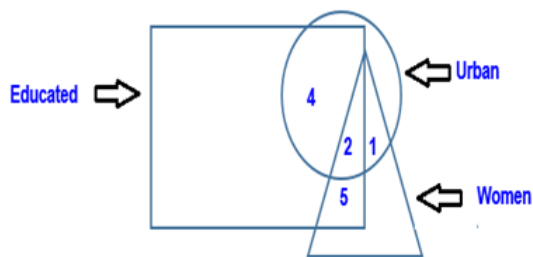
C. 225

D. 199

Q39 General Intelligence and Reasoning

Study the given diagram carefully and answer the question that follows.

The numbers in different sections indicate the number of people.



How many Women are Educated but NOT Urban?

A. 5

B. 7

C. 2

D. 4

Q40 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) R E S I C X Z H G U K E W A T E Y M Q D F (Right)

How many such consonants are there in the series each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A. One

B. Four

C. Three

D. Two



Q41 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some pens are staplers.

Some staplers are erasers.

Some erasers are notebooks.

Conclusions:

(I) Some notebooks are pens.

(II) Some erasers are pens.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follows



D. Both conclusions I and II follow

Q42 General Intelligence and Reasoning

Each vowel in the word CRICKET is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter thus formed is arranged in alphabetical order, which letter will be fifth from the right?

A. J

B. B

C. F



D. Q



Q43 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	*	2	@	5	^	+	7	#	%	9
Letter code	J	P	A	F	D	N	R	K	M	Z

Conditions:

- If the first element is a symbol and the last, a number, the codes for these two (the first and the last elements) are to be interchanged.
 - If the first element is an odd number and the last, an even number, the first and last elements are to be coded as \$.
- Which of the following will be the code for *9 @+2 ?

A. J Z N A P

B. J Z A N P

C. P Z A N J

D. P Z A N P

**Q44** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

8, 9, 64, 25, 216, ?

A. 81

B. 125

C. 72

D. 49

**Q45** General Intelligence and Reasoning

Among four stalls, P, Q, R and S, S is 40 m to the north of R, P is 60 m to the east of R, and Q is 50 m to the south of R. How far and in which direction is Q with reference to S?

A. 90m, South

B. 90m, North

C. 110m, South

D. 100m, North



Q46 General Intelligence and Reasoning

Study the following table and answer the question.

Goods	Profit (in lakhs)		
	2017	2019	2021
Refrigerator	32	15	43
Fan	47	26	54
Television	28	32	62
Mobile	61	45	47

Which goods earned the maximum combined profit in the given three years , and by what percentage is the profit of the highest profitable goods more than the profit of the lowest profitable goods in the year 2019?

A. Mobile, 200%



B. Fan, 300%

C. Mobile, 300%

D. Fan, 200%

Q47 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$18.96 + 12.96 + 15.16 - 17.89 \times 2.04 + 49.93 \div 5.1 = ?$$

A. 21



B. 22

C. 23

D. 24



Q48 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 648 545 317 653 476 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

NOTE: All operations to be done from left to right.

What will be the resultant if the second digit of the largest number is added to the first digit of smallest number?

A. 9

B. 8

C. 7

D. 11

Q49 General Intelligence and Reasoning

Town M is to the south of Town Z. Town C is to the east of Town Z. Town F is to the west of Town C. Town X is to the north of Town C. Town Z is to the west of Town F. What is the position of Town F with respect to Town M?

A. North- East

B. West

C. South-East

D. North-West

Q50 General Intelligence and Reasoning

Six Human Rights conferences are planned in six cities- Mumbai, Delhi, Kolkata, Chennai, Lucknow and Bangalore- between July to December in the same year (but not necessarily in the same order). Each conference was planned in a different month. Only the Delhi conference is planned between the Chennai and Bangalore conferences. The Chennai conference is in October. Only two conferences are planned before the Kolkata's conference. The Mumbai conference is immediately after the Lucknow conference. Which city will have the last conference in the year?

A. Bangalore

B. Chennai

C. Kolkata

D. Mumbai



Q51 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$11.96 + 4.96 + 12.16 - 11.89 \times 2.04 = ?$$

A. 7

B. 9

C. 5



D. 13

Q52 General Intelligence and Reasoning

Three statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $U < V > W = X$, $T < W$, $S > V$

A. $V = T$

B. $X > S$

C. $S > T$



D. $W > U$

Q53 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some bracelets are rings.
2. Some bangles are bracelets.
3. All watches are bracelets.

Conclusions:

- I-Some rings are bracelets.
II-Some bracelets are watches.

A. Only conclusion I follows.

B. Only conclusion II follows.

C. Both conclusions I and II follow.



D. Neither conclusion I nor II follows.



Q54 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number, the fourth number is related to the third number.

15 : 2 :: 255 : 4 :: 624 : ?

A. 8

B. 9

C. 3

D. 5

**Q55** General Intelligence and Reasoning

K, L, M, N, O and Q are sitting in a straight line facing North (but not necessarily in the same order). Only three students are sitting between Q and N. M has K and L as his immediate neighbours. K is second to the right of O. L is second to the right of K. N is to the immediate right of L. Q is to the immediate right of O. Who among the following has K and O as his immediate neighbours?

A. N

B. M

C. L

D. Q

**General Science**

25 Questions • Answer Key

Q56 General Science

Which of the following materials CANNOT be used to make a spherical lens?

A. Clear glass

B. Cellophane

C. Wood



D. Water

Q57 General Science

Which of the following options DO NOT fit in the 3 R's of waste management?

A. Reduce

B. Refuse



C. Reuse

D. Recycle



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Q58 General Science

Which of the following gases is evolved when zinc granules are added to hydrochloric acid?

- A. Cl_2
- B. O_2
- C. OCl_2
- D. H_2



Q59 General Science

In which of the following compounds are ions NOT found?

- A. CH_4
- B. NaCl
- C. KBr
- D. NaBr



Q60 General Science

In a house, a TV set rated as 150 W is operated for 4 hours, and a 1500 W electric heater is operated for 25 minutes. The energy consumption values per day for the TV set and the electric heater are:

- A. 625 W h and 600 W h, respectively
- B. 600 W h and 625 W h, respectively
- C. 525 W h and 500 W h, respectively
- D. 500 W h and 525 W h, respectively



Q61 General Science

Which of the following statements is INCORRECT about photosynthesis?

- A. Photosynthesis is about Absorption of light energy by chlorophyll.
- B. Photosynthesis is about conversion of light energy to chemical energy
- C. Photosynthesis includes splitting of water molecules into hydrogen and oxygen
- D. Photosynthesis involves oxidation of carbon dioxide to carbohydrates



Q62 General Science

Which of the following belongs to the homologous series of alkenes?

- A. C_6H_{14}
- B. $C_{10}H_{18}$
- C. $C_{10}H_{22}$
- D. $C_{10}H_{20}$



Q63 General Science

Which of the following statements is INCORRECT with respect to coal and petroleum?

- A. These are unlimited resources on Earth.
- B. They have been formed by degradation of living organisms over millions of years.
- C. They cause environmental pollution.
- D. Their use leads to global warming.



Q64 General Science

An object is placed in front of a concave lens at a distance d . An erect image of the object is formed at $d/3$. If the focal length of the lens is 15 cm, then d is equal to:

- A. 15 cm
- B. 20 cm
- C. 25 cm
- D. 30 cm



Q65 General Science

If the resistivity of nichrome wire is $110 \times 10^{-8} \Omega \text{ m}$, its length is 5.5 m and its resistance is 22Ω , then the area of cross section is:

- A. $275 \times 10^{-7} \text{ m}^2$
- B. $2.75 \times 10^{-7} \text{ m}^2$
- C. $3.4 \times 10^{-8} \text{ m}^2$
- D. $34 \times 10^{-4} \text{ m}^2$



Q66 General Science

Through which organ is air taken into the body of human beings?

A. Nostrils



B. Wind pipe

C. Alveoli

D. Bronchi

Q67 General Science

Which tissue forms the walls of the renal tubules?

A. Nervous tissue

B. Muscular tissue

C. Connective tissue

D. Epithelial tissue



Q68 General Science

Which of the following is required for the breakdown of glucose in human cells to provide energy?

A. Carbon dioxide

B. Oxygen



C. Nitrogen

D. Hydrogen

Q69 General Science

A beam of light parallel to the principal axis of a convex mirror will:

A. converge at F

B. appear to converge at F



C. diverge from pole

D. appear to diverge from F



Q70 General Science

The distance between the pole and the centre of curvature of a given concave mirror of focal length 0.5 m is:

- A. 0.5 m
- B. 0.25 m
- C. 1.0 m
- D. 0.75 m



Q71 General Science

Which of the following methods prevents or reduces wind erosion of soil in open areas?

- A. Using trees or large shrubs as fences for a garden
- B. Using pots to grow vegetables at home
- C. Following crop rotation in agriculture
- D. Covering up open areas with tiles or cement



Q72 General Science

Electrovalent compounds show conduction of electricity in:

- A. solid state
- B. molten state
- C. kerosene
- D. petrol



Q73 General Science

Calculate the current in a wire if 1200 C of charge passes through it in 10 minutes.

- A. 4 A
- B. 2 A
- C. 1.5 A
- D. 3 A



Q74 General Science

Which element does NOT belong to group number 11 in the Modern Periodic Table?

A. Cu

B. Ag

C. Au

D. Hg



Q75 General Science

Which of the following decreasing orders is correct for reactivity of metals?

A. $\text{Ca} > \text{Al} > \text{Cu} > \text{Hg}$



B. $\text{Al} > \text{Cu} > \text{Hg} > \text{Ca}$

C. $\text{Al} > \text{Ca} > \text{Cu} > \text{Hg}$

D. $\text{Al} > \text{Cu} > \text{Ca} > \text{Hg}$

Q76 General Science

What will happen if the ozone layer becomes thinner?

A. Cases of skin cancer will increase



B. Temperature of Earth will increase

C. Amount of surface ozone will increase

D. The ozone hole will close by redistribution

Q77 General Science

Why do many types of trees shed old leaves?

A. Because the cells die due to old age of the tree

B. Because the cells become packed with waste materials



C. Because a tree can support only a certain number of leaves

D. Because old leaves are broken off due to strong winds



Q78 General Science

In the early days, classification of elements was attempted according to their:

A. natural occurrence

B. synthesis in a laboratory

C. abundance

D. properties



Q79 General Science

In an electric circuit, where 5 lamps are connected in series, if the power, voltage, current and resistance are represented by P, V, I and R, respectively, then which of the following relations holds true?

A. $P = I^2 R$



B. $P = V^2 \times R$

C. $P = \frac{V}{R^2}$

D. $P = IR^2$

Q80 General Science

A straight conductor carrying current is kept along the axis of a closed circular loop of a conductor. If we change the direction of the current continuously in the straight conductor:

A. induced current in the loop is constant

B. induced current in the loop is zero

C. induced current in the loop is negative

D. induced current in the loop is not constant



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

_____ district is the smallest district in Tamil Nadu in terms of area (1672/Sq.Km).

A. Coimbatore

B. Madurai

C. Kanniyakumari



D. Vellore



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Q82 General Awareness and Current Affairs

Padma Shri 2022 awardee Vandana Kataria plays which of the following sports?

A. Hockey



B. Cricket

C. Badminton

D. Wrestling

Q83 General Awareness and Current Affairs

In February 2022, which Maharatna Company of the Government of India was awarded India's most trusted Public Sector Company award?

A. Bharat Heavy Electricals Limited

B. Coal India Limited



C. GAIL India

D. Hindustan Petroleum Corporation Limited

Q84 General Awareness and Current Affairs

The Ganga Plain extends between Ghaggar and Teesta rivers, of which about 79% area of the basin is in India. How many states and Union Territories does the basin cover?

A. 10

B. 11



C. 12

D. 13

Q85 General Awareness and Current Affairs

Which Article of the Constitution of India deals with right to education?

A. Article 22

B. Article 21A



C. Article 19

D. Article 18



Q86 General Awareness and Current Affairs

Which state had fielded a 396-member contingent, the largest at Khelo India Youth Games 2021 and competed in every sport?

- A. Maharashtra
- B. Odisha
- C. Haryana
- D. Assam



Q87 General Awareness and Current Affairs

What percentage of 1.5 lakh post offices is expected to come under the core banking system in year 2022?

- A. 80%
- B. 85%
- C. 90%
- D. 100%



Q88 General Awareness and Current Affairs

How many bytes are there in 1 kilobyte?

- A. 1036 bytes
- B. 1024 bytes
- C. 1064 bytes
- D. 1012 bytes



Q89 General Awareness and Current Affairs

Initially, how many languages were included in the 8th Schedule of the Indian Constitution?

- A. 10
- B. 12
- C. 13
- D. 14



Q90 General Awareness and Current Affairs

Which Governor General of India devised the policy of Doctrine of Lapse?

- A. Lord Ripon
- B. Lord William Bentinck
- C. Lord Canning
- D. Lord Dalhousie



Q91 General Awareness and Current Affairs

What is the main role of the State Finance Commission?

- A. The distribution and determination of the net proceeds of taxes, tolls and fees between the state and local bodies.
- B. To look after the elections of the panchayats and municipalities and also provide fund for that elections.
- C. To advise the government on the legal financial matters referred to it by the President.
- D. To secure the accountability of the executive to the Parliament in the sphere of financial administration.



Q92 General Awareness and Current Affairs

In February 2022, Atal Innovation Mission (AIM), NITI Aayog, and the US Agency for International Development (USAID) announced a new partnership under the SAMRIDH initiative. What is the full form of SAMRIDH?

- A. Sustainable Access to Markets and Resources for Innovative Delivery of Healthcare
- B. Sustainable Abilities to Markets and Resources for Innovative Delivery of Healthcare
- C. Sustainable Access to Markets and Resources for Innovative Designs of Healthcare
- D. Successful Access to Markets and Resources for Innovative Designs of Healthcare



Q93 General Awareness and Current Affairs

As on August 2022, which of the following schemes provides support for students clearing prelims conducted by UPSC/SSC, State Public Service Commission (PSC), etc.?

- A. Padho Pradesh
- B. Naya Savera
- C. Nai Udaan
- D. Nai Manzil



Q94 General Awareness and Current Affairs

Which of the following initiatives of the Ministry of Minority Affairs received the prestigious India International Trade Fair, 2021 Silver Medal for strengthening commitment to 'Vocal for Local' in November of 2021?

- A. Hunar Haat
- B. ATAL Innovation Mission
- C. SAMRIDH Scheme
- D. ASPIRE

Q95 General Awareness and Current Affairs

Which of the following was used as a highway for foreign trade between India and Britain, as its opening in 1869 reduced the cost of transportation and made access to the Indian market easier?

- A. Panama Canal
- B. Suez Canal
- C. Corinth Canal
- D. White Sea- Baltic Sea Canal

Q96 General Awareness and Current Affairs

What is the term used for a pricing method in which companies group several products together and sell them at a single price?

- A. Skimming pricing
- B. Premium pricing
- C. Bundle pricing
- D. Competitive pricing

Q97 General Awareness and Current Affairs

_____ is one of the highest motorable roads in the world, and is a mountain pass in the Himalayan peaks that connects Sikkim and China's Tibet Autonomous Region.

- A. Auden's Col
- B. Baraclacha La
- C. Chanshal Pass
- D. Nathu La



Q98 General Awareness and Current Affairs

Which among the following is the oldest and biggest amongst all the four Vedas?

- A. Samaveda
- B. Rig Veda
- C. Yajur Veda
- D. Atharva Veda



Q99 General Awareness and Current Affairs

Which Article in the Constitution provides for All States to have a uniform 3 tier Panchayati Raj structure, i.e. the village, intermediate and district levels?

- A. Article 243
- B. Article 243A
- C. Article 243B
- D. Article 243C



Q100 General Awareness and Current Affairs

The _____ festival is celebrated in West Bengal, Assam and some other states of India and often coincides with the festival of Holi in the month of March.

- A. Bheldiya
- B. Baishagu
- C. Rongker
- D. Doljatra



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The sum of the squares of two consecutive odd natural numbers is 74. The sum of the numbers is:

- A. 18
- B. 24
- C. 28
- D. 12



Q2 Mathematics

If the radius of a sphere is halved, then the new volume will become _____ the original volume.

- A. $\frac{1}{4}$ times
- B. 8 times
- C. 4 times
- D. $\frac{1}{8}$ times



Q3 Mathematics

If the area of a triangle whose base measures 3 cm is 4 cm^2 , then its corresponding height is:

- A. $2\frac{2}{3} \text{ cm}$
- B. $1\frac{2}{3} \text{ cm}$
- C. $3\frac{2}{3} \text{ cm}$
- D. $4\frac{1}{3} \text{ cm}$



Q4 Mathematics

A person who spends $36\frac{2}{3}\%$ of his monthly income is able to save ₹5,700 per month. His monthly expenses are:

- A. ₹6,300
- B. ₹5,300
- C. ₹4,300
- D. ₹3,300



Q5 Mathematics

If a square has a side of $(5x-8)$ cm, then the area of the square (in cm^2) is:

A. $25x^2 - 80x - 64$

B. $25x^2 - 80x + 64$ ✓

C. $25x^2 + 80x - 64$

D. $25x^2 + 80x + 64$

Q6 Mathematics

The roots of the quadratic equation $x^2 + x - 2 = 0$ are:

A. $(1, 2)$

B. $(-1, 2)$

C. $(1, -2)$ ✓

D. $(-1, -2)$

Q7 Mathematics

Convert $\frac{23}{11}$ to its recurring decimal form.

A. $2.\overline{09}$ ✓

B. $2.\overline{18}$

C. $2.\overline{23}$

D. $2.\overline{32}$

Q8 Mathematics

Which of the following is the standard representation of quadratic equation

$$(x^2 + 1)(x - 1) = (x^2 - 3)(x + 3)?$$

A. $4x^2 - x - 6 = 0$

B. $4x^2 - 8 = 0$

C. $x^2 - 3x - 4 = 0$

D. $4x^2 - 4x - 8 = 0$ ✓



Q9 Mathematics

If $\left(\frac{25}{9}\right)^{x+1} \left(\frac{81}{625}\right)^{x-1} = \frac{9}{25}$, then find the value of x .

A. 5

B. 4



C. 6

D. 8

Q10 Mathematics

$\frac{\cos 45^\circ}{\sec 30^\circ + \operatorname{cosec} 30^\circ}$ is equal to:

A. $\frac{\sqrt{3}}{2\sqrt{3}(1 + \sqrt{2})}$

B. $\frac{\sqrt{2}}{2\sqrt{2}(1 + \sqrt{3})}$

C. $\frac{\sqrt{3}}{\sqrt{2}(1 + \sqrt{3})}$

D. $\frac{\sqrt{3}}{2\sqrt{2}(1 + \sqrt{3})}$



Q11 Mathematics

Which of the following is always true?

a) The bisectors of angles of a parallelogram form a rectangle.

b) A parallelogram is a trapezium.

c) Diagonals of a rhombus are equal and bisect each other at right angles.

A. Only (a)

B. Only (b)

C. Only (a) and (b)

D. All of (a), (b), (c)

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



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Q12 Mathematics

A sum of money was invested at a certain rate of simple interest per annum for a period of 4 years. Had the rate of simple interest per annum been 2% more, the sum invested would have earned a total of ₹640 more as interest in these 4 years. What was the sum (in ₹) invested?

A. 7,500

B. 8,000



C. 9,000

D. 9,500

Q13 Mathematics

The sum of the digits of a two-digit number is 15. The number obtained by interchanging the digits exceeds the given number by 9. The number is:

A. 78



B. 57

C. 98

D. 27

Q14 Mathematics

The highest common factor of a set of coprime numbers is equal to:

A. 1



B. 2

C. the lowest among them

D. the highest among them

Q15 Mathematics

The distance between two points on a map is 5 cm. The scale of the map is 1 : 400000. The actual distance between the two points (in km) is:

A. 20



B. 200

C. 2000

D. 20000



Q16 Mathematics

The value of $(6 - 3) \div [(9 - 6) \div \{ (6 - 4) \div (2 + \frac{8}{13}) \}]$ is:

A. $\frac{5}{17}$

B. $\frac{1}{17}$

C. $\frac{13}{17}$ ✓

D. $\frac{26}{17}$

Q17 Mathematics

The LCM of two numbers is 588. Which of the following CANNOT be their HCF?

A. 21

B. 28

C. 35 ✓

D. 49

Q18 Mathematics

Study the given table and answer the question that follows.

The marks obtained in Mathematics by 41 students of Class X are given in the table.

Number of marks	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Number of students	8	7	6	11	9

What is the arithmetic mean of the marks obtained by these students? [Give your answer correct to 3 decimal places.]

A. 38.675

B. 36.463 ✓

C. 36.745

D. 35.225



Q19 Mathematics

If a man was to sell an article for ₹ 840, he would lose 20%. To gain 25% he should sell it for ____.

- A. ₹1,200.50
- B. ₹1,212.50
- C. ₹1,300.50
- D. ₹1,312.50

**Q20** Mathematics

If $14 : y :: 7 : 8$, find the value of y.

- A. 56
- B. 16
- C. 28
- D. 18

**Q21** Mathematics

If two pipes A and B function simultaneously, an empty tank will be filled in 20 hours. If pipe A, working alone, fills this empty tank 9 hours faster than pipe B can fill it working alone, then how many hours does it take pipe B to fill this empty tank while working alone?

- A. 36 hours
- B. 45 hours
- C. 42 hours
- D. 39 hours

**Q22** Mathematics

If the mean of a distribution is 8.73 and its median is 11, then the mode of the distribution is _____ (using empirical relation).

- A. 19.73
- B. 22
- C. 17.46
- D. 15.54



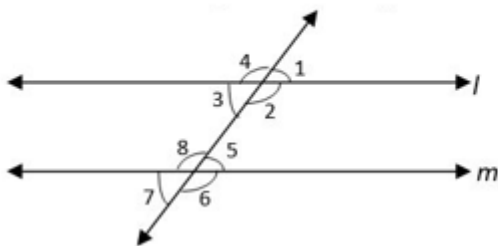
Q23 Mathematics

A two-digit number z is exactly six times the sum of its digits and the difference of the number formed by reversing the digits of z from the original number z is 9. Then z is:

- A. 45
- B. 36
- C. 42
- D. 54

**Q24** Mathematics

In the given figure, if $l \parallel m$, then which of the following relations is not necessarily true?



- A. $\angle 2 = \angle 5$
- B. $\angle 1 = \angle 7$
- C. $\angle 8 = \angle 6$
- D. $\angle 1 = \angle 5$

**Q25** Mathematics

A shopkeeper marks the price of an article 10% more than the cost price. After allowing discount, he earns 5% profit. The discount percentage is:

- A. 4.54%
- B. 5.54%
- C. 3%
- D. 4%



Q26 General Intelligence and Reasoning

Each of seven colleagues, A, B, C, D, E, F and G, travelled to USA for sales presentation in the months of April, May, June, July, August, September and October, in the year 2019, but not necessarily in the same order. Each colleague travelled in a different month. Exactly four people travelled after D's trip. C travelled between the trips of E and F. G travelled in the month immediately before A's trip. Exactly two people travelled after C's trip. E travelled in the month immediately before B, who travelled in the month of October. Who travelled in the month of July?

A. A

B. F

C. D

D. C

Q27 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

ALMOST : MLATSO :: BEGINS : GEBSNI :: CHIMPS : ?

A. IHCPMS

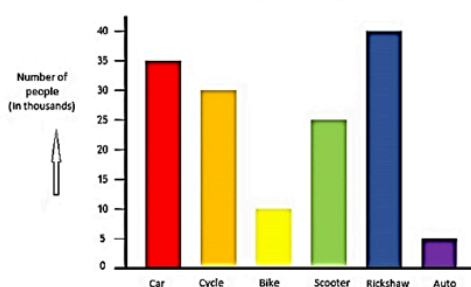
B. IHCSMP

C. IHCSPM

D. IHCPSM

Q28 General Intelligence and Reasoning

The number of people having six different types of vehicles in a city are shown in the following graph. Study the graph and answer the question.



What is the percentage increase in the people having a car as compared to the people having a scooter?

A. 10%

B. 35%

C. 25%

D. 40%



Q29 General Intelligence and Reasoning

In a code language, 'now you can come' is written as 'wp ae nz rf', 'you are kind' is written as 'ae dz tq', 'kind is virtue' is written as 'tq sf bc'. What is the code for 'kind, you' in that code language?

- A. nz, tq
- B. nz, ae
- C. tq, dz
- D. tq, ae



Q30 General Intelligence and Reasoning

Six people, A, B, C, D, E and F, travelled in different years 2010, 2012, 2014, 2016, 2018 and 2020 (but not necessarily in the same order). C travelled in 2018. Only three people travelled between D and A. A travelled after D. Only one person travelled between F and E. F travelled before E. Who travelled in 2014?

- A. B
- B. F
- C. E
- D. D



Q31 General Intelligence and Reasoning

If the position of the first and second letters in the word MOTHERLAND were interchanged, also the third and the fourth letters were interchanged, the fifth and sixth letters were interchanged and so on, which of the following would be the sixth letter from the right?

- A. R
- B. T
- C. E
- D. H



Q32 General Intelligence and Reasoning

Each of the digits in the number 4275913 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

- A. One
- B. Two
- C. Three
- D. Four



Q33 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some cats are rats.

All rats are dogs.

All dogs are monkeys.

Conclusions:

(I) Some monkeys are cats.

(II) All monkeys are rats.

A. Only conclusion I follows



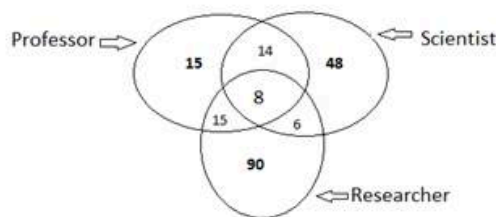
B. Only conclusion II follows

C. Neither conclusion I nor II follows

D. Both conclusions I and II follow

Q34 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many people are Researchers and Scientists but Not Professors?

A. 15

B. 14

C. 23

D. 6



Q35 General Intelligence and Reasoning

Six persons A, B, C, D, E and F are sitting in straight row facing west. D is sitting at the end of the row. B is sitting third to the left of D. A is sitting to the immediate right of B. A is an immediate neighbour of B and C. E is sitting at the first position in the row. F is sitting between A and E. Who is an immediate neighbour of A and F?

A. B



B. D

C. E

D. C

Q36 General Intelligence and Reasoning

Chitra starts driving from the resort and drives 15 km towards west and then turns left and drives 115km. Then she turns right and drives 25 km. After that, she again turns right and drives 90 km. She finally turns right and drives 40 km to reach her home. How far is resort from her home?

A. 25 km



B. 30 km

C. 35 km

D. 50 km

Q37 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

GLE11, KPI13, OTM17, SXQ19, ?

A. WBU27

B. UWB23

C. WBU23



D. UWB27

Q38 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

A C P D I U V K J Q E V F

How many vowels are immediately preceded by consonants?

A. 4

B. 3

C. 2



D. 1



Q39 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

42, 52, 63, 75, 88, ?, 117

A. 101

B. 102



C. 103

D. 100

Q40 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$27.92 \times 4 + 3.96 \times 5 - 18 \div 2 + 1 = ?$$

A. 100

B. 115

C. 124



D. 140

Q41 General Intelligence and Reasoning

Refer to the letter and symbol series, and answer the question that follows.

(Left) K B # A @ S * B Q @ R V N % & S (Right)

How many letters are there between the element that is third from the right end and the element that is sixth from the left end of the given series?

A. 5



B. 8

C. 6

D. 7



Q42 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number, the fourth number is related to the third number.

$$9 : 728 :: 4 : 63 :: 7 : ?$$

A. 342



B. 341

C. 346

D. 315

Q43 General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

$$3 : 8 :: 7 : 16 :: 4 : 10 :: 8 : ?$$

A. 16

B. 12

C. 18



D. 22

Q44 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $C \geq V < B \geq N > Z > L$

A. $B > L > V$

B. $B > Z > L$



C. $C > B \geq N$

D. $C \geq V < L$



Q45 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) S \$ 3 & 3 P & 3 D J * M 2 F A \$ Y ! 1 Z (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. 0

B. 1

C. 2

D. 3



Q46 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All shampoos are brushes.
2. Some brushes are conditioners.
3. No conditioner is towel.

Conclusions:

- I. Some towels are conditioners.
- II. No shampoo is a towel.
- III. Some brushes are shampoos.

A. Only conclusions I and II follow

B. Only conclusions II and III follow

C. Only conclusion I follows

D. Only conclusions III follows



Q47 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

26, 61, 120, 209, ? , 501

A. 334



B. 298

C. 368

D. 434



Q48 General Intelligence and Reasoning

J, K, L, M and N live on different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 5. K and N live on the topmost and bottommost floors, respectively. J lives on the floor immediately above L. M lives on the floor immediately above N. Who lives on the second floor?

A. K

B. J

C. M



D. L

Q49 General Intelligence and Reasoning

Letters are coded as numbers/symbols as per the table given below and the conditions which follow. Refer to the codes and conditions and then select the correct code for SQUARE.

Letters	T	P	J	Q	S	U	E	R	H	A
Number/Symbol	-	6	8	%	7	@	3	9	#	1

Conditions:

- (i) If there is more than 1 vowel in the word, the vowels will be coded as 4.
- (ii) If a word has consonants at both ends, both the consonants will be coded as 2.

A. 7%4494



B. 7%@193

C. 7%4493

D. 7%9493

Q50 General Intelligence and Reasoning

Jayant started from a point 'A' and walked 15 meters towards South. He turned left and walked 20 meters. He then turned right and walked 15 meters. He again turned right and walked 20 meters and reached a point 'B'. How far and in which direction is the point 'B' from the point 'A'?

A. 15 meters East

B. 15 meters West

C. 30 meters North

D. 30 meters South



Q51 General Intelligence and Reasoning

If '+' means ' $\div$ ', ' $-$ ' means '+', ' $\times$ ' means ' $-$ ' and ' $\div$ ' means ' $\times$ ', then, what will be the value of the following expression?

$$[(48 \times 28) - (5 \div 3)] + (3 - 4)$$

A. 1

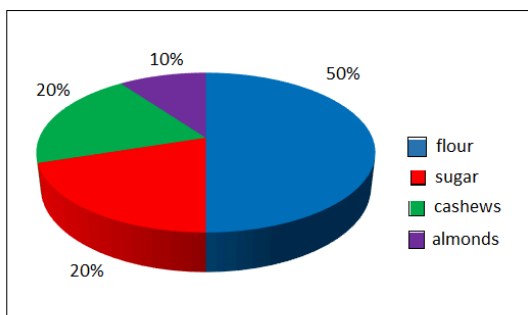
B. 2

C. 4

D. 5

**Q52** General Intelligence and Reasoning

The percentage of all of the ingredients in a recipe is shown in the following pie-chart. Blue represents the flour, red represents the sugar, green represents cashews, and purple represents almonds. Study the pie-chart and answer the question.



If the final mixture of all these ingredients weighs twice of 3,50,000 g, then what is the difference between the weight of flour and almonds?

A. 1,40,000 g

B. 1,55,500 g

C. 2,80,000 g

D. 2,93,000 g

**Q53** General Intelligence and Reasoning

Five friends are sitting around a circular table in a club playing cards and facing the center. W is not an immediate neighbour of either X or U. V is not an immediate neighbour of X. U is sitting to the immediate left of X. If Y is sitting between X and W, who will be sitting to immediate right of V?

A. X

B. W

C. U

D. Y



Q54 General Intelligence and Reasoning

Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Limited and cautious use of plastic material can be a good strategy for its total ban movement.

Arguments:

- I. An instant ban on plastic is very far from reality as people are not ready to use alternatives.
- II. Paper bags can be a good alternative to plastic bags.

- A. I weakens while II strengthens the statement.
- B. II weakens while I strengthens the statement.
- C. Both I and II weaken the statement.
- D. Both I and II strengthen the statement. ✓

Q55 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $J < P = C$, $T < Q < M = J < A$

- A. $C = A$
- B. $T < A$ ✓
- C. $A > P$
- D. $P > A$

General Science

25 Questions • Answer Key

Q56 General Science

Which programme was launched by the Union Government as a flagship programme to fulfil the main objectives of effective abatement of pollution, conservation and rejuvenation of River Ganga?

- A. Ganga Action Plan
- B. Namami Gange Programme ✓
- C. Clean the Ganga Programme
- D. Water for All



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Q57 General Science

Washing soda is:

- A. an acidic salt
- B. a basic salt
- C. a neutral salt
- D. a base

Q58 General Science

When a round, green seeded plant is crossed with a wrinkled, yellow seeded pea plant the F1 generation results in:

- A. round and yellow seeds
- B. round and green seeds
- C. wrinkled and yellow seeds
- D. wrinkled and green seeds

Q59 General Science

The process of fermentation takes place in:

- A. Amoeba
- B. Euglena
- C. Paramecium
- D. Yeast

Q60 General Science

Which of the following compounds of a homologous series has the lowest boiling point?

- A. $C_4H_{10}O$
- B. C_3H_8O
- C. C_2H_6O
- D. CH_4O



Q61 General Science

In plaster of Paris:

- A. two formula units of CaSO_4 share half molecule of water
- B. one formula unit of CaSO_4 has one molecule of water
- C. two formula units of CaSO_4 share two molecule of water
- D. two formula units of CaSO_4 share one molecule of water ✓

Q62 General Science

Which of the following chemical compounds is used in the manufacture of cement?

- A. Al_2O_3
- B. $\text{Mg}(\text{OH})_2$
- C. CaO ✓
- D. CuO

Q63 General Science

Which of the following solutions may scatter light?

- A. Electrolyte solution
- B. Acidic solution
- C. Colloidal solution ✓
- D. Basic solution

Q64 General Science

Which of the following compounds was used for the preparation of urea by Friedrich Wohler?

- A. Carbon monoxide
- B. Methane nitrile
- C. Ammonia
- D. Ammonium cyanate ✓



Q65 General Science

_____ are used in vermicomposting.

- A. Tapeworms
- B. Flatworms
- C. Earthworms
- D. Roundworms



Q66 General Science

How many pairs of sex chromosomes are present in humans?

- A. 2 pairs
- B. 4 pairs
- C. 1 pair
- D. 3 pairs



Q67 General Science

Consider two circuits, A and B, each of which has 12 resistors each of resistance R_A and R_B , respectively. In each circuit the resistors are in such a way that the net resistance of each circuit is the minimum. Now a 30 V battery with negligible internal resistance is connected across each circuit separately, and the current drawn by circuit A and circuit B are 10 A and 18 A, respectively. Then R_A and R_B will be:

- A. $R_A = 26 \Omega$ and $R_B = 20 \Omega$
- B. $R_A = 26 \Omega$ and $R_B = 25 \Omega$
- C. $R_A = 36 \Omega$ and $R_B = 15 \Omega$
- D. $R_A = 36 \Omega$ and $R_B = 20 \Omega$



Q68 General Science

The phenomena that links current induced in a coil and change in magnetic flux is known as:

- A. electromagnetic radiation
- B. electromagnetic wave
- C. electromagnetic induction
- D. electromagnetic wave propagation



Q69 General Science

Which of the following is an insectivorous plant?

- A. Cuscuta
- B. Mushroom
- C. Pitcher
- D. Lichens



Q70 General Science

What is the main limitation of Mendeleev's periodic table?

- A. Nobel gases could be placed in a new group without disturbing the existing order.
- B. No fixed position can be given to hydrogen in the Periodic Table.
- C. Mendeleev's Periodic Table contains vertical columns called groups and horizontal rows called periods.
- D. Mendeleev selected hydrogen and oxygen as they are very reactive and formed compounds with most elements.



Q71 General Science

What happens when CO_2 gas is passed through the lime water?

- A. There is no change.
- B. The solution turns milky.
- C. A black precipitate is formed.
- D. Green colour appears.



Q72 General Science

Most ordinary gases do not show dispersion with visible light. This is because the velocities of propagation of waves of different wavelengths of visible light are _____.

(Velocity of light in vacuum is c)

- A. very much different
- B. almost the same as c
- C. always much greater than c
- D. always much less than c



Q73 General Science

A reflected ray will follow the same path but in reverse direction when it passes through pole and _____.

- A. focal plane
- B. surface of mirror
- C. is parallel to the focal plane
- D. is perpendicular to the focal plane



Q74 General Science

The direction of the force acting on a current carrying conductor in the presence of a magnetic field depends on:

- A. the direction of the current alone
- B. the direction of the magnetic field alone
- C. the direction of both, the magnetic field and the current
- D. neither the direction of the current nor the direction of the magnetic field



Q75 General Science

Arrange the following element of group 1 in the decreasing order of their atomic radii. Atomic numbers are given in parentheses.

Li (3), K (19), Cs (55), Na (11), Rb (37)

- A. $Cs > Rb > K > Li > Na$
- B. $Cs > Rb > K > Na > Li$
- C. $Cs > Rb > Li > K > Na$
- D. $Cs > Rb > Na > K > Li$



Q76 General Science

Three resistors of $5\ \Omega$ are connected in series, and a battery of 10 V is connected to the two end of the series combination of resistors. Calculate the current drawn from the battery.

- A. 0.57 A
- B. 0.67 A
- C. 0.77 A
- D. 0.87 A



Q77 General Science

The image of a star is obtained at F of a concave mirror when the incident ray is:

- A. perpendicular to principal axis
- B. parallel to principal axis
- C. inclined to principal axis
- D. along the focal plane

Q78 General Science

A circuit consists of three resistors, R1, R2 and R3, and they have the values $5\ \Omega$, $10\ \Omega$ and $30\ \Omega$, respectively, which have been connected to a battery of 10 V (with negligible internal resistance). Each of the resistors is in parallel with each other. The total resistance of the circuit is:

- A. $1\ \Omega$
- B. $3\ \Omega$
- C. $5\ \Omega$
- D. $6\ \Omega$

Q79 General Science

Which of the following tissues helps in tissue repair?

- A. Areolar
- B. Cartilage
- C. Ligament
- D. Tendon

Q80 General Science

As per Mendel's experiments with pea plants, tallness was called a 'dominant' trait compared to shortness because _____.

- A. tall plants are larger in size than short plants
- B. in all organisms, including peas, tall individuals are more common than short individuals
- C. a plant was tall regardless of whether it had one gene (allele) or two genes (alleles) for tallness
- D. the symbol for the gene for tallness was 'T', while the symbol for the gene for shortness was 't'



Q81 General Awareness and Current Affairs

Which state in India will you find the The Cathedral of Mary Help of Christians ?

- A. Meghalaya
- B. Karnataka
- C. Bihar
- D. West Bengal



Q82 General Awareness and Current Affairs

Who among the following clocked 2:40:16 to pocket the men's 35 km race walk national record at the Indian Open Race Walking Competition 2022?

- A. Ram Baboo
- B. Juned Khan
- C. Chandan Singh
- D. Akshdeep Singh



Q83 General Awareness and Current Affairs

As of July 2022, which state government among the following implemented the Kalyana Lakshmi and Shaadi Mubarak Scheme?

- A. West Bengal
- B. Telangana
- C. Gujarat
- D. Madhya Pradesh



Q84 General Awareness and Current Affairs

A Large Area Soft X-ray Spectrometer (CLASS), a payload on-board _____ Orbiter, detected a solar proton event which significantly increases the radiation exposure to humans in space, on January 2022.

- A. Chandrayaan-1
- B. Chandrayaan-2
- C. Chandrayaan-3
- D. Chandrayaan-4 a



Q85 General Awareness and Current Affairs

_____ is the price where the quantity the consumer purchases is equal to the quantity the producers supply.

A. Surplus price

B. Equilibrium price



C. Total price

D. Product price

Q86 General Awareness and Current Affairs

As on July 2022, how many Fundamental Duties are there in the Indian Constitution?

A. 11



B. 10

C. 9

D. 12

Q87 General Awareness and Current Affairs

_____ of the Constitution of India deals with Panchayats.

A. Part IX



B. Part X

C. Part VIII

D. Part XI

Q88 General Awareness and Current Affairs

What is the value of money multiplier if the CRR (Cash Reserve Ratio) is 15%?

A. 6.67



B. 15

C. 85

D. 1500



Q89 General Awareness and Current Affairs

Goa Liberation Day is celebrated on which of the following dates?

A. 19 December



B. 20 December

C. 21 December

D. 22 December

Q90 General Awareness and Current Affairs

The oldest mountain range in India is _____.

A. Dhauladhar Range

B. Aravali Range



C. Nallamala Range

D. Zaskar Range

Q91 General Awareness and Current Affairs

What is explicit cost?

A. It is a direct payment made to others in the course of running a business, such as wage, rent and materials.



B. It is the opportunity cost equal to what a firm must give up in order to use a factor of production.

C. It represents the loss of profit but does not represent a loss of income.

D. It is the only cost necessary to calculate a profit, as it clearly affects a company's profits.

Q92 General Awareness and Current Affairs

On 27 July 2022, the Union Cabinet cleared a ₹1.64 lakh crore package for the revival of which of the following organisations?

A. Air India

B. Oil and Natural Gas Corporation Limited

C. Container Corporation of India Limited (CONCOR)

D. Bharat Sanchar Nigam Limited (BSNL)



Q93 General Awareness and Current Affairs

On which model was the Second Five-Year Plan made?

- A. Harrod-Domar model
- B. Investment Model of Planning Commission
- C. Manmohan Plan
- D. PC Mahalanobis Model



Q94 General Awareness and Current Affairs

_____ was the first Indian man to win gold at Commonwealth Games 2022 held at Birmingham.

- A. Tejaswin Shankar
- B. Murali Sreeshankar
- C. Jeremy Lalrinnunga
- D. Mohit Grewal

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q95 General Awareness and Current Affairs

As per Census 2011, which language replaced Telugu as the third most spoken language in India?

- A. Bengali
- B. Marathi
- C. Tamil
- D. Gujarati



Q96 General Awareness and Current Affairs

Vincov-19, the first indigenous drug to treat Covid-19, has been developed by synthesizing blood serum obtained from _____ immunised with spike glycoprotein of inactivated SARS-CoV-2 virus.

- A. rabbits
- B. horses
- C. pigs
- D. monkeys



Q97 General Awareness and Current Affairs

The Godavari river rises from _____ about 80 km from the Arabian Sea at an elevation of 1,067 m.

- A. Mahabaleshwar
- B. Talakaveri
- C. Trimbakeshwar
- D. Satpura Range



Q98 General Awareness and Current Affairs

The Prarthana Samaj, which was recognised as an institution that worked for religious as well as social reform, was established in Bombay by _____ in 1876.

- A. Mahadev Govind Ranade
- B. RC Bhandarkar
- C. Dr. Atma Ram Pandurang
- D. Ishwar Chandra Vidyasagar



Q99 General Awareness and Current Affairs

Through which of the following states of India does the Tropic of Cancer NOT pass?

- A. Rajasthan
- B. Odisha
- C. Madhya Pradesh
- D. Tripura



Q100 General Awareness and Current Affairs

The executive power of the State shall be vested in the Governor and shall be exercised by him either directly or through officers subordinate to him in accordance with which Article of the Constitution of India?

- A. Article 124
- B. Article 134
- C. Article 144
- D. Article 154



Mathematics

25 Questions • Answer Key

Q1 Mathematics

If $x - \frac{1}{x} = 5$, then the value of $x^4 + \frac{1}{x^4}$ is:

A. 927

B. 827

C. 727



D. 627

Q2 Mathematics

If $16 : y :: y : 25$, find the positive value of y .

A. 10

B. 15

C. 18

D. 20



Q3 Mathematics

If $5^{x+y} = 125$ and $5^{x-y} = 3125$, then the value of y is:

A. -1



B. -2

C. -4

D. -3

Q4 Mathematics

What is the quadratic equation whose roots are 2 and $-\frac{1}{2}$?

A. $2x^2 - 3x - 1 = 0$ B. $2x^2 - 3x - 2 = 0$ C. $2x^2 - 3x - 3 = 0$ D. $2x^2 - 3x - 4 = 0$ 

Q5 Mathematics

In a triangle PQR, $\angle P = 30^\circ$ and the straight line UV is drawn parallel to QR, intersecting PQ at S and PR at T. Which of the following is always true?

- a) $\frac{PS}{PQ} = \frac{PT}{PR}$
- b) $ST = \frac{QR}{2}$
- c) The triangle PST is similar to the triangle PQR.

- A. Only (a)
- B. All of (a), (b) and (c)
- c. Only (a) and (b)
- D. Only (a) and (c) ✓

Q6 Mathematics

The ratio of $9^{3.5} : 3^5$ is the same as:

- A. 7 : 1
- B. 1 : 7
- C. 1 : 14
- D. 9 : 1 ✓

Q7 Mathematics

The ages of Ram and Sita are in the ratio 5 : 8. Three years later the sum of their ages will be 58 years. The present age of Ram is:

- A. 22 years
- B. 21 years
- c. 20 years ✓
- D. 25 years

Q8 Mathematics

At present, a man is 50 years old and his daughter is 22 years old. The man will be twice as old as his daughter after _____ years.

- A. 18
- B. 9
- C. 6 ✓
- D. 5



Q9 Mathematics

If the curved surface area of a right circular cylinder is 880 cm^2 and the diameter of its base is 7 cm, then the height (in cm) of the cylinder is _____.

Take $\pi = \frac{22}{7}$.

A. 14

B. 28

C. 40



D. 20

Q10 Mathematics

The smallest 1-digit number to be added to the 6-digit number 234492 so that it is completely divisible by 11 is:

A. 4

B. 5

C. 6



D. 7

Q11 Mathematics

A wholesaler sells a tin of oil at ₹540 and bears a loss of 10%. Now, if he decides to sell another tin of oil with same cost at ₹696, his profit percentage in the sale of second tin will be equal to:

A. 12%

B. 18%

C. 15%

D. 16%

**Q12 Mathematics**

Ashish sold a cow to Bipin for ₹5,000 by losing 20%. Bipin sold it to Kasim at that price which would have given Ashish a profit of 15%. What is Bipin's gain in this transaction?

A. ₹2,100.00

B. ₹937.50

C. ₹2,187.50



D. ₹1,250.00



Q13 Mathematics

The mode of 5, 18, 6, 7, 6, 2, 3, 4, 24, 2, 7, 21, 2, 81 is:

A. 6

B. 2

C. 7

D. 81

Q14 Mathematics

AD is the altitude of an isosceles triangle ABC in which $AB = AC$. Which of the following is true for AD?

A. AD bisects $\angle A$

B. AD bisects $\angle B$

C. AD bisects $\angle C$

D. AD does not bisect $\angle A$

Q15 Mathematics

If the volume of a solid cube is 216 cm^3 , then its total surface area (in cm^2) is _____.

A. 36

B. 6

C. 216

D. 38

Q16 Mathematics

A number is increased by 30% and then decreased by 40% . The net increase or decrease percentage is:

A. 44% decrease

B. 32% increase

C. 22% decrease

D. 34% increase



Q17 Mathematics

The speed of a bus increases by 4 km/h after every two hours. If the bus covers a distance of 80 km in the first two hours, then the total distance covered by the bus in 10 hours will be:

- A. 440 km
- B. 460 km
- C. 470 km
- D. 480 km

**Q18** Mathematics

The value of $20 - [12 - \{14 - (12 - \overline{16 - 10})\}]$ is:

- A. 8
- B. 20
- C. 16
- D. 10

**Q19** Mathematics

The discriminant of a quadratic equation is 0. The quadratic equation has:

- A. two distinct real roots
- B. two equal real roots
- C. no real roots
- D. three distinct real roots

**Q20** Mathematics

The value of $\sqrt{1 + \left(\frac{1 - \tan A}{1 - \cot A}\right)^2}$ is:

- A. $\cos A$
- B. $\cot A$
- C. $\tan A$
- D. $\sec A$



Q21 Mathematics

The value of x in the proportion equation $5 : 12 :: 9 : x$ is:

A. 21.6



B. 20.6

C. 21.4

D. 20.4

Q22 Mathematics

The sum of the present ages of Ram, Nikhil and Aswin is 111 years. Ten years ago, the ratio of their ages was $2 : 3 : 4$. What is the present age (in years) of Nikhil?

A. 16

B. 28

C. 37



D. 44

Q23 Mathematics

Express $0.\overline{5323}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{5323}{9990}$

B. $\frac{5333}{9990}$

C. $\frac{2659}{4995}$



D. $\frac{2661}{4990}$

Q24 Mathematics

An amount of ₹1,344 is divided among three persons in the ratio of $3 : 4 : 5$. The difference between the largest and the smallest shares in the distribution is:

A. ₹224



B. ₹236

C. ₹248

D. ₹260



Q25 Mathematics

Find the smallest natural number that can be divided by the first five 2-digit positive even numbers without leaving a remainder.

A. 5040



B. 5120

C. 5340

D. 5560

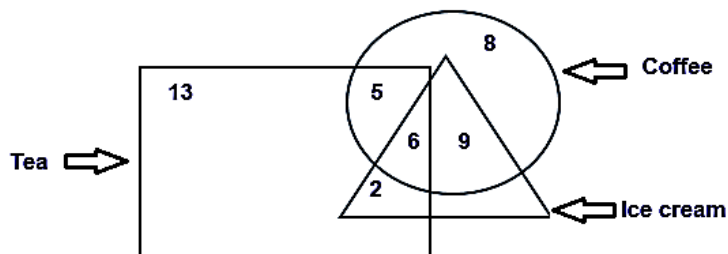
General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Study the given diagram carefully and answer the question that follows.

The numbers in different sections indicate the number of people who have coffee, tea, and ice cream.



How many people have all three i.e. Ice cream, Tea as well as Coffee?

A. 2

B. 6



C. 9

D. 5

Q27 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

MSN15, QWR18, UAV21, YEZ24, ?

A. DBC27

B. CJL31

C. CID27



D. DNS31



Q28 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $A > C = B$, $M > N > O > Q = A$

A. $B < M$



B. $C > N$

C. $O < B$

D. $N < C$

Q29 General Intelligence and Reasoning

If each of the letters in the word MIRACLE is arranged in alphabetical order, then how many letters are there in the English alphabetical series between the letter which is third from the left and the one which is third from the right in the new arrangement?

A. Three

B. Four

C. Five

D. Six



Q30 General Intelligence and Reasoning

Six boxes, A, B, C, P, U and V, are kept one over the other, but not necessarily in the same order. B is the top-most box, and C is immediately below B. There are only two boxes between B and V. There are only three boxes between P and C. There is only one box below U. Which box is kept immediately below U?

A. P



B. A

C. V

D. C

Q31 General Intelligence and Reasoning

From the numbers 367, 489, 514, 632 and 728, if 2 is added to the first digit of each of the numbers, how many new numbers will be thus formed whose sum of all digits will be divisible by three?

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

A. One

B. Two



C. Three

D. four



Q32 General Intelligence and Reasoning

Ajay starts from his office and drives 3 km towards the east. He then takes a right turn, drives 4 km, turns left, and drives 5 km. He then takes a left turn and drives 3 km and stops at a shop. Which direction should he drive now in order to reach his office from that shop? (All turns are 90° turns only.)

- A. North
- B. North-west ✓
- C. South
- D. South-east

Q33 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	*	2	@	5	^	+	7	#	%	9	4
Letter code	J	P	A	F	D	N	R	K	M	Z	B

Conditions:

- (i) If both first and fourth elements are even numbers, the third element is to be coded as the code for the third element
- (ii) If both second and third elements are perfect squares, the third element is to be coded as the code for the second element

Which one of the following would be the code for %94#2 ?

- A. MZBKP
- B. MZZKP ✓
- C. MBZKP
- D. MBZPK

Q34 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$17 \div 3 - 2 + 12 \times 4 = ?$$

- A. 15
- B. 18
- C. 21
- D. 20 ✓



Q35 General Intelligence and Reasoning

Five runners are standing in a straight row facing the east. Runner K is standing at the first position and M is at the end position. L is standing to the immediate left of N, and N is standing to the immediate left of M. P is standing third to the left of M. Who is standing to the immediate left of P?

A. M

B. K



C. N

D. L

Q36 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number, the fourth number is related to the third number.

28 : 2 :: 126 : 4 :: 65 : ?

A. 3



B. 6

C. 7

D. 5

Q37 General Intelligence and Reasoning

Refer to the following letter series and answer the question that follows.

(Left) E B Y T F R D C S W E R F V Y H N E C S R F C A R W (Right)

If every odd placed letter in the above series is dropped, which letter would appear at the seventh place from the left?

A. V



B. F

C. Y

D. H



Q38 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

TSRA : ZIHG

OLEV : EVOL

A. JPMN : ONKQ

B. CRVF : VEIX

C. KVRA : ZIEQ

D. ARNI : RMIZ



Q39 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

17 : 38 :: 23 : 50 :: 12 : ?

A. 28



B. 33

C. 39

D. 35

Q40 General Intelligence and Reasoning

Six actors are sitting in a line facing the north. A is sitting at the first position, and G is sitting third to the right of A. H is sitting to the immediate right of G. F is sitting second to the right of A. L is sitting to the immediate right of A. S is sitting at the end of the line. Who is sitting to the immediate right of L?

A. G

B. H

C. F



D. S



Q41 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) E 5 % H V 7 8 L M # @ A 6 3 F & S 4 Z (Right)

How many such letters are there which are immediately preceded by a letter and also immediately followed by a number?

A. 0

B. 1

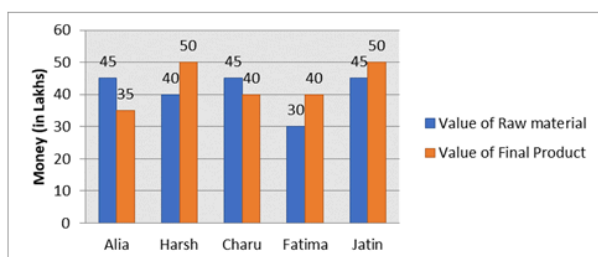


C. 2

D. 3

Q42 General Intelligence and Reasoning

The value of raw material and the value of final products manufactured by five people are shown in the following graph. Study the graph and answer the question.



Which manufacturer among the following has the maximum percentage increase in the value of final product as compared to the value of raw material, and by how much (approx.)?

A. Harsh, 25%

B. Fatima, 25%

C. Fatima, 33%



D. Harsh, 33%



Q43 General Intelligence and Reasoning

Avina has tuitions for six subjects - Maths, English, Computer Science, Physics, Biology and Chemistry, each on a different day of a week from Monday and ending on Saturday of the same week, but not necessarily in this order. Only three subject tuitions are scheduled between Computer Science and Physics tuitions. Only Chemistry tuition is scheduled between Maths and English tuitions. Biology tuition is on Monday. Physics tuition is on the day immediately after the Maths tuition which is on Friday. Which subject's tuition is scheduled on Wednesday?

- A. Physics
- B. English
- C. Biology
- D. Chemistry

Q44 General Intelligence and Reasoning

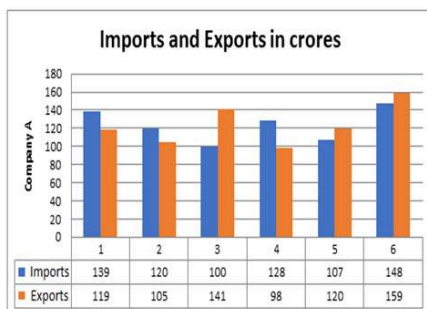
Amongst six girls- A, C, F, H, J and K, each has a different height. They are standing in the ascending order of their heights, shortest in the front and tallest at the back. C is at the beginning of the queue. There is only one person taller than F. H is immediately taller than A. Both C and H are shorter than K. There is only one other person between A and C. If H and F are at the fourth and the fifth places from the start of the queue, respectively in the queue, then who is second from the beginning of the queue?

- A. K
- B. J
- C. A
- D. C

Q45 General Intelligence and Reasoning

The given bar graph shows the exports and imports of Company A over a period of time. Study the bar graph and answer the question that follows.

The numbers 1 to 6 in the graph represent the years from 2001 to 2006.



For how many years are the exports at least 10% higher than the imports?

- A. 1
- B. 2
- C. 3
- D. 4



Q46 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

48, 52, 26, 30, 15, ?

A. 17

B. 18

C. 19



D. 20

Q47 General Intelligence and Reasoning

Eight boxes, J, K, L, M, N, O, P and Q, are kept in a vertical pattern, one over the other (but not necessarily in the same order). L is placed at the bottommost position. Q is at the third place from the top and N is just below J. Only two boxes are placed between Q and M. K is placed somewhere between M and N and O is just below Q. Which box is placed at the second position from the bottom?

A. M

B. N

C. J

D. P



Q48 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

India still needs gender equality programmes to make people aware about this.

Arguments:

- I. People still believe boys are better than girls.
- II. Gender discrimination has vanished from our society.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement.



C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.



Q49 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question that follows.

(Left) 4 # O \$ 5 T F 8 % U 2 P A & F o 3 @ T 4 ¥ I # H (Right)

How many such symbols are there in the above series each of which is immediately followed by a vowel and also immediately preceded by a number?

A. 1

B. 2

C. 3



D. 4

Q50 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All cashews are jaggery.
2. No food is jaggery.
3. Some walnuts are food.

Conclusions:

- I. Some walnuts are cashews.
- II. Some walnuts are jaggery.
- III. No food is cashew.

A. Only conclusions I and II follow

B. Only conclusions II and III follow

C. All conclusions follow

D. Only conclusion III follows



Q51 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

17, 19, 21, 19, 25, 19, ?

A. 29



B. 32

C. 27

D. 30

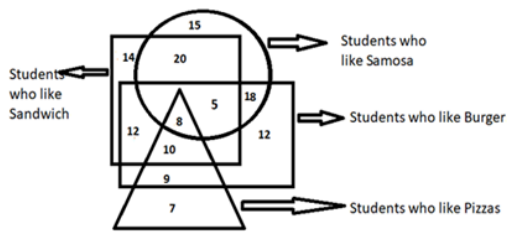


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Q52 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of students surveyed regarding types of snacks they like to have in the college canteen.



How many students like both Samosa and Burger?

A. 13

B. 23

C. 18

D. 31



Q53 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbols	2	@	9	5	\$	&	3	%	#	7	+	4	8	6
Code	T	F	A	J	L	E	W	Q	D	P	R	B	U	S

Conditions:

(i) If the first element is a symbol and the last is a number, the codes for these two (the first and the last elements) are to be interchanged.

(ii) If the first element is an odd number and the last is an even number, the first and the last elements are to be coded as ©

(iii) If both the second and the third elements are perfect squares, the third element is to be coded as the code for the second element.

Question: 7 % 9 # 2

A. ©QAD©



B. ©AD©Q

C. ©D©QA

D. Q©AD©



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Q54 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ symbol	#	*	+	8	@	6	5	2	%	4	3	&	7	9
Code Letter	D	L	F	A	H	M	Q	N	C	X	W	G	T	R

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for 3 & % 4 6 ?

A. WQLT©

B. ©GCX#

C. ©GCX©



D. WGCXM

Q55 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '×' means '+', '÷' means '×', what will come in place of the question mark (?) in the following equation?

$$2 - 4 \times 25 + 13 \div 2 = ?$$

A. -1

B. 3

C. 0.5

D. -0.5



General Science

25 Questions • Answer Key

Q56 General Science

Two wires are of the same length and the same resistance, but the ratio of their cross-sectional areas is 1 : 8. The ratio of their resistivities will be:

A. 8 : 1

B. 8 : 3

C. 1 : 8



D. 3 : 8



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Q57 General Science

In which of the following infections does the virus go to the immune system and damages its function?

- A. Cancer
- B. HIV-AIDS
- c. Typhoid
- D. Malaria



Q58 General Science

Which of the following components are necessary for photosynthesis?

- A. Carbon dioxide, water, sunlight and chlorophyll
- B. Carbon dioxide, water, sunlight and oxygen
- c. Oxygen, water, sunlight and chlorophyll
- D. Carbon dioxide, water, oxygen and chlorophyll



Q59 General Science

Which of the following statements is INCORRECT?

- a) Methanoic acid is secreted by Nettle plant leaves.
- b) Acetic acid is found in vinegar.
- c) Tooth decay starts when mouth pH is lower than 5.5.
- d) Bacteria present in the mouth produces base by degradation of the remaining food particles present in the mouth.

- A. a
- B. b
- C. c
- D. d



Q60 General Science

Why should we human beings reduce our dependence on petroleum products?

- A. Petroleum is very expensive
- B. Amount of petroleum is finite
- c. Petroleum needs to be imported
- D. Petroleum needs to be refined



Q61 General Science

What was the historic contribution of the community of Amrita Devi Bishnoi in Rajasthan in the 1700s?

- A. They dug several ponds to capture rainwater and stopped desertification of the region.
- B. They planted thousands of Khejri trees and stopped desertification of the region.
- C. They laid down their lives to stop the cutting down of trees growing in their region. ✓
- D. They set up the first wildlife sanctuary to protect deer from hunters.

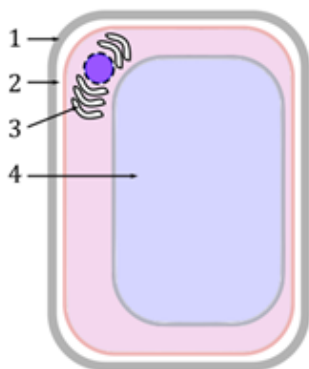
Q62 General Science

A needle is placed at a distance $2.5f$ from the pole of a convex mirror of focal length f . The linear magnification is:

- A. $\frac{1}{7}$
- B. $\frac{2}{7}$ ✓
- C. $\frac{3}{7}$
- D. $\frac{4}{7}$

Q63 General Science

Where can we find waste products in a plant cell shown in the following figure?



- A. Region shown by arrow 1
- B. Region shown by arrow 2
- C. Region shown by arrow 3
- D. Region shown by arrow 4 ✓



Q64 General Science

What are the main products in the process of neutralisation reaction?

- A. O_2 and salt
- B. CO_2 and salt
- C. N_2 and salt
- D. H_2O and salt



Q65 General Science

Which of the following reactions is NOT an example of neutralisation reaction?

- A. $Ca(OH)_2 + H_2CO_3 \rightarrow CaCO_3 + 2H_2O$
- B. $HNO_3 + KOH \rightarrow KNO_3 + H_2O$
- C. $CaO + H_2O \rightarrow Ca(OH)_2$
- D. $H_3PO_4 + 3KOH \rightarrow K_3PO_4 + 3H_2O$



Q66 General Science

Which of the following metals is the least reactive, as per the reactivity series of metals?

- A. Lead
- B. Zinc
- C. Magnesium
- D. Iron



Q67 General Science

Dialysis is the procedure done to remove the waste products from the blood when the normal functioning of kidneys is affected. The steps of dialysis are given below but not in the proper order. Which option shows the correct sequence of these steps?

- a) Line to vein
- b) Patient's blood passed through a tank with dialysing fluid
- c) Line from artery
- d) Waste products from the blood pass into dialysing fluid
- e) Dialysing fluid has same osmotic pressure as blood except the wastes

A. a—b—c—d—e

B. a—c—d—b—e

C. c—b—e—d—a



D. c—b—d—a—e

Q68 General Science

If three resistors of $3\ \Omega$, $2\ \Omega$ and $6\ \Omega$ are connected in series combination with a $9\ \text{V}$ battery, then the potential difference across the $6\ \Omega$ resistor will be:

A. $9\ \text{V}$

B. $4.9\ \text{V}$



C. $2.4\ \text{V}$

D. $1.6\ \text{V}$

Q69 General Science

The functional group which has more than one oxygen atom is:

A. Alcohol

B. Ketone

C. Aldehyde

D. carboxylic acid



Q70 General Science

How many molecules of hydrogen sulphide are required to balance the given chemical equation? $\text{SO}_2 + \text{H}_2\text{S} \rightarrow 3\text{S} + 2\text{H}_2\text{O}$

A. Four

B. Three

C. Two



D. One

Q71 General Science

In a triad the middle element has:

A. double the atomic mass of the first element

B. double the atomic mass of the third element

C. average atomic mass of the first and third elements



D. atomic mass equal to the of sum of the first and third elements

Q72 General Science

Consider two wires of the same material, but the ratio of their cross-sectional areas is 2 : 5 and the ratio of their lengths is 7 : 5. If the same amount of current is flowing through them when they are connected to two batteries with voltages V_1 and V_2 , respectively, then $V_1 : V_2$ is:

A. 2 : 7

B. 2 : 5

C. 7 : 2



D. 7 : 5

Q73 General Science

The magnitude of force that acts on the arms of an armature is the maximum when the length of the arms are:

A. parallel to the magnetic field

B. 45° to the magnetic field

C. perpendicular to the magnetic field



D. 60° to the magnetic field



Q74 General Science

A commutator is used to change the direction of current in the coil of _____.

- A. AC generator only
- B. DC motor and DC generator both
- C. DC generator only
- D. DC Motor Only

Q75 General Science

Which of the following enzymes in the saliva breaks down starch which is a complex molecule to give simple sugar?

- A. Salivary amylase
- B. Salivary pepsin
- C. Salivary lipase
- D. Salivary trypsin

Q76 General Science

Smaller particles scatter the light of _____ and _____ colour the most; on the other hand, larger particles scatter the light of _____ and _____ colour the most.

- A. red, orange; violet, blue
- B. violet, blue; red, orange
- C. red, orange; green, yellow
- D. violet, blue; green, yellow

Q77 General Science

Suppose a human hair is $30.0 \mu\text{m}$ thick. If Reshmi uses a concave mirror of focal length 25 cm and obtains an image of the hair of 60 cm thickness, then the hair should be placed in front of the mirror at:

- A. 25 cm
- B. 50 cm
- C. 40 cm
- D. 60 cm



Q78 General Science

The state of Rajasthan regained its lost greenery due to which canal?

- A. Agra Canal
- B. Indira Gandhi Canal
- C. Munak Canal
- D. Sirhind Canal

Q79 General Science

Which of the following groups in the Modern Periodic Table have NO metallic element?

- A. 14
- B. 15
- C. 16
- D. 17

Q80 General Science

An astronaut from the moon's surface will observe the sky as:

- A. blue
- B. white
- C. red
- D. black

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following is NOT a constitutional body of the Government of India?

- A. NITI Aayog
- B. Union Public Service Commission
- C. Comptroller and Auditor General
- D. Election Commission



Q82 General Awareness and Current Affairs

Which of the following terms is used for the expression ' $\bar{C}$ ' in the consumption function?

- A. Induced consumption
- B. Marginal propensity to consume
- C. Average propensity to consume
- D. Autonomous Consumption



Q83 General Awareness and Current Affairs

Most popularly celebrated in Maharashtra and Gujarat, the Parsi New Year is known as _____ and marks the beginning of the Iranian calendar.

- A. Nowruz
- B. Navreh
- C. Bestu Varas
- D. Losoong



Q84 General Awareness and Current Affairs

As of August 2022, under which Mission has the Government of India subsumed the Child Protection Services Scheme of 2017?

- A. Bachpan
- B. Poshan
- C. Vatsalya
- D. Indradhanush



Q85 General Awareness and Current Affairs

Which of the following Articles of the Indian Constitution deals with the separation of judiciary from the executive?

- A. 50
- B. 51
- C. 52
- D. 53



Q86 General Awareness and Current Affairs

Which river of Rajasthan had dried up but revived with efforts of the villagers assisted by Tarun Bharat Sangh, an NGO?

- A. Luni River
- B. Arvari River
- C. Bhagirathi River
- D. Saraswati River

Q87 General Awareness and Current Affairs

The Board of Control for Cricket in India (BCCI) has finalised a Central Contracts list for the 2022-23 season for Indian cricketers. Which of the following senior players has lost the Grade A status in 2022?

- A. Chateshwar Pujara
- B. Virat Kohli
- C. Jasprit Bumrah
- D. Rohit Sharma

Q88 General Awareness and Current Affairs

In March 2022, the Union Cabinet, chaired by Prime Minister Narendra Modi, has extended the Pradhan Mantri Garib Kalyan Anna Yojana till which period?

- A. September 2025
- B. September 2024
- C. September 2023
- D. September 2022



Q89 General Awareness and Current Affairs

In India, the Integrated Wastelands Development Programme (IWDP) has been under implementation since _____.

A. 1989-90



B. 1991-92

C. 1994-95

D. 2001-02

Q90 General Awareness and Current Affairs

Which of the following goals does NASA hope to achieve by launching the HelioSwarm research mission?

A. Understanding the intense seasonal episodes of Pluto

B. Improving the understanding of MARS

C. Improving the understanding of Ionosphere

D. Improving the understanding of the dynamics of the Sun



Q91 General Awareness and Current Affairs

The limit of 'Shishu' loan that is granted under Micro Units Development & Refinance Agency (MUDRA) is _____.

A. ₹50,000 to ₹5 lakh

B. up to ₹50,000



C. ₹5 lakh to ₹10 lakh

D. up to ₹50 lakh



Q92 General Awareness and Current Affairs

As per the report of Stockholm International Peace Research Institute (SIPRI) titled 'Trends in International Arms Transfers, 2021', India is the world's _____ arms importer globally.

- A. largest ☒
- B. second largest
- C. third largest
- D. fourth largest

Q93 General Awareness and Current Affairs

The Vikram Sarabhai Journalism Award is given in the field of _____.

- A. Atomic Energy Research
- B. Health and Physical Education Research
- C. Medical Science Research
- D. Space Science, Technology and Research ☒

Q94 General Awareness and Current Affairs

The first 'Home Rule League' was founded by _____.

- A. Chandra Shekhar Azad
- B. Bal Gangadhar Tilak ☒
- C. Surendranath Tagore
- D. Bipin Chandra Pal

Q95 General Awareness and Current Affairs

Deomali Peak is in which of the following states of India?

- A. Odisha ☒
- B. Himachal Pradesh
- C. Rajasthan
- D. Karnataka



Q96 General Awareness and Current Affairs

As of March 2022, who is the Union Minister of Rural Development & Panchayati Raj?

- A. Dharmendra Pradhan
- B. Giriraj Singh
- C. Pralhad Joshi
- D. Mansukh L Mandaviya



Q97 General Awareness and Current Affairs

Ramadan is the _____ month of the Islamic calendar and the holy month of fasting.

- A. seventh
- B. eighth
- C. ninth
- D. tenth



Q98 General Awareness and Current Affairs

The British introduced the concept of _____ in 1850, which significantly influenced the structure of the Indian economy.

- A. airways
- B. railways
- C. roadways
- D. waterways



Q99 General Awareness and Current Affairs

When was Tamil declared a classical language of India?

- A. 2004
- B. 2005
- C. 2006
- D. 2007



Who among the following was appointed the head coach of Indian Cricket Team in November 2021?

A. Anil Kumble

B. Sachin Tendulkar

C. Rahul Dravid



D. VVS Laxman



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Express $0.\overline{64}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{9}{11}$

B. $\frac{64}{99}$ ✓

C. $\frac{67}{95}$

D. $\frac{7}{9}$

Q2 Mathematics

A man receives ₹6,500 per month as salary. He saves 20% of his salary every month. His expenditure per month is:

A. ₹4,900

B. ₹5,000

C. ₹5,100

D. ₹5,200 ✓

Q3 Mathematics

Ten years ago, Krishna was one-third as old as he will be 20 years from now. Krishna's present age (in years) is _____.

A. 30

B. 25 ✓

C. 45

D. 27

Q4 Mathematics

The value of the discriminant of the quadratic equation $2x^2 - 4x - 3 = 0$ is:

A. 40 ✓

B. 16

C. 24

D. 36



Q5 Mathematics

Find the value of $[(12 \times 4) \times \{6 \div 4 \times (\frac{7-4}{6})\}]$.

A. 24

B. 36



C. 42

D. 48

Q6 Mathematics

Given that c is the third proportional of 15 and b . If b is the sum of first three odd natural numbers, then the value of c is:

A. $\frac{29}{5}$

B. $\frac{28}{5}$

C. $\frac{27}{5}$



D. $\frac{26}{5}$

Q7 Mathematics

A factory built in the shape of a cuboid except for its roof had its dimensions given as $140 \text{ m} \times 10 \text{ m} \times 10 \text{ m}$. The structure is then closed on the top with a semi-cylindrical structure to exactly cover the open top of the cuboidal structure. The volume (in m^3) of the semi-cylindrical structure forming the roof is:

Take $\pi = \frac{22}{7}$

A. 6500

B. 5500



C. 11000

D. 13000



Q8 Mathematics

Which of the following fractions is the largest?

$$\frac{5}{7}, \frac{9}{14}, \frac{16}{21}, \frac{29}{42}$$

A. $\frac{5}{7}$

B. $\frac{9}{14}$

C. $\frac{16}{21}$



D. $\frac{29}{42}$

Q9 Mathematics

The present total age of A and B is 12 years more than the present total age of B and C. By how many years is C younger than A?

A. 6

B. 8

C. 10

D. 12



Q10 Mathematics

By selling a computer for ₹30,875, a shopkeeper suffers a loss of 5%. At what price should he sell it to gain 7%?

A. ₹35,525

B. ₹34,775



C. ₹36,105

D. ₹33,985



Q11 Mathematics

The traffic signals at three different road crossings change after every 45 seconds, 75 seconds and 90 seconds respectively. If they all change simultaneously at 9:30:00 a.m., then at what time will they next change again simultaneously?

- A. 9:39:20 a.m.
- B. 9:38:00 a.m.
- C. 9:37:30 a.m. ✓
- D. 9:39:10 a.m.

Q12 Mathematics

Two pipes A and B can fill a cistern in 21 minutes and 28 minutes, respectively. Both the pipes are opened together but after 4 minutes, pipe B is turned off. What is the total time taken to fill the tank?

- A. 12 minutes
- B. 13 minutes
- C. 18 minutes ✓
- D. 15 minutes

Q13 Mathematics

The mean of a data is 38 and its median is 46. The mode (using empirical relation) of the data is:

- A. 62 ✓
- B. 63
- C. 64
- D. 65

Q14 Mathematics

The surface area (in cm^2) of a sphere of radius 14 cm is:

Take $\pi = \frac{22}{7}$

- A. 2464 ✓
- B. 1848
- C. 1232
- D. 616



Q15 Mathematics

A company earns a profit that is distributed among the company's three partners in the ratio of 1 : 3 : 5. If the difference between the smallest and the largest shares is ₹80,000, the total profit of the company is:

A. ₹1,80,000



B. ₹1,60,000

C. ₹1,40,000

D. ₹1,20,000

Q16 Mathematics

The difference between the smallest and the largest fractions among $\frac{5}{6}$, $\frac{7}{8}$, $\frac{11}{12}$, $\frac{13}{16}$ is:

A. $\frac{5}{41}$

B. $\frac{5}{43}$

C. $\frac{5}{47}$

D. $\frac{5}{48}$

**Q17** Mathematics

The perimeter of an isosceles triangle is 32 cm. If each of the equal sides is 4 cm longer than the base, then the length of the sides of the triangle are _____.

A. 16, 12, 12

B. 8, 12, 12



C. 14, 10, 10

D. 14, 14, 4

Q18 Mathematics

The perimeter of a square is 32 m. Its area (in m^2) is:

A. 32

B. 56

C. 64



D. 128



Q19 Mathematics

If the cost of two tables and three wooden benches is ₹3,500 and the cost of three tables and two wooden benches is ₹4,000, then the cost (in ₹) of one table is _____.

- A. 500
- B. 2,200
- C. 1,400
- D. 1,000

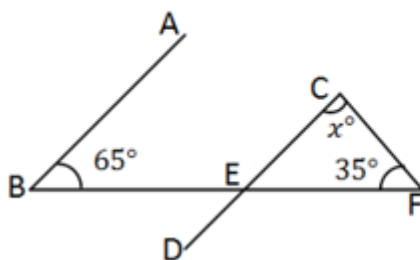
**Q20** Mathematics

A dealer sold his goods at a discount of 20% but set the marked price of each article at 30% above the cost price. His gain percentage on each article is _____.

- A. 5%
- B. 8%
- C. 4%
- D. 10%

**Q21** Mathematics

In the given figure, AB is parallel to CD. What is the value of x° ?



- A. 30°
- B. 100°
- C. 110°
- D. 80°



Q22 Mathematics

Convert $\frac{7893}{9990}$ to its recurring decimal form.

A. $0.\overline{790}$

B. $0.\overline{7900}$ ✓

C. $0.\overline{799}$

D. $0.\overline{7990}$

Q23 Mathematics

A shopkeeper claims to sell his goods at cost price but uses a weight that actually weighs 900 gm though 1 kg is written on it. The gain percentage is:

A. $22\frac{1}{2}\%$

B. $14\frac{1}{3}\%$

C. $11\frac{1}{9}\%$ ✓

D. 9%

Q24 Mathematics

Which of the following numbers is exactly divisible by 18?

A. 239076 ✓

B. 317468

C. 842104

D. 792462

Q25 Mathematics

If α, β be the roots of the quadratic equation $3x^2 - 9x + 8 = 0$, then the value of $\left(\frac{\alpha}{\beta} + \frac{\beta}{\alpha}\right) + 4\left(\frac{1}{\alpha} + \frac{1}{\beta}\right)$ is:

A. 6.125

B. 5.875 ✓

C. 7.225

D. 4.825



Q26 General Intelligence and Reasoning

Read the given statements and conclusions carefully and decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. M ranked higher than B who ranked equal to S.
2. B ranked higher than F.
3. S did not rank higher than Q who ranked lower than M.
4. M ranked higher than F who did not rank lower than T.

Conclusions:

- I. Q ranked higher than T.
II. Q ranked equal to T.
III. M ranked higher than F.

- A. Conclusions I and II follow
B. Conclusions I and III follow
C. Conclusion III follows
D. Conclusions II and III follow

**Q27** General Intelligence and Reasoning

Eight girls, A, B, C, D, E, F, G and H, are sitting around a circular table and facing the centre (but not necessarily in the same order). A is sitting second to the left of B. F is sitting to the immediate left of C. D is not an immediate neighbour of either F or E. H is not an immediate neighbour of B. Only three girls are sitting between A and D.

Who among the following girls are the immediate neighbours of D?

- A. F and B
B. A and E
C. H and G
D. E and B



Q28 General Intelligence and Reasoning

Six Engineering graduates, Jayanth, Komal, Lasya, Midhun, Nayan and Ojaswi, graduated from a reputed engineering institute, each of them in a different year between 2004-2009. Jayanth graduated in the year immediately before the year Nayan graduated. Only one engineering student graduated between Komal and Ojaswi, where Komal was Ojaswi's senior. Ojaswi graduated in 2009.

If Midhun graduated in 2004, then who graduated in 2006?

- A. Komal
- B. Nayan
- C. Lasya
- D. Jayanth



Q29 General Intelligence and Reasoning

Each vowel in the word GRADIENT is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

- A. B
- B. J
- C. F
- D. M



Q30 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$7.05 - 20.92 + 16.20 \times 3.99 = ?$$

- A. 52
- B. 50
- C. 62
- D. 76



Q31 General Intelligence and Reasoning

The given pie chart shows the sales of a store in each quarter as the percentage of total sales. Study the pie chart and answer the question that follows.



Which quarters have the highest and lowest sales, respectively?

A. 2nd and 3rd



B. 1st and 2nd

C. 4th and 3rd

D. 2nd and 4th

Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

0, 3, 8, 15, 24, 35, ?

A. 80

B. 63

C. 48



D. 37

Q33 General Intelligence and Reasoning

Janak started from his office and after travelling a distance of 4 km towards north, he turned to the left and travelled a distance of 3 km. He then turned left and travelled 9 km. He then took a final left, travelled 3 km and stopped. What is the shortest distance between the stopping point and his office? (All turns are 90 degree turns only)

A. 8 km

B. 7 km

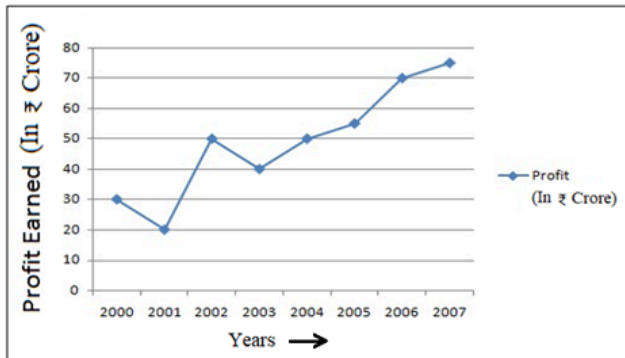
C. 6 km

D. 5 km



Q34 General Intelligence and Reasoning

The following graph shows the profit earned by a company over the years. Study the graph and answer the question that follows.



Calculate the increase in profit earned by the company in year 2002 as compared to previous year.

- A. ₹20 crore
- B. ₹30 crore
- C. ₹40 crore
- D. ₹50 crore

Q35 General Intelligence and Reasoning

In a certain code language, 'TOTAL' is written as 'RMRYJ' and 'PLANT' is written as 'NJYLR'. How will 'PHONE' be written in that code language?

- A. NFLMC
- B. NFMLC
- C. MLCNF
- D. FNMLC

Q36 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

3 : 16 :: 5 : 36 :: 7 : ?

- A. 62
- B. 63
- C. 64
- D. 65



Q37 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the assumptions is/are implicit in the statement.

Statement:

Do not throw glass bottles in green dustbins which are meant for other recyclable waste items.

Assumptions:

- I. Dustbins for collecting glass bottles are of a different colour than the dustbins used to collect other recyclable items.
- II. Glass bottles are to be thrown along with the non-recyclable waste.

- A. Only assumption I is implicit** ☒
- B. Only assumption II is implicit
- C. Neither assumptions I nor II is implicit
- D. Both assumptions I and II are implicit

Q38 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All aliens are people.
All people are mammals.
All mammals are animals.

Conclusions:

- I. Some animals are mammals.
- II. All people are aliens.

- A. Only conclusion I follows** ☒
- B. Only conclusion II follows
- C. Both conclusions I and II follow
- D. Neither conclusion I or II follows

Q39 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

SJC : XOH

FMT : KRY

A. HNF : MSK



B. NFH : MSK

C. NHF : MWK

D. NFK : SKD

Q40 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	6	8	4	+	5	#	%	2	\$	1	^	7	9	*	@
Code	S	U	T	W	N	P	V	D	A	Z	J	M	O	M	Y

Conditions:

- (i) If the first and last elements are numbers, then the last element will be replaced by the symbol @.
- (ii) If the first element is a symbol, then the first element will be coded as ©.
- (iii) If both the first and second elements are numbers, then the third element will be coded as *.

What will be the code for the following?

7 8 4 % @

A. MU* VY



B. VY*UM

C. UM*VY

D. UMY*



Q41 General Intelligence and Reasoning

A statement is followed by two conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$R < S \leq T \leq U = V > W > X$$

Conclusions:

I. $S = V$

II. $V > S$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true

D. Either conclusion I or II is true



Q42 General Intelligence and Reasoning

Six medical students, J, K, L, M, N and O completed their MBBS graduation from a reputed medical institute between 2014 and 2019. Each of them graduated in a different year. J graduated in the year immediately before the year N graduated. Only one medical student graduated between K and O, where K graduated before O. O graduated in 2019. If M graduated in 2014, then who graduated in 2016?

A. K

B. N



C. L

D. J

Q43 General Intelligence and Reasoning

Six friends Q, R, S, T, U and V are sitting in a row facing north. Q is seated 2nd to the right of T and 3rd to the left of S. U is not an immediate neighbour of Q. Who is seated between R and V?

A. Q



B. U

C. S

D. T



Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

13, 14, 27, 41, 68, ?

A. 85

B. 118

C. 109



D. 98

Q45 General Intelligence and Reasoning

Which of the following term will replace the question mark (?) in the given series to make it logically complete?

AMB3, DPE5, GSH7, ?, MYN11

A. KYL12

B. JVK9



C. KVL9

D. JVK12

Q46 General Intelligence and Reasoning

Refer to the following letter, number and symbol series and answer the question.

(Left) V 2 5 U @ ¢ W ¥ # 2 Ω A R Q 1 @ F B 4 6 # H J % Z E (Right)

If all the consonants are dropped from the series, what will be the position of 'Ω' from the left?

A. Eighth

B. Seventh

C. Ninth



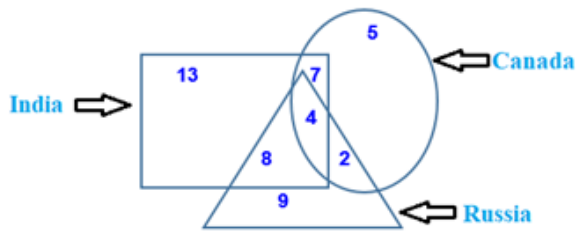
D. Tenth



Q47 General Intelligence and Reasoning

Study the given diagram carefully and answer the question that follows.

The numbers in different sections indicate the number of people who belong to different countries.



What number represents the people who belong to India, Canada as well as Russia?

A. 2

B. 7

C. 4



D. 8

Q48 General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

$8 : 2 :: 16 : 6 :: 18 : 7 :: 28 : ?$

A. 21

B. 11

C. 9

D. 12



Q49 General Intelligence and Reasoning

Refer to the following number series and answer the question.

(Left) 1 4 6 2 7 8 3 7 5 6 8 9 1 3 9 5 3 (Right)

Find the sum of all the odd numbers in the above number series.

A. 53



B. 55

C. 57

D. 58



Q50 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All chairs are pens.

Some pens are shoes.

Some shoes are desks.

Conclusions:

(I) Some desks are chairs.

(II) Some shoes are chairs.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follow



D. Both conclusions I and II follow

Q51 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$44 \times 11 - 25 \div 20 + 80 = ?$$

A. 40



B. 60

C. 100

D. 90

Q52 General Intelligence and Reasoning

Which two numbers should be interchanged to make the following equation correct?

$$9 + 7 - (6 \div 3 - 4) \times 8 = 31$$

A. 9 and 7

B. 8 and 7



C. 6 and 7

D. 4 and 7



Q53 General Intelligence and Reasoning

Study the following arrangement and answer the question given below. All numbers given below are 2 digit numbers.

33 56 93 % 28 21 @ / 84 94 39 \$ 65 19 # 81

Which is the 7th term to the right of the 14th term from the right end in the above arrangement?

A. @

B. 84

C. 94



D. 21

Q54 General Intelligence and Reasoning

Amit starts from Point A and drives 6 km towards the south. He then takes a left turn, drives 4 km, turns right and drives 3 km. He then takes a right turn and drives 7 km. He takes a final right turn, drives 9 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 3 km towards the north

B. 2 km towards the east

C. 3 km towards the east



D. 2 km towards the west

Q55 General Intelligence and Reasoning

Six pen boxes of different brands, P1, Q2, R3, S4, T5 and U6, are kept one above the other but not necessarily in the same order. P1 is third from the top and immediately below U6. Only two boxes are there between P1 and Q2. There are two boxes between R3 and T5. R3 is placed below T5. How many pen boxes are there between T5 and Q2?

A. One

B. Two

C. Three

D. Four



Q56 General Science

When light is passed through a prism, refraction of light occurs:

- A. one time
- B. two times
- C. zero times
- D. three times



Q57 General Science

Consider two coils, A, having larger number of turns than B, kept axially at a distance from each other. The coil A is connected to a battery and a switch and B is connected to a galvanometer. On switching on or off the circuit a DC current flows through the coil A, then deflection in the galvanometer connected to coil B can be increased by winding the core of coil B on _____.

- A. an iron rod
- B. a glass rod
- C. an ebonite rod
- D. a wooden rod



Q58 General Science

Carbon exhibits catenation property due to _____.

- A. its large size and greater strength of carbon-carbon bond
- B. its small size and greater strength of carbon-carbon bond
- C. its small size and weaker strength of carbon-carbon bond
- D. its large size and weaker strength of carbon-carbon bond



Q59 General Science

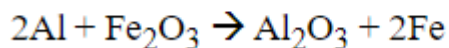
In the modern periodic table, addition of new shells down the group results in _____.

- A. increase in atomic size and nuclear charge
- B. decrease in atomic size and nuclear charge
- C. increase in atomic size and decrease in nuclear charge
- D. decrease in atomic size and increase in nuclear charge



Q60 General Science

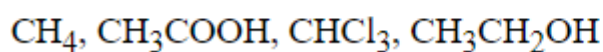
The given reaction is an example of _____.



- A. oxidation reaction
- B. reduction reaction
- C. displacement reaction
- D. double displacement reaction

Q61 General Science

Arrange the following organic compounds in the increasing order of their boiling point.



- A. $\text{CH}_3\text{COOH} < \text{CH}_3\text{CH}_2\text{OH} < \text{CHCl}_3 < \text{CH}_4$
- B. $\text{CH}_4 < \text{CHCl}_3 < \text{CH}_3\text{CH}_2\text{OH} < \text{CH}_3\text{COOH}$
- C. $\text{CH}_3\text{CH}_2\text{OH} < \text{CH}_3\text{COOH} < \text{CHCl}_3 < \text{CH}_4$
- D. $\text{CH}_4 < \text{CHCl}_3 < \text{CH}_3\text{COOH} < \text{CH}_3\text{CH}_2\text{OH}$

Q62 General Science

The first menstrual flow begins at puberty and is termed as:

- A. menarche
- B. menopause
- C. menstruation
- D. ovulation

Q63 General Science

Why are contraceptive methods used?

- A. To overcome fatigue
- B. To reduce blood pressure
- C. To prevent bacterial infection
- D. To avoid pregnancy



Q64 General Science

The element 'X' has seven electrons in outermost shell. Select the group of the modern periodic table to which it belongs.

A. 18th group

B. 7th group

C. 16th group

D. 17th group



Q65 General Science

A substance is said to be reduced in a redox reaction if it:

A. gains oxygen or loses hydrogen

B. gains hydrogen or loses oxygen



C. gains hydrogen and oxygen both

D. loses hydrogen and oxygen both

Q66 General Science

The magnification produced by a concave mirror is found to be -2 when an object of height 1 cm is placed at a suitable distance from the pole. Here, image height is equal to:

A. 2 cm



B. 1 cm

C. 3 cm

D. 0.2 cm

Q67 General Science

Normally, in a healthy adult, the initial filtrate in the kidneys is about 180 L daily. However, the volume actually excreted is only:

A. 1 litre or 2 litres a day



B. 2 litres or 3 litres a day

C. 3 litres or 3.5 litres a day

D. 2 litres or 3.5 litres a day



Q68 General Science

Which of the following chemicals can be applied to get relief from pain due to bee-sting?

- A. CaSO_4
- B. Na_2CO_3
- C. CaCO_3
- D. NaHCO_3



Q69 General Science

What is the cause of muscle cramps?

- A. Insufficiency of oxygen supply to muscles
- B. Excessive excitation of neuromuscular junctions
- C. Fatigue and weakness of the body
- D. Low glucose level in the blood (hypoglycaemia)



Q70 General Science

Which of the following part connects the urinary bladder and the kidney?

- A. Nephrons
- B. Tubules
- C. Ureters
- D. Urethra



Q71 General Science

Different-coloured dustbins are provided by some municipalities in some cities and towns. The blue one is used for collecting _____.

- A. kitchen wastes
- B. medical wastes
- C. reusable wastes
- D. agricultural wastes



Q72 General Science

An electric bulb of $40\ \Omega$ resistance and a conductor of $10\ \Omega$ resistance are connected to a 10 V battery. The total resistance of the circuit is:

- A. $30\ \Omega$
- B. $40\ \Omega$
- C. $50\ \Omega$ ✓
- D. $60\ \Omega$

Q73 General Science

The principal focus of a convex mirror is located:

- A. in front of the mirror
- B. behind the mirror ✓
- C. above the principal axis
- D. below the principal axis

Q74 General Science

Which acid is produced by the human stomach?

- A. HCl ✓
- B. CH_3COOH
- C. H_2SO_4
- D. Lactic acid

Q75 General Science

In return for help in protection of 1,272 hectares of a badly degraded Sal forest, villagers were given employment in:

- A. pomo culture
- B. silviculture ✓
- C. agriculture
- D. Sericulture



Q76 General Science

Ashutosh plotted Voltage against Current for two Ohmic conductors and found that the slopes of these two conductors are 10 and 50, respectively. If the same 20 V battery is connected across these two Ohmic wires separately, what will be the ratio of the current flow in these two wires?

A. 5 : 4

B. 5 : 3

C. 5 : 2

D. 5 : 1



Q77 General Science

The refractive indices of dense flint glass and water are 1.65 and 1.33, respectively. A ray of light passes from dense flint glass to water. The refractive index of water with respect to dense flint glass is _____ and the ray bends _____ the normal in water.

A. 0.81, towards

B. 1.24, towards

C. 0.81, away from



D. 1.24, away from

Q78 General Science

The rate of electricity in a state is Rs5.00 per unit. The cost of running an 100 W fan for 10 hours a day for the whole month of May will be rupees:

A. 250

B. 200

C. 150



D. 300

Q79 General Science

For green plant tissues undergoing photosynthesis, _____ is a waste product.

A. carbon dioxide

B. oxygen



C. urea

D. ammonia



Q80 General Science

Suppose a current of 0.05 A is passing through a wire of resistance R when the voltage across the resistor is 10 V. What current will pass through this wire when the voltage across it is 20 V?

- A. 0.01 A
- B. 0.1 A
- C. 0.02 A
- D. 0.2 A



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In which year was the High Court of Delhi established?

- A. 1862
- B. 1966
- C. 1948
- D. 1956



Q82 General Awareness and Current Affairs

Who among the following social reformers wrote the book called 'Barno-Porichoy'?

- A. Debendranath Tagore
- B. Ishwar Chandra Vidyasagar
- C. Swami Vivekananda
- D. Dwarkanath Ganguly



Q83 General Awareness and Current Affairs

The elections for Panchayat are conducted by _____.

- A. urban local government
- B. election commission of India
- C. state election commission
- D. Revenue Department of the state



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Q84 General Awareness and Current Affairs

What is term used for perks that employers give to their employees above and beyond any financial compensation?

- A. Marginal benefits
- B. Fringe benefits
- C. Outlying benefits
- D. Trim benefits



Q85 General Awareness and Current Affairs

The Dree Festival, an important agricultural festival, is primarily celebrated by the Apatani tribe in the state of _____.

- A. Kerala
- B. Arunachal Pradesh
- C. West Bengal
- D. Madhya Pradesh



Q86 General Awareness and Current Affairs

As of March 2022, who is the chief justice of Karnataka high court?

- A. Ritu Raj Awasthi
- B. Alok Aradhe
- C. S Sujatha
- D. B Veerappa



Q87 General Awareness and Current Affairs

Who among the following clocked 20.52 seconds in the men's 200 m final of the Federation Cup 2022 to break Muhammed Anas Yahiya's previous national record of 20.63 created at a meet in the Czech Republic back in 2018?

- A. Jinson Johnson
- B. Amlan Borgohain
- C. Amiya Kumar Mallick
- D. Surendra Singh



Q88 General Awareness and Current Affairs

Devprayag is the confluence of _____.

- A. Sutlej and Indus
- B. Yamuna and Ganga
- C. Godavari and Narmada
- D. Alaknanda and Bhagirathi



Q89 General Awareness and Current Affairs

In India, the duration from _____ is the time of the arrival of the normal rainfall, which increases suddenly and continues constantly for several days, known as the 'burst' of the monsoon.

- A. Early June to August
- B. July to early September
- C. Early July to mid-August
- D. Early June to mid-September



Q90 General Awareness and Current Affairs

Who among the following sportsmen was in news in June 2021 for being inducted into the ICC Hall of Fame ahead of WTC Final?

- A. Dilip Vengsarkar
- B. Vinoo Mankad
- C. Javagal Srinath
- D. Ajay Jadeja



Q91 General Awareness and Current Affairs

Which of following is in-house software of the Indian Railways to tackle the problem of cattle getting run over by the trains?

- A. Smart Event Tracking System
- B. Animal Tracking and Vigilant System
- C. Indian Railway Tracking System
- D. Cattle Tracking Collar System



Q92 General Awareness and Current Affairs

_____ pass is a high mountain pass in the state of Himachal Pradesh, that connects Kullu valley with Lahual - Spiti Valley.

- A. Zoji La
- B. Rohtang
- C. Shipki La
- D. Lipu Lekh



Q93 General Awareness and Current Affairs

Which of the following Indian languages is NOT categorised as a classical language by the Ministry of Culture, Government of India?

- A. Telugu
- B. Tamil
- C. Sanskrit
- D. Bengali



Q94 General Awareness and Current Affairs

Parshavnatha temple is located in which state?

- A. Kerala
- B. Karnataka
- C. Rajasthan
- D. Madhya Pradesh



Q95 General Awareness and Current Affairs

As per the 16th Annual Status of Education Report (ASER) 2021 (Rural), the enrolment rate decreased to _____ in private schools.

- A. 18.2%
- B. 20.1%
- C. 24.4%
- D. 27.2%



Q96 General Awareness and Current Affairs

SHG – Bank Linkage Programme (SHG-BLP) is a bank-led microfinance channel in India, which was initiated by _____.

- A. SIDBI
- B. NABARD
- C. LIC
- D. EXIM Bank

Q97 General Awareness and Current Affairs

The Union Budget also known as Annual Financial Statement (AFS) for a particular financial year is given in which Article of the Indian Constitution?

- A. Article 31-C
- B. Article 38
- C. Article 112
- D. Article 134

Q98 General Awareness and Current Affairs

Which of the following falls under the Right to Constitutional Remedies?

- A. Right to education
- B. Equality of opportunity in public employment
- C. Freedom of conscience and free profession, practice and propagation of religion
- D. The right to move the Supreme Court by appropriate proceedings for the enforcement of the rights conferred by Part III is guaranteed

Q99 General Awareness and Current Affairs

_____ is an Indian Technology developed by Research Design and Standards Organisation in collaboration with Indian Railways in March 2022, that can prevent two trains from colliding.

- A. Srivatsa
- B. Jaivardhan
- C. Kavach
- D. Trishool



Q100 General Awareness and Current Affairs

In which of the following years was the Planning Commission set up with the Prime Minister as its Chairperson, and hence began the era of five-year plans.

A. 1947

B. 1948

C. 1949

D. 1950



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The population of a town in 1980 was 2,25,000. If its population increased in two successive decades by 10% in each decade, the population of the town in 2000 was:

A. 2,72,150

B. 2,72,250



C. 2,72,350

D. 2,72,450

Q2 Mathematics

Using the fact that $4515 \div 12.9 = 350$, find the value of $4.515 \div 12.9$?

A. 35

B. 3.5

C. 0.35



D. 0.035

Q3 Mathematics

The marked price of an article is ₹150. The shopkeeper offers a discount of 20% on the purchase of the article. Thereby, he makes a profit of 25%. The cost price of the article is:

A. ₹72

B. ₹96



C. ₹120

D. ₹144

Q4 Mathematics

The nature of the roots of the quadratic equation $(x + 12)(x + 6) = 4^2$ satisfy the following:

A. both the roots are positive and rational

B. one of the roots is positive and the other one is negative, and both are rational

C. both the roots are negative and rational



D. both the roots are irrational



Q5 Mathematics

The sum of the digits of a 2-digit number is 9. The number at the tens' place is double of the number at the units' place. The 2-digit number is:

A. 63



B. 36

C. 45

D. 54

Q6 Mathematics

Find the value of $[(12 \div 4) \times \{\frac{12}{3} + \frac{5}{3} \times (7 - 4)\}]$.

A. 54

B. 45

C. 36

D. 27

**Q7 Mathematics**

A man makes a monthly payment equal to 15% of his monthly salary towards debt repayment. He spends 75% of the remaining salary and saves ₹425. His monthly salary is:

A. ₹1,800

B. ₹2,000



C. ₹2,200

D. ₹2,400

Q8 Mathematics

₹ 2,000 is divided among A, B and C such that half of A's part, one-third of B's part and one-fifth of C's part are equal. What is A's part (in ₹)?

A. 200

B. 1,000

C. 400



D. 600



Q9 Mathematics

If the diameter of a sphere is 12 cm, then find the volume of the sphere. [Use $\pi = \frac{22}{7}$]

A. $905\frac{1}{7} \text{ cm}^3$



B. $906\frac{6}{7} \text{ cm}^3$

C. $907\frac{4}{7} \text{ cm}^3$

D. $908\frac{2}{7} \text{ cm}^3$

Q10 Mathematics

The value of $[(k^a)^{b-c} \times (k^b)^{c-a} \times (k^c)^{a-b}] \times (x^0 - 1)$ is

A. 1

B. abc

C. $a + b + c$

D. 0



Q11 Mathematics

The roots of the quadratic equation $x + \frac{10}{x} = 7$ are:

A. 2, -5

B.

C. -2, 5

D. 5, 2



Q12 Mathematics

Three numbers are co-prime to one another and the product of the first two and the last two are 432 and 945, respectively. Find the LCM of the three numbers.

A. 16650

B. 14850

C. 15030

D. 15120



Q13 Mathematics

The sum of the ages of William and Brijesh is 20 years. Four years ago, Brijesh's age was half of William's then age. How old (in years) is William at present?

A. 12



B. 10

C. 8

D. 6

Q14 Mathematics

A man spends 20% of his monthly salary on the rent of his house. If every month he also spends ₹600 on his conveyance and ₹3,500 on his grocery and saves the remaining ₹500, his monthly salary is:

A. ₹5,000

B. ₹5,250

C. ₹5,500

D. ₹5,750

**Q15** Mathematics

Evaluate $23^3 + (-11)^3 + (-12)^3$.

A. 9108



B. 8908

C. 8708

D. 8608

Q16 Mathematics

A and B can complete a work in 10 days and 15 days, respectively. They started working together but after 3 days B had to leave and A alone completed the remaining work. In how many days in all was the entire work completed?

A. 8 days



B. 6 days

C. 7 days

D. 5 days



Q17 Mathematics

The mean marks of the following distribution is:

Marks obtained	No. of students
25	5
30	6
35	3
40	1

A. 29

B. 30



C. 31

D. 32

Q18 Mathematics

1000 identical small spheres are cast from a sphere of radius 10 cm, with the total volume of the small spheres being equal to the volume of the larger sphere. The diameter (in cm) of each of the small spheres is:

A. 0.5

B. 1

C. 2



D. 3

Q19 Mathematics

The length of a rectangular park is 22 m more than its breadth. Its area is 1400 m^2 . Its breadth (in m) is:

A. 21

B. 28



C. 35

D. 42

Q20 Mathematics

A trader offers a discount of 10% on an article if a customer makes the payment in cash. How much percentage above the cost price should he mark the article to make a profit of 10%? [Give your answer correct to 2 decimal places.]

A. 11.22%

B. 15.22%

C. 20.22%

D. 22.22%



Q21 Mathematics

Simplify the given expression.

$$\frac{0.068 \times 3.5 \times 12}{3.6 \times 0.17 \times 7}$$

A. $\frac{2}{3}$



B. $\frac{4}{7}$

C. $\frac{1}{4}$

D. $\frac{3}{8}$

Q22 Mathematics

Five years hence the age of Ramesh will be three times the then age of his son, and 5 years ago his age was seven times the then age of his son. Ramesh's present age (in years) is:

A. 38

B. 40



C. 42

D. 44

Q23 Mathematics

Which of the following is NOT NECESSARILY true for congruent triangles?

A. If the three sides of one triangle are equal to the corresponding three sides of another triangle, then the two triangles are congruent.

B. If any two sides and the angle included between the sides of one triangle are equal to the corresponding two sides and the angle included between those two sides of the second triangle, then the two triangles are congruent.

C. If two angles and the included side of one triangle are equal to two angles and the included side of another triangle, then the two triangles are congruent.

D. If two sides and an angle of one triangle are equal to two sides and an angle of the other triangle, then the two triangles are congruent.



Q24 Mathematics

A bus is moving at a speed of 84 km/h. If its speed is reduced by 12%, the new speed of the bus (in km/h) will be:

- A. 70.92
- B. 71.92
- C. 72.92
- D. 73.92

**Q25 Mathematics**

The value of $3 + 3 \times \{11 - 2\} \div 3 - 2 \times 3$ is:

- A. 9
- B. 8
- C. 7
- D. 6

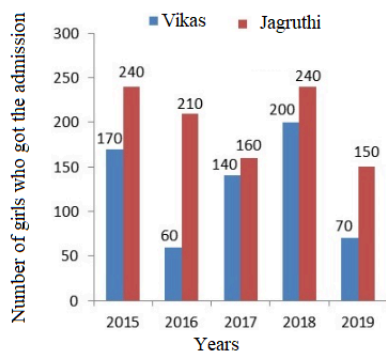
**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Study the graph and answer the question that follows.

The following bar graph shows the total numbers of girls who got the admission in two degree colleges Vikas and Jagruthi from 2015 to 2019 are given.



What is the ratio between total girl students in 2016 to the total girl students in 2019 of both degree colleges?

- A. 25 : 21
- B. 29 : 12
- C. 31 : 11
- D. 27 : 22



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Q27 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(12, 8, 90)

(8, 8, 58)

A. (13, 7, 85)



B. (11, 7, 72)

C. (9, 8, 78)

D. (5, 8, 30)

Q28 General Intelligence and Reasoning

A certain number of class XII students are standing together; each are of different weights. When their weights are compared, Adya is heavier than Dilipa, but lighter than Fiya. Charu is lighter than Esha and heavier than Bidan, who is heavier than Fiya. Only one student is heavier than Esha. Only two students are lighter than Dilipa. If no other student is part of the group, what is the total number of students in the group?

A. Ten

B. Six

C. Seven

D. Nine

**Q29** General Intelligence and Reasoning

Refer to the number and symbol series, and answer the question that follows.

(Left) 6 % 7 & 9 4 3 @ 2 8 * 3 # 9 & 2 (Right)

How many symbols are there between the third element from the right end and the fourth element from the left end of the given series?

A. 4

B. 3



C. 2

D. 5



Q30 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) Q A Y S R E Z I L X B O P A R D I H O U K (Right)

How many such consonants are there, each of which is immediately preceded by a vowel and also immediately followed by a vowel?

- A. One
- B. Two
- C. Three
- D. Four



Q31 General Intelligence and Reasoning

Shiv started from his office and walked 15 m towards the south. He then turned right and walked 20 m. He then turned right again and walked 15 m. He then turned left and walked another 15 m to reach the place where his car is parked. How far and in which direction is the car parked from the office?

- A. 15 meters East
- B. 15 meters West
- C. 20 meters North
- D. 35 meters West



Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1, 8, 7, 14, 13, 20, 19, 26, 25, ?

- A. 29
- B. 30
- C. 31
- D. 32



Q33 General Intelligence and Reasoning

Study the following table carefully and answer the questions based on it.

The table below shows the number of Air coolers sold on different days by five different stores in a city.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
P	45	40	28	48	20	20	24
Q	92	90	12	27	16	26	98
R	36	80	13	30	38	47	62
S	46	60	64	12	52	76	34
T	18	48	69	58	80	15	10

What is the average of number of Air coolers sold by the store Q on Thursday, store T on Saturday and store S on Tuesday?

A. 44

B. 24

C. 34



D. 52

Q34 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

A C P D I U V K J Q E V F

How many consonants have one vowel on one side and one consonant on the other side as immediate neighbours?

A. 7

B. 6

C. 4

D. 5

**Q35** General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(11, 202, 9)

(13, 233, 8)

A. (17, 231, 9)

B. (15, 255, 8)

C. (9, 181, 7)

D. (15, 274, 7)



Q36 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	*	2	@	5	^	+	7	#	%	9
Letter code	J	P	A	F	D	N	R	K	M	Z

Conditions:

(i) If the first element is a symbol and the last, a number, the codes for these two (the first and the last elements) are to be interchanged.

(ii) If the first element is an odd number and the last, an even number, the first and last elements are to be coded as S.

Which of the following will be the code for $+ 5 \wedge 9 \# 2$?

A. F D Z K P N

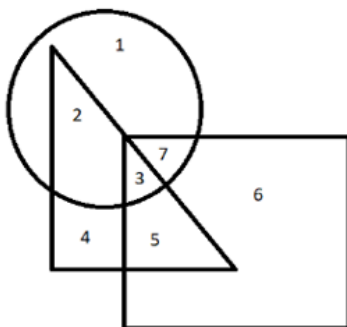
B. N D F Z K P

C. P F D Z K N

D. N F D Z K P

Q37 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'hockey players', the square represents 'golf players', and the triangle represents 'badminton players'. How many persons are there who play both golf and hockey but NOT badminton?



A. 7

B. 6

C. 5

D. 4



Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3, 1, 5, -1, 7, ?

A. -2

B. 2

C. 9

D. -3



Q39 General Intelligence and Reasoning

Five friends, Sandya, Rinku, Prachi, Thiru and Madavi, are sitting on a bench in a playground, facing north (but not necessarily in the same order). Sandya is to the immediate left of Rinku and to the immediate right of Prachi. Madavi is somewhere to the right of Rinku. Thiru is an immediate neighbour of both Rinku and Madavi.

Who is sitting at the rightmost end?

A. Prachi

B. Madavi

C. Rinku

D. Sandya



Q40 General Intelligence and Reasoning

If the digits of the number 2079816 are arranged in increasing order from left to right, what will be the middle digit?

A. 6

B. 2

C. 7

D. 8



Q41 General Intelligence and Reasoning

Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

ULJ - POO - KLT

LMF - GNK - BMP

A. GTF - BGJ - GTN

B. YVJ - UEO - QVT

C. PIO - KRT - FIY

D. RGF - STK - TGP



Q42 General Intelligence and Reasoning

Six persons, Aditya, Binod, Chaya, Dilshan, Estar and Fatima, travelled in different months of the same year viz. January, March, May, July, September and November. None of them travelled after Binod, who travelled immediately after Chaya. Only three people travelled before Estar. Aditya travelled immediately after Fatima. Dilshan did not travel in the month of May.

Who among them travelled in May?

A. Fatima

B. Aditya



C. Estar

D. Chaya

Q43 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $E = A < T \leq D > H > O < X$

Conclusions:

I. $D > E$

II. $D > O$

A. Only conclusion I is true

B. Only conclusion II is true

C. Both conclusions I and II are true



D. Neither conclusion I nor II is true

Q44 General Intelligence and Reasoning

Six persons, A, B, C, D, E and F, travelled in different months of the same year, viz. January, March, May, July, September and November. None of them travelled after B, and he travels just after C. Only three people travelled before E. A travelled just after F. D did not travel in the month of May. Who among the following travelled in May?

A. F

B. A



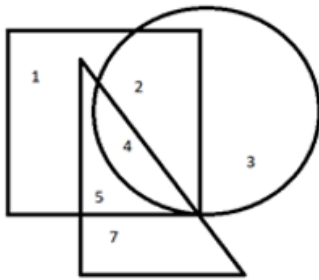
C. E

D. C



Q45 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'sports persons', the square represents 'coaches', and the triangle represents 'administrators'. How many sports persons are there who are also coaches but NOT administrators?



A. 1

B. 2

C. 3

D. 4

Q46 General Intelligence and Reasoning

In this question, a group of numbers is coded using letters/symbols as per the table given below, and the conditions that follow. The correct combination of codes following the conditions is your answer.

Number/Digit	9	5	1	7	3	4	8	6	2
Code	B	K	L	D	^	S	#	&	F

Conditions.

1. If the first digit is odd and last digit is even, the codes for the first and the last digits are to be interchanged.
2. If the first digit is even and last digit is odd, both are to be coded by the code for the first digit.

What will be the code for 85624731?

A. #KF&SD^L

B. #KF&DS^#

C. #K&FSD^L

D. #K&FSD^#

Q47 General Intelligence and Reasoning

Kamal is at a distance of 10 m south-west of Laxmi. If Mohit is 10 m south-east of Laxmi, then Mohit is in which direction with respect to Kamal?

A. East

B. West

C. North

D. South



Q48 General Intelligence and Reasoning

Six students P, Q, R, S, T and U are standing in a straight row such that all of them are facing towards north, but not necessarily in the same order. Q stands second from one of the ends and immediately to the right of P. Only two persons stand between P and R. R stands second to the left of the T. The number of persons standing to the left of T is the same as to the right of P. T stands at the extreme right end of the row and to the immediate right of U. Q stands third to the left of U and stands to the immediate left of S. How many persons stand between Q and U?

A. Two



B. Three

C. Four

D. One

Q49 General Intelligence and Reasoning

A statement is followed by two conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$Q < A < B \leq C > D > E \geq F$$

Conclusions:

I. $F < C$

II. $D < A$

A. Only conclusion I is true



B. Only conclusion II is true

C. Neither conclusion I nor II is true

D. Both conclusions I and II are true



Q50 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Keeping children below the age of two in day care should be avoided as it only has disadvantages.

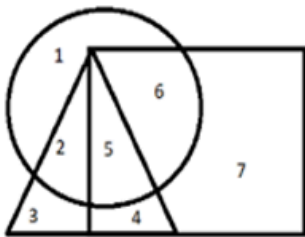
Arguments:

- I. Since some parents have full time jobs with no one to take care of their children at home, keeping children in day care can provide the children with the required care.
- II. Children at day care benefit by having other children around and develop good social skills.

- A. I weakens, while II strengthens the statement
- B. II weakens, while I strengthens the statement
- C. Both I and II weaken the statement
- D. Both I and II strengthen the statement

Q51 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'doctors', the square represents 'men', and the triangle represents 'philanthropists'. How many philanthropists are there who are NEITHER men NOR doctors?



- A. 4
- B. 3
- C. 2
- D. 1



Q52 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$23.96 + 24.96 + 23.16 - 18.89 \times 3.04 + 36.13 \div 6.1 = ?$$

A. 27

B. 21



C. 23

D. 25

Q53 General Intelligence and Reasoning

Each of the digits in the number 56137428 is arranged in ascending order from left to right. What will be the sum of the digits which are second from the left and second from the right in the new number thus formed?

A. 10

B. 11

C. 12

D. 9



Q54 General Intelligence and Reasoning

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

OZF6, QWK12, STP18, UQU24, ?

A. WNY30

B. WNZ30



C. WNZ32

D. VMZ32

Q55 General Intelligence and Reasoning

Each vowel in the word FRANTIC is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. Q

B. J

C. R

D. B



Q56 General Science

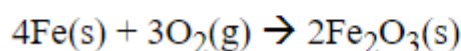
An object of diameter 6 cm is placed at a distance of 10 cm in front of a lens with a power of +5.0 D. The diameter of the image of the object will be:

- A. 8 cm
- B. 10 cm
- C. 12 cm
- D. 14 cm



Q57 General Science

Which of the following substances is being oxidised in the given reaction?

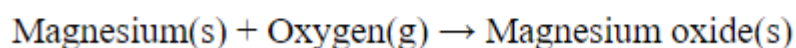


- A. Fe(s)
- B. O₂(g)
- C. Fe₂O₃(s)
- D. Both Fe(s) and Fe₂O₃(s)



Q58 General Science

Select the correct balanced chemical equation for the given reaction.



- A. $\text{Mg(s)} + \text{O}_2\text{(g)} \rightarrow 2\text{MgO(s)}$
- B. $2\text{Mg(s)} + \text{O}_2\text{(g)} \rightarrow 2\text{MgO(s)}$
- C. $2\text{Mg(s)} + \text{O}_2\text{(g)} \rightarrow 2\text{MgO}_2\text{(s)}$
- D. $\text{Mg(s)} + \text{O}_2\text{(g)} \rightarrow \text{MgO}_2\text{(s)}$



Q59 General Science

Warts are caused by:

- A. fungus
- B. bacterium
- C. virus
- D. algae



Q60 General Science

The compound 'X' is produced when baking soda is heated. Recrystallization of X gives compound 'Y'. Select the compounds X and Y, respectively.

- A. Sodium carbonate and washing soda ✓
- B. Sodium bicarbonate and washing soda
- C. Sodium carbonate and bleaching powder
- D. Sodium bicarbonate and bleaching powder

Q61 General Science

In an electric circuit, where 3 lamps A, B and C of resistances $10\ \Omega$, $20\ \Omega$ and $30\ \Omega$, respectively, are in parallel and a battery of 60 V is applied across them, the total power dissipation in the circuit is:

- A. 560 W
- B. 620 W
- C. 660 W ✓
- D. 700 W

Q62 General Science

An electric lamp of $30\ \Omega$ resistance and a conductor of $6\ \Omega$ resistance are connected in series to a 6 V battery. The total resistance of the circuit is:

- A. $24\ \Omega$
- B. $30\ \Omega$
- C. $36\ \Omega$ ✓
- D. $42\ \Omega$

Q63 General Science

The gum produced by various types of trees like Acacia trees is _____.

- A. a form of stored food
- B. a waste product of these plants ✓
- C. an insect-repellent substance
- D. an indication of poor health/infection



Q64 General Science

Select the correct pair of semi-metals amongst the following elements.

- A. Carbon and nitrogen
- B. Hydrogen and helium
- C. Sulphur and phosphorus
- D. Silicon and germanium



Q65 General Science

The site of complete digestion of carbohydrates, proteins and fat is:

- A. the small intestine
- B. the large intestine
- C. the stomach
- D. the rectum



Q66 General Science

Ram bought a bulb rated as 50 W and 220 V. When it is connected to a 220 V supply, its resistance will be:

- A. 868 Ω
- B. 968 Ω
- C. 1068 Ω
- D. 1098 Ω



Q67 General Science

Which of the following chemical compounds is known as marble?

- A. Calcium bicarbonate
- B. Calcium oxide
- C. Calcium carbonate
- D. Calcium hydroxide



Q68 General Science

Where can we find spores in a fern plant?

- A. At the tips of older leaves
- B. In the central chamber of flowers
- C. At the underside of leaves
- D. On special branches called sporangia

Q69 General Science

The common domestic power supplied in India is given by which of the following?

- A. 110V, 60 Hz
- B. 220V, 50Hz
- C. 110V, 50Hz
- D. 220V, 100Hz

Q70 General Science

Biodegradable plastics are the new industry for export as well as marketing. Some advantages of these plastics are mentioned below. Which option is NOT an advantage?

- A. Easy to recycle
- B. Consume less energy for manufacture
- C. Cannot be composted
- D. Less greenhouse emissions

Q71 General Science

Magnetic field lines never cross each other. This fact implies that the magnetic field always have _____.

- A. multiple values at any point in space
- B. a unique value at any point in space
- C. double values at any point in space
- D. triple values at any point in space



Q72 General Science

In which of the following animals does the body temperature NOT depend on the temperature in the environment?

- A. Birds and mammals
- B. Birds and some reptiles
- C. Birds and fishes
- D. Fishes and mammals

Q73 General Science

Red cabbage is a natural indicator which gives different colour when mixed with an acid or a base. Identify the change in colour when it is mixed with an alkaline solution.

- A. Bluish green
- B. Orange
- C. Reddish brown
- D. Pale pink

Q74 General Science

When we observe the floor of a swimming pool filled with water we notice that the pool looks:

- A. More wider than it actually is
- B. less wide than it actually is
- C. deeper than it actually is
- D. less deep than it actually is

Q75 General Science

Which of the following is used to detect the presence of starch in food?

- A. Litmus solution
- B. Phenolphthalein
- C. Benedict's solution
- D. Iodine solution



Q76 General Science

Which of the following statements about Mendeleev's periodic table is NOT correct?

- A. Like alkali metals, hydrogen reacts with halogen, oxygen, and sulphur to form compounds having similar formulae.
- B. Hydrogen was assigned a fixed position in the Mendeleev's periodic table. ✓
- C. No specific position was assigned to the isotopes in the Mendeleev's periodic table.
- D. Noble gases were not discovered at that time.

Q77 General Science

If the magnification of an image from a spherical mirror is -1.38 , then the nature of the image will be:

- A. virtual, erect and smaller
- B. virtual, erect and enlarged
- C. real, inverted and smaller
- D. real, inverted and enlarged ✓

Q78 General Science

What is the difference between the molecular masses of two successive members of the homologous series?

- A. 12 u
- B. 14 u ✓
- C. 8 u
- D. 6 u

Q79 General Science

An object is placed in front of a concave mirror of focal length 18 cm, at a distance of 12cm. The magnification produced by the mirror is _____.

- A. -0.6
- B. $+0.6$
- C. -3
- D. $+3$ ✓

Q80 General Science

Which canal brought considerable greenery to Rajasthan?

- A. Agra canal
- B. Buckingham canal
- C. Indira Gandhi canal
- D. Handri-Neeva canal



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The minimum age required to contest the election for the President of India is _____.

- A. 21 years
- B. 25 years
- C. 32 years
- D. 35 Years



Q82 General Awareness and Current Affairs

Which additional duty was added in 2002 by the 86th Amendment of the Constitution, under clause K of the fundamental duties of India?

- A. To safeguard public property and to abjure violence
- B. To value and preserve the rich heritage of our composite culture
- C. To defend the country and render national service when called upon to do so
- D. Who is a parent or guardian, to provide opportunities for education to his child or, as the case may be, ward, between the age of six and fourteen years.



Q83 General Awareness and Current Affairs

Which of the following is NOT a capital receipt?

- A. Borrowings from other countries
- B. Interest received on loans
- C. Recovery of loans
- D. Sale of public sector undertaking



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Q84 General Awareness and Current Affairs

In December 2021, in which city was the National Billiards Championship held?

- A. Bhopal
- B. Guwahati
- C. Ranchi
- D. Mumbai



Q85 General Awareness and Current Affairs

Which of the following is a part of the urban local government in India?

- A. Gram Panchayat
- B. Panchayat Samiti
- C. Zila Parishad
- D. Nagar Panchayat



Q86 General Awareness and Current Affairs

Which of the following states has the largest deposits of jet black granite?

- A. Rajasthan
- B. Madhya Pradesh
- C. Karnataka
- D. Odisha



Q87 General Awareness and Current Affairs

_____ is a skill training program launched by Microsoft in collaboration with Ministry of Labour and Employment (MoLE) of India in September 2021.

- A. DigiUday
- B. DigiUtkarsh
- C. DigiSmart
- D. DigiSaksham



Q88 General Awareness and Current Affairs

The Village and Small-Scale Industries Committee, passed in 1955, which noted the possibility of using small-scale industries for promoting rural development, is also known as _____.

- A. The Nayak Committee
- B. The Kothari Committee
- C. The Abid Hussain Committee
- D. The Karve Committee



Q89 General Awareness and Current Affairs

According to Reserve Bank of India, which is a foreign Bank in India from following -

- A. DCB Bank Ltd.
- B. IndusInd Bank Ltd
- C. Sonali Bank Ltd.
- D. YES Bank Ltd.



Q90 General Awareness and Current Affairs

The milestone of having how many open defecation-free (ODF) Plus villages has been crossed by India in March 2022?

- A. 50,000
- B. 30,000
- C. 20,000
- D. 40,000



Q91 General Awareness and Current Affairs

The President can nominate not more than _____ members from the Anglo-Indian community if he/she feels that the said community is not adequately represented in the House of the people.

- A. 2
- B. 3
- C. 4
- D. 5



Q92 General Awareness and Current Affairs

Excess demand leads to:

- (A) inflationary gap.
- (B) rise in employment level.

A. Only A



B. Only B

C. Both A and B

D. Neither A nor B

Q93 General Awareness and Current Affairs

In April 2021 the Union Education Minister launched the world's first microsensor-based explosive trace detector called 'NanoSniffer'. NanoSniffer was developed by which IIT incubated startup?

A. IIT-Bombay



B. IIT-Kharagpur

C. IIT-Madras

D. IIT-Hyderabad

Q94 General Awareness and Current Affairs

Who became U-20 World Wrestling Champion in August, 2022?

A. Antim Panghal



B. Mulaym Yadav

C. Anshu Malik

D. Sushil Kumar

Q95 General Awareness and Current Affairs

What does 'Barchans' (Barkhans) refer to?

A. Shrub in desert

B. Type of hut in deserts

C. Sand dune



D. Hot winds in desert



Q96 General Awareness and Current Affairs

In which state from following, we can see the local wind 'Loo' in summer season from following?

- A. Assam
- B. Rajasthan
- C. Telangana
- D. Maharashtra



Q97 General Awareness and Current Affairs

Under the Scheme for Protection and Preservation of Endangered Languages of India (SPPEL), the Central Institute of Indian Languages (CIIL) works on protection, preservation and documentation of all the mother tongues/languages of India spoken by less than _____ people, which are called endangered languages

- A. 5000
- B. 10,000
- C. 15,000
- D. 20,000



Q98 General Awareness and Current Affairs

The Baisakhi festival in India marks the birth of Khalsa Panth under Guru Gobind Singh, the _____ Guru of Sikhs, in the year 1699.

- A. 7th
- B. 8th
- C. 9th
- D. 10th



Q99 General Awareness and Current Affairs

As on August 2022, the Pradhan Mantri Shram Yogi Maandhan (PM-SYM) Yojana, is a voluntary and contributory pension scheme for providing monthly minimum assured pension of _____ after attaining the age of 60 years.

- A. ₹2,000
- B. ₹3,000
- C. ₹4,000
- D. ₹5,000



Yajur Veda deals with _____.

- A. the Gayatri Mantra
- B. melodies
- C. the rituals of the Yagna
- D. spells and charms



Mathematics

25 Questions • Answer Key

Q1 Mathematics

In triangle DEF, side EF is produced to G. If $\angle DFG = 110^\circ$ and $EF = DF$, then $\angle DEF$ measures:

A. 70° B. 55° ✓C. 45° D. 40°

Q2 Mathematics

Using the fact that $\sqrt{18496} = 136$, find the value of $\sqrt{184.96} - \sqrt{1.8496}$.

A. 18.49

B. 14.96

C. 12.24 ✓

D. 10

Q3 Mathematics

The area of a square field is 169 m^2 . Its perimeter (in m) is:

A. 13

B. 26

C. 39

D. 52 ✓

Q4 Mathematics

Mahesh earned ₹1,23,450, ₹1,34,900, ₹98,640, ₹1,26,500, and ₹1,42,000 as his monthly salaries (inclusive of incentives) during the first five months of a year. What is the mean salary (inclusive of incentives) earned every month by Mahesh during the first five months of the given year?

A. ₹1,25,346

B. ₹1,25,098 ✓

C. ₹1,24,975

D. ₹1,24,678



Q5 Mathematics

The decimal equivalent of 50% of 50% is _____.

A. 25

B. 50

C. 0.25



D. 0.50

Q6 Mathematics

Out of 162 students in a school, 72 are boys and the remaining are girls. What is the ratio of the number of girls to the number of boys in that school?

A. 5 : 4



B. 4 : 5

C. 6 : 5

D. 5 : 6

Q7 Mathematics

A taxi charges a fixed charge of ₹40 and an additional charge per kilometre. A person pays ₹150 for 11 km of distance travelled. Find out the charges paid by Ramesh if he travelled for a distance of 20 km.

A. ₹230

B. ₹240



C. ₹250

D. ₹260

Q8 Mathematics

Evaluate

$$(40.25 \div 5) + (0.07 \times 5)$$

$$(0.15 \times 8) + (0.18 \div 0.2)$$

A. 7.5

B. 3

C. 4



D. 5



Q9 Mathematics

Find the smallest natural number which must be subtracted from 2430 to get a perfect square.

A. 25

B. 26

C. 29



D. 36

Q10 Mathematics

Balaram sells a Bluetooth device to Krishna at a profit of 12%. Krishna sells it to Arjun at a profit of 10%. If Arjun pays ₹1,540 for it, what is the cost price of the Bluetooth device for Krishna?

A. ₹1,400



B. ₹1,320

C. ₹1,250

D. ₹1,370

Q11 Mathematics

What digit should come in the place of 'x' so that the given 6-digit number: $28x232$ is exactly divisible by 88?

A. 3

B. 5

C. 7



D. 9

Q12 Mathematics

The present cost of a building is ₹1,28,000. After a year, its cost increased to ₹1,46,000. The percentage increase (rounded off to the nearest integer) in the cost of the building is:

A. 12

B. 13

C. 14



D. 15



Q13 Mathematics

The cost price of an article is ₹1,200. The vendor wants to earn a profit of 15% after giving a discount of 10%. What is the marked price of the article? [Give your answer correct to the nearest integer.]

A. ₹1,433

B. ₹1,466

C. ₹1,566

D. ₹1,533 ☒**Q14** Mathematics

If $\frac{c}{d} + \frac{d}{c} = 1$, then the value of $\frac{c^3 - d^3}{dc^2 - cd^2}$ is:

A. -1

B. 1

C. 0

D. 2 ☒**Q15** Mathematics

A closed metallic cylindrical container is 1.05 m high and its base radius is 35 cm. If the metal sheet costs ₹150 per m^2 , then find the cost of the material used in this container. [Use $\pi = \frac{22}{7}$]

A. ₹462 ☒

B. ₹514

C. ₹360

D. ₹336

Q16 Mathematics

The quadratic equation whose roots are $\frac{1}{\sqrt{2}}$ and $\frac{1}{\sqrt{2}}$ is:

A. $2x^2 - 3\sqrt{2}x + 2 = 0$ B. $2x^2 - 2\sqrt{2}x + 2 = 0$ C. $2x^2 - 3\sqrt{2}x + 1 = 0$ D. $2x^2 - 2\sqrt{2}x + 1 = 0$ ☒

Q17 Mathematics

Krishan is four times as old as Ram. He is also 6 years older than Ram. Krishan's present age (in years) is:

A. 7

B. 8



C. 9

D. 10

Q18 Mathematics

Geetha spends 70% of her monthly income. If her monthly savings is ₹15,600, then her monthly income is:

A. ₹52,000



B. ₹54,000

C. ₹45,000

D. ₹60,000

Q19 Mathematics

A number when decreased by $37\frac{1}{2}\%$, gives 375. The number is:

A. 800

B. 700

C. 600



D. 500

Q20 Mathematics

The cost of 2 pencils and 3 erasers is ₹7 and the cost of 5 pencils and 6 erasers is ₹16. The combined cost of one pencil and one eraser is:

A. ₹1

B. ₹2

C. ₹3



D. ₹4



Q21 Mathematics

The sum of the roots of $x^2 - px + q = 0$ is _____.

A. $\frac{1}{p}$

B. $-p$

C. q

D. p

**Q22** Mathematics

Ravi can complete a certain job in 48 days. Kiran is 60% more efficient than Ravi. In how many days will they together complete the same job?

A. $19\frac{5}{13}$ days

B. $20\frac{8}{13}$ days

C. $18\frac{6}{13}$ days



D. $21\frac{7}{13}$ days

Q23 Mathematics

Find the value of $[66 \div \{12 + 5 \times (6 - 4)\}]$.

A. 1

B. 2

C. 3



D. 4

Q24 Mathematics

From a book containing 264 pages, the teacher taught $\frac{2}{3}$ of the total number of pages and the children studied $\frac{1}{8}$ of the remaining pages at home. How many pages were yet to be either taught by the teacher or studied on their own by the students?

A. 55

B. 77



C. 80

D. 88



The roots of the quadratic equation $3x^2 - 2\sqrt{6}x + 2 = 0$ are:

A. $\sqrt{\frac{2}{3}}, \sqrt{\frac{2}{3}}$



B. $\sqrt{\frac{5}{3}}, \sqrt{\frac{2}{3}}$

C. $\sqrt{\frac{1}{3}}, \sqrt{\frac{1}{3}}$

D. $\sqrt{\frac{5}{3}}, \sqrt{\frac{5}{3}}$

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All packets are urns.

No urn is a truck.

All trucks are drums.

Conclusions:

I. Some packets are drums.

II. Some drums are urns.

III. All drums are truck.

A. Only conclusions I and III follow.

B. Only conclusions II and III follow.

C. Only conclusions I and II follow.

D. None of the conclusions follow.



Q27 General Intelligence and Reasoning

Preeti is walking towards the south and after covering some distance, she turns to her left, then takes a turn towards the right, and finally takes a left turn. In which direction is she going now? (All turns are 90 degree turns only)

A. South

B. North

C. East



D. West



Q28 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$15 - 4 \div 2 + 10 \times 2 = ?$$

A. 55

B. 56

C. 57



D. 58

Q29 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if '×' is replaced with '÷' and '-' is replaced with '×'?

$$14 \times 2 + 5 - 56 \div 8 = ?$$

A. 44

B. 26

C. 40

D. 42



Q30 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

27, 54, 42, 84, 72, 144, ?

A. 156

B. 138

C. 152

D. 132



Q31 General Intelligence and Reasoning

Each vowel in the word 'FOURTH' is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter of the word thus formed is arranged in alphabetical order, which letter will be third from the left?

A. P



B. G

C. Q

D. S



Q32 General Intelligence and Reasoning

Each of the letters in the word **DIAGNOSE** is arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter which is third from the left and the one which is fifth from the right?

A. One



B. Three

C. Five

D. Six

Q33 General Intelligence and Reasoning

Six friends- A, B, D, E, F and K got different ranks in class VIII final exams. Only two friends got higher rank than D and only four friends got lower rank than B. K's rank was immediately higher than B. E had 4th rank from top. A had the lowest rank among the six friends.

Who got the highest rank among the six friends?

A. F

B. E

C. K



D. B

Q34 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	6	8	4	+	5	#	%	2	\$	1	^	7	9	*	@
Code	S	U	T	W	N	P	V	D	A	Z	J	M	O	M	Y

Conditions:

- (i) If the first and last elements are numbers, then the last element will be replaced by the symbol @.
- (ii) If the first element is a symbol, then the first element will be coded as ©.
- (iii) If both the first and second elements are numbers, then the third element will be coded as *.

What will be the code for the following?

% 6 8 4 @

A. ©SUTY



B. YTUS@

C. @SUTY

D. TYUS@



Q35 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Few desks are blades.

Most blades are pillows.

All pillows are flowers.

Conclusions:

I. Few desks are pillows.

II. Some flowers are desks.

III. Some flowers are blades.

A. Only conclusion I follows.

B. Only conclusion II follows.

C. Only conclusion III follows.



D. All the conclusions follow.

Q36 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the assumptions is/are implicit in the statement.

Statement:

Children below the age of 5 years should not be allowed too much of screen time a day.

Assumptions:

I. Too much screen time for growing children will affect them adversely.

II. Limited screen time is not detrimental to children below 5 years of age.

A. Only assumption I is implicit

B. Only assumption II is implicit

C. Neither assumption I nor II is implicit

D. Both assumptions I and II are implicit



Q37 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

A169D, B144E, C121F, D100G, ?

A. E81H



B. H81E

C. F81I

D. I81F

Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

4 ? 14 19 24

A. 7

B. 8

C. 9



D. 10

Q39 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $X > F \geq I > V < Z < K \leq O$

A. $F = K$

B. $I > Z$

C. $O > V$



D. $X > O$

Q40 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$149.99 \times 30.01 - 109.99 + 30.01 = ?$$

A. 4420



B. 4430

C. 4450

D. 4560



Q41 General Intelligence and Reasoning

Five students are sitting around a square table facing the centre. Ram and Sonu are both sitting in the two left corners each (but not necessarily in the same order). Sita and Kamal are both sitting in the two right corners each (but not necessarily in the same order). Ritu is an immediate neighbour of Sita and Kamal. Sita is sitting second to the left of Kamal. Who is sitting to the immediate left of Kamal?

A. Sonu

B. Ritu



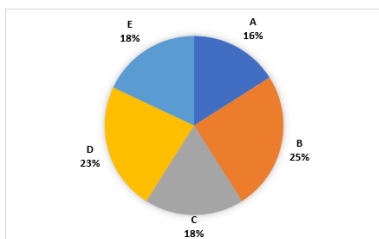
C. Sita

D. Ram

Q42 General Intelligence and Reasoning

Study the pie chart and answer the question that follows.

The following pie chart gives the information about the production of sugar in different districts as percentage of total sugar production in all districts put together in a State.



The production of sugar from district C is how much percentage less than that of the production of sugar from district B?

A. 28%



B. 8%

C. 16%

D. 35%



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Q43 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number /symbol	2	9	%	4	@	*	3	7	6	5	\$	3	^	#
Code Letter	G	F	D	O	H	A	C	M	K	S	L	T	M	B

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for % 2 4 * 9 ?

A. FGAOD

B. FGOAD

C. DGOAF

D. DOAGF



Q44 General Intelligence and Reasoning

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- All doctors are surgeons.
- Some nurses are surgeons.
- Some nurses are students.

Conclusions:

- I. Some doctors are students.
- II. Some surgeons are doctors.
- III. Some doctors are nurses.

A. Only conclusions I and II follow

B. Only conclusions I and III follow

C. Only conclusions II and III follow

D. Only conclusion II follows



Q45 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

10 : 110 :: 7 : 56 :: 17 : ?

A. 272

B. 306



C. 235

D. 315

Q46 General Intelligence and Reasoning

This question is based on the following 3-letter words:

(Left) FRY CAT GUN NOT (Right)

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have no vowel?

A. One



B. Two

C. Three

D. Four

Q47 General Intelligence and Reasoning

A statement is followed by two conclusions. Find out which conclusion is true based on the given statement.

Statement:

$F > A \geq B > C < D \leq E$

Conclusions:

I. $E > C$

II. $E > B$

A. Only conclusion I is true



B. Only conclusion II is true

C. Neither conclusion I nor II is true

D. Both conclusions I and II are true



Q48 General Intelligence and Reasoning

Aman travels a distance of 12 km in the north direction and he turns to the east and travels a distance of 5 km. He further turns to the north and travels 3 km and then he turns in the east direction and travels a distance of 4 km. Finally he turns in the south direction and travels a distance of 15 Km. What is the shortest distance between his starting and end positions? (All turns are 90 degree turns only)

A. 9 km



B. 11 km

C. 12 km

D. 15 km

Q49 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(123, 90, 68)

(61, 28, 6)

A. (114,82,60)

B. (143,110,88)



C. (68,36,14)

D. (85,52,29)

Q50 General Intelligence and Reasoning

Six friends, Udita, Varuni, Wasim, Hayati, Yash and Zunaid, live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 6. Zunaid lives on the floor immediately above Yash. Only one person lives between Udita and Varuni. Wasim lives immediately above Zunaid and immediately below Varuni.

Who lives on the second floor?

A. Udita

B. Varuni

C. Wasim

D. Zunaid



Q51 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

LETTER : RETTEL :: OPTION : NOITPO :: SELECT : ?

- A. CETLEC
- B. ECTLCE
- C. TECLEC
- D. TCELES



Q52 General Intelligence and Reasoning

If 10 March 2011 is a Thursday, then what will be the day of the week on 8 April 2022?

- A. Friday
- B. Thursday
- C. Tuesday
- D. Monday



Q53 General Intelligence and Reasoning

Five businessmen are sitting around a circular table facing the centre (but not necessarily in the same order). X is an immediate neighbour of Y and Z. W is to the immediate left of Y and right of Q. Who is sitting to the immediate left of W?

- A. Y
- B. Q
- C. X
- D. Z



Q54 General Intelligence and Reasoning

Study the table and answer the question that follows. (High. = highest marks and Ave. = average marks)

Year	English		Maths		Science		Social Science	
	High.	Ave.	High.	Ave.	High.	Ave.	High.	Ave.
2018	80	70	94	60	89	70	65	55
2019	82	65	85	62	95	64	66	58
2020	71	56	92	68	97	68	68	48
2021	75	52	91	64	92	75	77	58

What is the overall average of the marks in all four subjects in the year 2020, considering that equal number of students appeared for all these exams?

A. 55

B. 58

C. 60



D. 62

Q55 General Intelligence and Reasoning

Eight pencil boxes of different brands, B, D, F, H, J, L, N and P, are kept one above the other but not necessarily in the same order. N is fourth from the top and immediately below F. P is placed at the topmost position and immediately above B. Only one box is there between H and J. J is always placed at one of the positions below H. L is placed immediately below N. How many boxes are there between J and D?

A. Two

B. One

C. None



D. Three

General Science

25 Questions • Answer Key

Q56 General Science

Is safe sex the only method to prevent transmission of HIV?

A. Yes. It is the only method and usage of condoms is recommended

B. No. The primary route of transmission of HIV is drug use only.

C. No. The safest method is to avoid sex completely.

D. No. There are other methods like preventing use of infected needles and transfusion of infected blood.



Q57 General Science

A ray of white light is incident on a refracting surface AB of a glass prism and emerges out of the other refracting surface AC. Consider the following statements:

- (a) The angle of refraction at surface AB is different for different colours of white light.
- (b) The angle of refraction at the surface AC is different for different colours.

Which of the above statements is/are correct?

- A. Only (a)
- B. Only (b)
- C. Both (a) and (b) ✓
- D. Neither (a) nor (b)

Q58 General Science

According to Fleming's right hand rule, the direction of the motion of the conductor and the direction of the induced EMF are:

- A. the same
- B. perpendicular ✓
- C. parallel
- D. opposite

Q59 General Science

For a given concave mirror of focal length 0.1 m, if an object is kept at a distance 0.2 m, then the image distance will be:

- A. 0.1 m
- B. 0.2 m ✓
- C. 2 m
- D. 1 m

Q60 General Science

Absence of oxygen as in anerobic fermentations by yeast cells convert pyruvate into _____.

- A. Lactic acid + Energy
- B. Ethanol + lactic acid + Energy
- C. Ethanol + Carbon dioxide + Water + Energy
- D. Ethanol+ Carbon dioxide + Energy ✓

Q61 General Science

Which of the following statements are correct?

- (A) All children will inherit an X chromosome from their mother.
- (B) A child who inherits an X chromosome from her mother will be a girl.
- (C) Women have a perfect pair of sex chromosomes; both are called X.
- (D) A child who inherits a Y chromosome from his father will be a boy.

A. A, C and D



B. B and D

C. A and D

D. B and C

Q62 General Science

Which of the following properties of carbon is responsible for a large number of carbon compounds?

- A. Catenation property and divalency
- B. Isomerisation and divalency
- C. Allotropy and tetravalency
- D. Catenation property and tetravalency



Q63 General Science

Which of the following is based on the principle of 'Electromagnetic induction'?

- A. The relative motion between a coil and a bar magnet induces electric current
- B. An electric current produces a magnetic field
- C. The electricity produced in a glass rod
- D. The magnetic field exerts a force on a current carrying conductor



Q64 General Science

Group 2nd elements in the modern periodic table are also known as:

- A. inert gases
- B. alkali metals
- C. alkaline earth metals ✓
- D. transition metals

Q65 General Science

High blood pressure is also called as Hypertension which is caused due to _____.

- A. Constriction of arterioles ✓
- B. Relaxation of arterioles
- C. Relaxation of veins
- D. Contraction of heart muscles

Q66 General Science

When sunlight passes through a canopy of a dense forest, tiny water droplets in the mist _____ light and Tyndall effect is observed.

- A. reflect
- B. refract
- C. reflect and refract
- D. scatter ✓

Q67 General Science

Which of the following is a tough, porous and black substance obtained from coal?

- A. Coke ✓
- B. Coal tar
- C. Coal gas
- D. Diamond



Q68 General Science

An electric lamp is connected to a 240 V DC source. The current flowing through the lamp is 0.25 A. The power of the lamp is:

- A. 40 W
- B. 60 W
- C. 80 W
- D. 100 W



Q69 General Science

The heat produced in a resistor of $100\ \Omega$ when a current of 5A passes through it for 15 minutes is:

- A. $3.25 \times 10^6\text{ J}$
- B. $2.25 \times 10^6\text{ J}$
- C. $1.15 \times 10^7\text{ J}$
- D. $1.05 \times 10^7\text{ J}$



Q70 General Science

Which of the following wastes cause least damage to the environment?

- A. Paper cups
- B. Polythene bags
- C. Plastic bottles
- D. Chemical pesticides



Q71 General Science

Which of the following statements is true for a solution with high concentration of hydroxide ions?

- A. Solution is basic with low pH value.
- B. Solution is acidic with high pH value.
- C. Solution is basic with high pH value.
- D. Solution is acidic with low pH value.



Q72 General Science

Suppose a wire of aluminum is 1 m long, its cross-sectional area is 10^{-2} mm^2 , and its resistance is 2.8Ω . If it is stretched to 8 times its original length, then its resistivity will be:

A. $2.8 \times 10^{-8} \Omega \text{ m}$



B. $8.8 \times 10^{-8} \Omega \text{ m}$

C. $1.8 \times 10^{-7} \Omega \text{ m}$

D. $2.8 \times 10^{-7} \Omega \text{ m}$

Q73 General Science

What is the energy currency for most of the cellular processes?

A. ADP

B. ATP



C. Glucose

D. Pyruvate

Q74 General Science

Which of the following statements is correct for washing soda?

A. Washing soda is used for the preparation of glass.



B. Washing soda is used for the production of H_2 and Cl_2 .

C. Washing soda is a decolorising agent.

D. Washing soda is Na_2CO_3 .

Q75 General Science

Which of the following statements is correct with respect to Alkanes?

A. Saturated hydrocarbons contain one or more double bonds.

B. Unsaturated hydrocarbons contain one or more double bonds.

C. Unsaturated hydrocarbons contain one or more single bonds.

D. Saturated hydrocarbons contain one or more single bonds.



Q76 General Science

Select the compounds 'A' and 'B' produced in the given reaction.



- A. Na_2CO_3 and H_2O
- B. CH_3COONa and H_2O ✓
- C. NaHCO_3 and H_2O
- D. $(\text{CH}_3\text{COO})_2\text{Na}$ and H_2O

Q77 General Science

In which cell should iron be placed in the following table?

	Biodegradable	Non-biodegradable
Recyclable	A	B
Non-recyclable	C	D

- A. Cell A
- B. Cell B ✓
- C. Cell C
- D. Cell D

Q78 General Science

The position of an object placed in front of a concave mirror that gives a real, inverted image at infinity is:

- A. at pole
- B. at focus F ✓
- C. at centre of curvature C
- D. between pole P and focus F

Q79 General Science

Which of the given statements about non-metals is true?

- A. Non-metals are electronegative in nature and form bonds by losing electrons.
- B. Non-metals are electropositive in nature and form bonds by gaining electrons.
- C. Non-metals are electronegative in nature and form bonds by gaining electrons. ✓
- D. Non-metals are electropositive in nature and form bonds by losing electrons.



Q80 General Science

What is the main product when calcium oxide reacts vigorously with water?

- A. Slaked lime
- B. Lime stone
- C. Quick lime
- D. Hydrogen gas



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Where is the headquarters of Bandhan Financial Services Ltd, which offers micro financial services?

- A. Kolkata
- B. Chennai
- C. Bhubaneshwar
- D. Bengaluru



Q82 General Awareness and Current Affairs

In which of the following events did India win the bronze medal in the world games 2022 in the USA?

- A. Wrestling
- B. Archery
- C. Shooting
- D. Wushu



Q83 General Awareness and Current Affairs

In which of the following years was the Official Languages Act enacted?

- A. 1963
- B. 1964
- C. 1965
- D. 1966



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Q84 General Awareness and Current Affairs

Which of the following can be classified as a public sector company in India?

- A. Anand Milk Union Limited
- B. Hindustan Aeronautics Limited
- C. ITC Limited
- D. Reliance Industries Limited



Q85 General Awareness and Current Affairs

PARAM Ganga is the Made in India Petascale supercomputer installed at _____ under National Supercomputing Mission in the year 2022.

- A. IIT Bombay
- B. IIT Roorkee
- C. IIT Delhi
- D. IIT Kanpur



Q86 General Awareness and Current Affairs

Which of the following options correctly defines 'Aldermen' in the context of municipal corporation?

- A. Representative or elected member of ward in municipal corporation
- B. Nominated members to the corporation
- C. Head of the municipal corporation
- D. Municipal Commissioner appointed by the state government



Q87 General Awareness and Current Affairs

Which of the following festivals is predominantly celebrated in Varanasi on a full moon day, 15 days after Diwali, on the ghats of River Ganga?

- A. Makar Sankranti
- B. Dev Deepawali
- C. Chhath Pooja
- D. Rath Yatra



Q88 General Awareness and Current Affairs

Instant messaging platform WhatsApp launched a UPI payment service in a graded manner in India in _____.

- A. October 2020
- B. December 2020
- C. November 2020
- D. September 2020



Q89 General Awareness and Current Affairs

As per Provisional Coal Statistics released by the Ministry of Coal for the year 2020-21, _____ was the largest producer of non-coking coal in the country in 2020-21.

- A. Chhattisgarh
- B. Madhya Pradesh
- C. Odisha
- D. Jharkhand



Q90 General Awareness and Current Affairs

Which of the following ministries introduced the National Anti-Doping Bill, 2022, which was passed in the Rajya Sabha on 3 August 2022?

- A. Ministry of Education
- B. Ministry of Youth Affairs and Sports
- C. Ministry of Tribal affairs
- D. Ministry of Home Affairs



Q91 General Awareness and Current Affairs

As on 31st March 2022 who among the following became India's first woman to win ICC women's cricketer of the year twice?

A. Simran Bahadur

B. Renuka Singh

C. Smriti Mandhana



D. Meghna Singh

Q92 General Awareness and Current Affairs

Which of the following countries witnessed a military coup in February 2021?

A. Myanmar



B. Bangladesh

C. Pakistan

D. Afghanistan

Q93 General Awareness and Current Affairs

The right to privacy which was recognised as a Fundamental Right by the Supreme Court in the landmark case 'Justice K.S. Puttaswamy (Retd.) vs. Union of India 2017', emerges primarily from _____ of the Constitution of India.

A. Article 18

B. Article 19

C. Article 20

D. Article 21



Q94 General Awareness and Current Affairs

Penna river of South India originates from which of the following hills?

A. Anamalai Hills

B. Shivalik Hills

C. Nandi Hills



D. Ashambu Hills



Q95 General Awareness and Current Affairs

Which of the following months are the season of retreating monsoon in India?

- A. Mid-December to February
- B. October to November
- C. March to mid-June
- D. Mid-June to mid-September



Q96 General Awareness and Current Affairs

In July 2021, Team India 2021 won _____ Grand Awards and 8 Special Awards at the Regeneron International Science and Engineering Fair (ISEF).

- A. 6
- B. 7
- C. 9
- D. 10



Q97 General Awareness and Current Affairs

The 73rd amendment of the Constitution of India has made a provision for the mandatory creation of the Gram Sabha. What does the Gram Sabha comprise of?

- A. Adult members registered as voters in the Panchayat area
- B. All adult members in the Panchayat area
- C. All senior citizens registered as voters in the Panchayat area
- D. All male members registered as voters in the Panchayat area



Q98 General Awareness and Current Affairs

‘Malmal’ is the finest variety of:

- A. chiffon
- B. muslin
- C. crepe
- D. linen



Q99 General Awareness and Current Affairs

How many testaments are there in the Bible?

- A. five
- B. four
- C. three
- D. two



Q100 General Awareness and Current Affairs

Which portal was launched by Union Minister of Labour and Employment for better execution of various social security schemes for unorganised sector workers in August 2021?

- A. e-shram portal
- B. e-rozgar portal
- C. e-labour portal
- D. e-employment portal



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Five years hence, the age of Jacob will be four times that of his son. Three years ago, Jacob's age was seven times that of his son. Their present ages are:

- A. 49 and 21
- B. 59 and 21
- C. 59 and 11
- D. 69 and 11



Q2 Mathematics

The greatest number, which divides 2000 and 2200 to leave 22 and 38 respectively as remainders, is:

- A. 36
- B. 39
- C. 42
- D. 46



Q3 Mathematics

The value of $4^2 - 3(8)^{2/3} + (16/9)^{1/2}$ is:

- A. 0
- B. 1
- C. $3\frac{1}{3}$
- D. $5\frac{1}{3}$



Q4 Mathematics

The median of the data using an empirical formula, when it is given that mode = 37.4 and mean = 30.5 is:

- A. 32.8
- B. 31.7
- C. 33.4
- D. 30.5



Q5 Mathematics

The diagonals of a rhombus are 12 cm and 8 cm, respectively. The area of the rhombus (in cm^2) is:

A. 24

B. 48



C. 72

D. 96

Q6 Mathematics

The value of 60% of 28% of 250 = _____.

A. 68

B. 56

C. 42



D. 22

Q7 Mathematics

A sum of ₹7,500 gives a simple interest of ₹1,800 in 4 years. What is the rate of interest per annum?

A. 6%



B. 5%

C. 4%

D. 3%

Q8 Mathematics

Ritesh is 12 years older than the Mohit. 17 years ago, Ritesh's age was four times of Mohit's age. Mohit's present age (in years) is:

A. 18

B. 21



C. 24

D. 27



Q9 Mathematics

Ramesh invested a certain sum of money at 9% per annum simple interest. If he receives an interest of ₹20,250 after one year, the sum he invested is:

A. ₹2,00,000

B. ₹2,25,000



C. ₹2,50,000

D. ₹2,75,000

Q10 Mathematics

Find the value of $[(12 \div \frac{4}{3}) \times \{6 \div 4 \times (\frac{12-7}{6})\}] \div \{4 \times 6 \div 3\}$.

A. $1\frac{13}{32}$



B. $1\frac{15}{32}$

C. $1\frac{11}{32}$

D. $1\frac{17}{32}$

Q11 Mathematics

The average age of 40 students of a class is 15 years. If the age of the teacher is also included, the average age of the whole group becomes 16 years. The age (in years) of the teacher is:

A. 56



B. 54

C. 52

D. 50

Q12 Mathematics

The product of two consecutive positive natural numbers is 72. The greater of the two numbers is:

A. 24

B. 12

C. 9



D. 8



Q13 Mathematics

If a milkman adds 4 ℓ of water to 9 ℓ of milk, then the amount of water he should add to 36 ℓ of milk in order to maintain the same proportion of milk and water will be:

A. 16 ℓ



B. 14 ℓ

C. 12 ℓ

D. 10 ℓ

Q14 Mathematics

The HCF of 64, 48 and y is 8. Which of the options below cannot be a possible value of y ?

A. 72

B. 88

C. 96



D. 104

Q15 Mathematics

The cost of 10 chairs is equal to that of 4 tables. The cost of 15 chairs and 2 tables is equal to ₹2,000. The cost of a table is:

A. ₹500

B. ₹250



C. ₹200

D. ₹100

Q16 Mathematics

The difference between the ages of Radha and Murari is 12 years. Five years ago, the sum of their ages was 28 years. If Radha is older than Murari, find Murari's present age (in years).

A. 13



B. 15

C. 17

D. 25



Q17 Mathematics

The marked price of an article is ₹400 and successive discounts of 10% and 12% are offered on its sale. The selling price of the article is:

A. ₹306.80

B. ₹313.80

C. ₹316.80



D. ₹323.80

Q18 Mathematics

If the volume of a sphere is divided by its surface area, the result is 9 cm. The radius (in cm) of the sphere is _____.

A. 18

B. 4.5

C. 81

D. 27



Q19 Mathematics

What is the measure of each interior angle of a regular hexagon?

A. 90°

B. 110°

C. 120°



D. 150°

Q20 Mathematics

If the sum of the immediate successors of two given numbers is 40 and the difference of the two given numbers is 6, then the two given numbers are _____.

A. 24 and 14

B. 22 and 18

C. 22 and 16



D. 25 and 13



Q21 Mathematics

Find the value of $4^{-5} \div 4^7 \times 4^{-6}$.

A. 4^{-14}

B. 4^{-16}

C. 4^{-18} ✓

D. 4^{-20}

Q22 Mathematics

The speed of a car is 20 metres/second. The distance (in kilometres) travelled by the car in 2 hours and 20 minutes is:

A. 158

B. 162

C. 166

D. 168 ✓

Q23 Mathematics

Simplify the following expression:

$$\frac{\cos A}{1 + \sin A} + \frac{1 + \sin A}{\cos A}$$

A. $2 \cos A$

B. $2 \sin A$

C. $2 \sec A$ ✓

D. $1 + 2 \sin A$

Q24 Mathematics

A dealer claims to sell his goods at cost price but uses a weight that actually weighs 800 gm though 1 kg is written on it. Find his gain percentage.

A. 20%

B. 18%

C. 25% ✓

D. 15%



Q25 Mathematics

The volume (in m^3) of a cuboidal tank, whose dimensions are given as $6 \text{ m} \times 5 \text{ m} \times 4 \text{ m}$, is:

A. 120



B. 80

C. 40

D. 30

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. F is taller than only one friend. A is taller than only three other friends. E is taller than D. B is taller than F but shorter than D. Who is the tallest among all the friends?

A. D

B. E



C. C

D. A

Q27 General Intelligence and Reasoning

Siddharth leaves from his home and drives 24 km towards North, and then he turns right and drives 29 km. After that, he turns right again and drives 67 km. Then he turns left and drives 32 km. He finally turns left and drives 43 km to reach his destination. How far is Siddharth from his home?

A. 72 km

B. 74 km

C. 62 km

D. 61 km

**Q28** General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $P < Q < R = T$, $M < T = N$

A. $M > Q$

B. $M < Q$

C. $M < R$



D. $P > M$



Q29 General Intelligence and Reasoning

Refer to the following letter and symbol series and answer the question.

(Left) Z # U * Y \$ K W P Q @ G & A % J B L % & H D # V (Right)

How many such consonants are there in the series which are immediately preceded and immediately followed by a symbol?

A. Two



B. Three

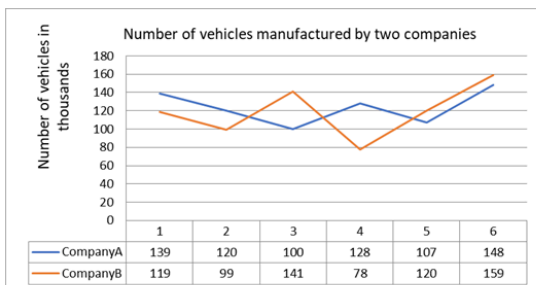
C. Four

D. Five

Q30 General Intelligence and Reasoning

Study the given chart and answer the question that follows.

The numbers 1 to 6 represent the years from 2001 to 2006.



The production of company B in 2004 was approximately what percentage of the production of company A in the same year?

A. 61%



B. 172%

C. 99%

D. 136%

Q31 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

17, 51, 42, 126, 117, ?

A. 273

B. 351



C. 289

D. 327



Q32 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$12.99 - 3.02 + 11.89 \times 9.19 = ?$$

A. 118



B. 189

C. 220

D. 80

Q33 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

B A _ D L _ A M _ L B A _ F L B A _ G L

A. MBEMM



B. MBMBL

C. MMMCL

D. MCEMM

Q34 General Intelligence and Reasoning

Select the option in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE: Operations should be performed on the whole numbers without breaking down the numbers into its constituent digits.

E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(9, 8, 15)

(4, 5, 11)

A. (8, 19, 10)

B. (17, 13, 22)



C. (8, 9, 15)

D. (11, 10, 17)



Q35 General Intelligence and Reasoning

Six students are sitting around a circular table facing the centre (but not necessarily in the same order). Ram is an immediate neighbour of both Shyam and Kamal. Kartik is an immediate neighbour of Kamal. Diksha is sitting to the immediate left of Kartik and Aditya is sitting to the immediate right of Shyam. Who are the immediate neighbours of Kamal?

A. Ram and Kartik



B. Shyam and Diksha

C. Shyam and Ram

D. Kartik and Diksha

Q36 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follows from the statements.

Statements:

Some chairs are TVs.

Some TVs are fans.

Some fans are buses.

Conclusions:

(I) Some buses are chairs.

(II) No bus is a chair.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follow

D. Either conclusion I or II follows



Q37 General Intelligence and Reasoning

Five boxes, A, C, D, E and F, are kept one over the other, but not necessarily in the same order. D is kept immediately above E. F is kept third from the top. D is neither the top-most nor the bottom-most box. A is kept immediately below C. Which box is kept immediately below A?

A. C

B. F



C. D

D. E



Q38 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Global warming has become an unprecedented issue over the globe.

Argument :

- I. Urban life style produces a vast amount of greenhouse gases.
- II. Change in temperature in many countries, is an indicator of global warming.

- A. I weakens while II strengthens the statement.
- B. II weakens while I strengthens the statement.
- C. Both I and II weaken the statement.
- D. Both I and II strengthen the statement. ☒

Q39 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- 1. Some institutes are universities.
- 2. All schools are universities.
- 3. Some colleges are schools.

Conclusions:

- I. Some colleges are institutes.
- II. Some institutes are schools.
- III. Some colleges are universities.

- A. Only conclusions I follows
- B. Only conclusions II and III follow
- C. Only III follows ☒
- D. Only conclusions I and II follow

Q40 General Intelligence and Reasoning

Eight people, P, Q, R, S, T, U, V and W, live on different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 8.

Exactly two people live between P and T. Q lives immediately above R, on an even numbered floor. P lives on the topmost floor. S lives in one of the floors above T on an odd numbered floor. Only four people live between S and U. W lives on the lowermost floor. Who lives on the sixth floor?

A. U

B. V



C. W

D. Q

Q41 General Intelligence and Reasoning

In a code language, 'hay in the sack' is written as 'it fn en ho', 'the sack is full' is written as 'en ho go bu' and 'the hay is full' is written as 'en bu fn go'. What is the code for the word 'sack' in that language?

A. ho



B. it

C. fn

D. en

Q42 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

REPORT : SFQPSU :: WHITE : XIJUF :: PROGRAM : ?

A. SHPSNBS

B. SQHPBNS

C. RSHPNBS

D. QSPHSBN



Q43 General Intelligence and Reasoning

Eight houses M, N, O, P, Q, R, S, and T are located in a big campus. House O is 20 m west from house N which is 30 m south to house M. House M is 40 m west to house Q. House P is 50 m south to house Q. House R is at a distance of 15 m towards the north from house S. House T is located at 20 m to the east from house S. House R is 40 m west to house P. In which direction is house Q located from house R?

A. North-east



B. North-west

C. South-east

D. South-west

Q44 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

KDNCICLOASC SOPM CODKCVNDCMM

How many consonants are there in the given series between the letter that is fifth from the right end and the letter that is sixth from the left end of the given series?

A. Eight

B. Three

C. Eleven



D. Thirteen

Q45 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

42 : 7 :: 110 : 11 :: 132 : ?

A. 13

B. 15

C. 12



D. 17



Q46 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

15, 18, 24, 33, 45, ?

A. 36

B. 37

C. 42

D. 60



Q47 General Intelligence and Reasoning

If 1 is subtracted from each odd digit and 1 is added to each even digit in the number 92379654, what will be the sum of the digits which are second from the left and third from the right?

A. 5

B. 10



C. 8

D. 6

Q48 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All products are usefuls.
2. No useful is tough.
3. All toughs are durables.

Conclusions:

- I. Some products are durables.
- II. Some durables are usefuls.
- III. All durables are toughs.

A. Only Conclusion I and III follow

B. Only Conclusion II and III follow

C. Only Conclusion I and II follow

D. None of the conclusions follow



Q49 General Intelligence and Reasoning

This question is based on the following 3-letter words.

GYM HIP JAM LAC PIC

If the first letter of all the words is changed to the following letter of the English alphabetical series, how many words will have more than one vowel? (Same or different Vowel)

A. Zero

B. One



C. Two

D. Three

Q50 General Intelligence and Reasoning

In a certain code language, 'SHAKE' is written as 'TKFRN' and 'JUICE' is written as 'KXNJN'. How will 'SWEET' be written in the same code language?

A. TZJLC



B. TZJLK

C. TTJLC

D. TZZLC

Q51 General Intelligence and Reasoning

Six friends, Atiq, Bijoy, Kamal, Faya, Esha and Dhruv are sitting in a straight row facing North (but not necessarily in the same order). Faya is third to the left of Bijoy. Atiq is third to the right of Kamal. Esha is second to the right of Bijoy. Faya is on the extreme left end. Who is at the extreme Right?

A. Dhruv

B. Atiq

C. Esha



D. Kamal



Q52 General Intelligence and Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$15 \div 27 \times 3 + 36 - 12 = ?$$

A. 110

B. 111



C. 105

D. 95

Q53 General Intelligence and Reasoning

If 26 January 2018 is a Friday, then what will be the day of the week on 29 January 2021?

A. Friday



B. Sunday

C. Monday

D. Wednesday

Q54 General Intelligence and Reasoning

Six persons, Pratik, Ansh, Rajesh, Shivam, Tanu and Ujma, travelled in different months of the same year viz. January, February, March, April, May and June. Pratik travelled in March. Only one person travelled between Pratik and Ujma. No one travelled between Tanu and Ansh. Ansh travelled in one of the months after Tanu. More than two persons travelled between Ansh and Rajesh. Ansh travelled on one of the months before Rajesh. Who among them travelled in June?

A. Rajesh



B. Ansh

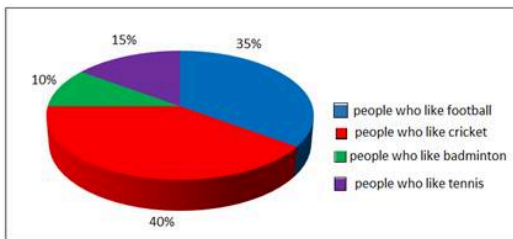
C. Shivam

D. Ujma



Q55 General Intelligence and Reasoning

According to a survey, the percentage of people who like different sports is shown in the following pie-chart. Blue represents people who like football, red represents people who like cricket, green represents people who like badminton, and purple represents people who like tennis. Study the pie-chart and answer the question.



The survey was to be conducted on 28,500 people. If only two-third of the total people took the survey, then how many people like badminton and tennis?

A. 4,750



B. 19,000

C. 5,425

D. 13,500

General Science

25 Questions • Answer Key

Q56 General Science

If an object is kept at a distance of 50 cm from a convex lens of focal length 20 cm, then the image distance is:

A. 0.333 cm

B. 3.33 cm

C. 333 cm

D. 33.3 cm

**Q57** General Science

Which of the following pigments has a high affinity for oxygen?

A. Haemoglobin



B. Haemocyanin

C. Melanin

D. Bilirubin



Q58 General Science

Which of the following is an example of an ovarian hormone?

- A. Testosterone
- B. Oestrogen
- C. Thyroxin
- D. Adrenalin



Q59 General Science

Which of the following reactions would undergo precipitation?

- A. $\text{HCl} + \text{NaOH}$
- B. $\text{H}_2\text{SO}_4 + 2\text{NaOH}$
- C. $\text{HNO}_3 + \text{NaOH}$
- D. $\text{Pb}(\text{NO}_3)_2 + \text{KI}$



Q60 General Science

Which of the following statements is not true?

- A. Potassium is least reactive in the reactivity series
- B. The metals in the middle of the reactivity series are moderately reactive.
- C. The metals high up in the reactivity series can be obtained from their compounds by electrolytic reduction.
- D. The reactivity series is a list of metals arranged in the order of their decreasing reactivities



Q61 General Science

Which of the following metals has an electronic configuration 2, 8, 4?

- A. Ar
- B. Si
- C. P
- D. Cl



Q62 General Science

In which of the following animals is sex NOT genetically determined?

A. Snails



B. Snakes

C. Shark

D. Salmon

Q63 General Science

The electric power consumed by an electric heater is found to be 500 W per unit time when it is connected to a 250 V source. The current drawn by the heater per unit time is:

A. 2 A



B. 0.2 A

C. 0.5 A

D. 5 A

Q64 General Science

The following diagram shows which component of the human circulatory system?



A. Artery

B. Vein



C. Capillary

D. Aorta



Q65 General Science

Consider the dispersion of a medium as D for a wavelength λ . The dispersion of the same medium for wavelength 3λ will be:

A. $\frac{D}{4}$

B. $\frac{D}{16}$

C. $\frac{D}{27}$ ✓

D. $\frac{D}{81}$

Q66 General Science

Which of the following processes is NOT applicable to photosynthesis?

A. Chlorophyll absorbs light

B. Water molecule splits into hydrogen and oxygen

C. Oxidation of carbon dioxide forms carbohydrates ✓

D. Light energy is converted to chemical energy

Q67 General Science

The two successive members in a homologous series differ from each other by which group?

A. $-\text{CH}-$

B. $-\text{CH}_2-$ ✓

C. $-\text{CH}_3$

D. $-\text{C}_2\text{H}$

Q68 General Science

Which of the following are NOT considered as biomedical wastes?

A. Food wastes ✓

B. Industrial wastes

C. Medical wastes

D. Animal wastes



Q69 General Science

A magnetic compass consists of:

- A. a tiny magnetic needle attached to an aluminium pointer ☒
- B. an aluminium pointer alone
- C. a coil of a conductor
- D. a coil carrying conductor

Q70 General Science

Some consequences of creating monocultures are mentioned below. Which of these are the advantages?

- a. Huge areas are cleared of vegetation
- b. They destroy large amount of biodiversity
- c. Industries can access specific products
- d. They generate revenue for the forest department
- e. Varied needs of local people are not met

- A. a and e
- B. c and d ☒
- C. a, b and e
- D. b and e

Q71 General Science

If the radius of curvature of a given convex mirror is 0.3 m, then the distance between the principal focus and the centre of curvature is:

- A. 0.15 m ☒
- B. 0.3 m
- C. 0.45 m
- D. 0.6 m



Q72 General Science

In a house, bulbs A, B and C of rating 30 W, 60 W and 75 W, respectively, are connected in parallel with an electric source. Which of the following is true?

- A. Brightness of bulb A is the maximum
- B. Brightness of bulb C is the maximum
- C. Brightness of all the bulbs is the same
- D. Brightness of bulb B is the minimum

Q73 General Science

Which of the following is NOT an ionic compound?

- A. NaCl
- B. CO₂
- C. CaCl₂
- D. CaO

Q74 General Science

Which of the following materials is best suitable for making an electromagnet ?

- A. Steel
- B. Aluminum
- C. Copper
- D. Soft iron

Q75 General Science

Which of the following balanced reactions is correct for the given reaction?

Silver nitrate + Sodium chloride → Silver chloride + Sodium nitrate

- A. $2\text{AgNO}_3 + \text{NaCl} \rightarrow 2\text{AgCl} + \text{NaNO}_3$
- B. $\text{AgNO}_3 + \text{NaCl} \rightarrow \text{AgCl} + \text{NaNO}_3$
- C. $3\text{AgNO}_3 + \text{NaCl} \rightarrow 3\text{AgCl} + 2\text{NaNO}_3$
- D. $\text{AgNO}_3 + 2\text{NaCl} \rightarrow \text{AgCl} + 2\text{NaNO}_3$



Q76 General Science

Nichrome is used to make an electric heater because it has:

- A. low resistivity and high melting point
- B. low resistivity and low melting point
- C. high resistivity and high melting point
- D. high resistivity and low melting point



Q77 General Science

A child is looking at a reflecting surface of a Christmas tree ball which has a diameter of 10.0 cm, and the child observes an image of his face that is half the real size. How far is the child's face from the ball?

- A. +5.0 cm
- B. -5.0 cm
- C. +2.5 cm
- D. -2.5 cm



Q78 General Science

The different steps in the process of photosynthesis in plants are given below. Which option shows the correct sequence of the different steps in the process?

- a) Splitting of water molecule into hydrogen and oxygen
- b) Light energy converted into chemical energy
- c) Absorption of light energy by chlorophyll
- d) Carbon dioxide reduced to carbohydrates

- A. a—b—c—d
- B. b—c—d—a
- C. c—b—a—d
- D. d—c—a—b



Q79 General Science

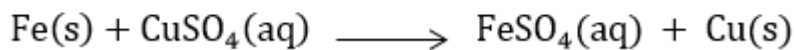
Name the chemist who arranged the elements with similar properties into groups in the year 1817.

- A. Mosley
- B. Mendeleev
- C. Newland
- D. J W Dobereiner



Q80 General Science

In the given reaction, iron has displaced:



- A. Cu
- B. S
- C. O₂
- D. SO₂



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which Veda is the largest and considered the most important of the collection, containing 1,028 hymns divided into 10 books called mandalas?

- A. Rig Veda
- B. Sama Veda
- C. Yajur Veda
- D. Atharva Veda



Q82 General Awareness and Current Affairs

_____ is a festival of the tribal population of Jharkhand.

- A. Bushu
- B. Yemshe
- C. Tuluni
- D. Sarhul



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Q83 General Awareness and Current Affairs

The slope of an indifference curve is measured by:

- A. marginal rate of transformation
- B. marginal rate of substitution ✓
- C. marginal rate of technical substitution
- D. marginal rate of effective exchange

Q84 General Awareness and Current Affairs

The Industrial Policy Resolution of 1956 formed the basis of which of the following Five-Year Plans in India?

- A. Second Five-Year Plan ✓
- B. Third Five-Year Plan
- C. Fourth Five-Year Plan
- D. Fifth Five-Year Plan

Q85 General Awareness and Current Affairs

In 2021, which country won the ICC T20 Cricket World Cup?

- A. England
- B. West Indies
- C. Australia ✓
- D. New Zealand

Q86 General Awareness and Current Affairs

Which of the following Indian cricketers played his 100th Test Match in March 2022?

- A. Rohit Sharma
- B. Shikhar Dhawan
- C. KL Rahul
- D. Virat Kohli ✓



Q87 General Awareness and Current Affairs

Under which of the following Articles of the Indian Constitution, Hindi is declared as an official language of the Union?

- A. Article 346
- B. Article 345
- C. Article 344
- D. Article 343



Q88 General Awareness and Current Affairs

When is Earth Day observed?

- A. April 22
- B. April 1
- C. March 14
- D. May 7



Q89 General Awareness and Current Affairs

From which country's constitution has Indian Constitution borrowed the feature of Fundamental Rights?

- A. Germany
- B. USA
- C. France
- D. Japan



Q90 General Awareness and Current Affairs

The Ministry of Ayush launched the World's first multicentre phase III clinical trial in March 2022 that will be assessing Ayurveda's efficacy in _____ treatment.

- A. Celiac disease
- B. Multiple sclerosis
- C. Rheumatoid arthritis
- D. Pernicious anaemia



Q91 General Awareness and Current Affairs

As per the All India Higher Education Survey (AISHE) report 2019-20, which state had the highest Gross Enrolment Ratio (GER) in Higher Education?

A. Uttar Pradesh



B. Madhya Pradesh

C. Arunachal Pradesh

D. Andhra Pradesh

Q92 General Awareness and Current Affairs

In India, coins are issued by the _____.

A. Reserve Bank of India

B. State Bank of India

C. Ministry of Finance



D. Ministry of Home Affairs

Q93 General Awareness and Current Affairs

What is the name of the version of Oxford–AstraZeneca COVID-19 vaccine in India?

A. Covishield



B. Covaxin

C. Sputnik

D. Sinovac

Q94 General Awareness and Current Affairs

Which of the following is a political right?

A. Freedom to form associations

B. Right to religious freedom

C. Right to vote



D. Freedom of thought and expression



Q95 General Awareness and Current Affairs

The most important Gondwana coal fields that lie in the Jharkhand-Bengal coal belt of India are located in the _____.

- A. Manali Valley
- B. Dehradun
- C. Kaveri Basin
- D. Damodar Valley



Q96 General Awareness and Current Affairs

Which country's constitution was considered by the makers of the Constitution of India for importing the provisions of Liberty, Equality and Fraternity?

- A. Constitution of Australia
- B. Constitution of France
- C. Constitution of Canada
- D. Constitution of Ireland



Q97 General Awareness and Current Affairs

In normal circumstances, who usually heads the Municipal Corporation?

- A. Mayor
- B. Chief Minister
- C. Governor
- D. Home Minister of the State



Q98 General Awareness and Current Affairs

As per the Centre for Monitoring Indian Economy (CMIE), the rate of unemployment in urban areas was approximately _____ in January 2022.

- A. 8.1
- B. 7.2
- C. 5.8
- D. 9.3



Q99 General Awareness and Current Affairs

Who among the following was one of the early leaders of the 'Prarthana Samaj' movement?

A. Mahadev Gobind Ranade



B. Keshab Chandra Sen

C. Swami Sahajanand

D. Balak Singh

Q100 General Awareness and Current Affairs

Who was the founder of Bank of Baroda from following?

A. Maharaja Ganpatrao Gaekwad

B. Maharaja Sayajirao Gaekwad III



C. Maharaja Malharrao Gaekwad

D. Maharaja Govindrao Gaekwad



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

The value of $2405 \div 13 \times 6 + 35$ is:

A. 1035

B. 1305

C. 1145



D. 1235

Q2 Mathematics

Let Chennai and Trivandrum be two stations 690 km apart. A train starts from Chennai at 8:00 p.m. and travels towards Trivandrum at a speed of 75 km/h. Another train starts from Trivandrum at 9:00 p.m. and travels towards Chennai on the parallel track at a speed of 60 km/h. At what time will they meet?

A. 01:03:40 a.m.

B. 01:23:30 a.m.

C. 01:43:20 a.m.

D. 01:33:20 a.m.



Q3 Mathematics

An open water drum is in the form of a cylinder. The height of the drum is 7 m and its internal diameter is 21 m. Find the area (in m^2) that needs to be painted if one wants to paint the inside of the drum.

Take $\pi = \frac{22}{7}$

A. 577.5

B. 462

C. 808.5



D. 1155



Q4 Mathematics

A man purchased two varieties of apples at the rate of ₹2 for 3 apples and ₹1 per apple, respectively. If he purchased an equal number of apples of each variety and then sold all his apples at ₹1 per apple, what was his profit percentage?

A. 15%

B. 18%

C. 20% ☒

D. 22%

Q5 Mathematics

The average weight of 11 students is 50 kg. When the teacher's weight of 70 kg is added to the total, then the new average will be:

A. 51.66 ☒

B. 50.66

C. 51.36

D. 53.66

Q6 Mathematics

If the area of a square is 11025 cm^2 , then the length of its diagonal is:

A. $115\sqrt{2} \text{ cm}$ B. $105\sqrt{2} \text{ cm}$ ☒C. $125\sqrt{2} \text{ cm}$ D. $135\sqrt{2} \text{ cm}$ **Q7 Mathematics**

Simplify the given expression.

$$[13 - (-2) \times \{6 - (7 - 3)\}] \div [4 \times \{5 + (-2) \times (-6)\}]$$

A. $-\frac{1}{3}$ B. $\frac{1}{4}$ ☒C. $\frac{7}{34}$ D. $-\frac{17}{68}$ 

Q8 Mathematics

Convert $0.2\bar{6}$ into a proper fraction.

A. $\frac{4}{15}$



B. $\frac{5}{17}$

C. $\frac{7}{33}$

D. $\frac{8}{21}$

Q9 Mathematics

What percentage of 1 is $6\frac{3}{4}$?

A. 625

B. 525

C. 575

D. 675



Q10 Mathematics

The price of bananas is ₹x per kg. If the price per kg of apples is ₹5 more than the price per kg of bananas, then the price (in ₹) of 5 kg of apples and 3 kg of bananas is:

A. $8x + 25$



B. $6x + 25$

C. $8x + 20$

D. $6x + 20$

Q11 Mathematics

A man purchased 50 dozen bananas for a certain amount. He could not sell five dozen of those bananas as they were spoiled. He sold two-thirds of the good bananas at a profit of 20% per dozen and sold the remaining good bananas at a profit of 5% per dozen. What was his loss or gain percentage in the whole transaction?

A. 3.5% loss

B. 3.5% gain



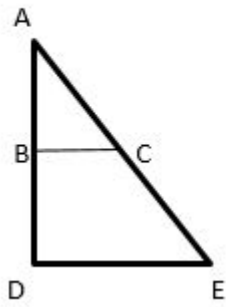
C. 2.5% loss

D. 2.5% gain



Q12 Mathematics

Given that $\triangle ABC$ and $\triangle ADE$ are similar, which of the following options is necessarily true?



A. $\frac{BC}{BD} = \frac{CE}{DE}$

B. $\frac{EC}{AC} = \frac{AD}{DE}$

C. $\frac{AB}{AD} = \frac{BC}{DE}$

D. $\frac{BC}{BD} = \frac{AB}{AC}$

Q13 Mathematics

If $x + \frac{1}{x} = 3$, then $x^6 + \frac{1}{x^6}$ is:

A. 927

B. 414

C. 364

D. 322

Q14 Mathematics

The volume of a cuboid is $5a^2 - 80b^2$. Which of the options below can be possible dimensions of the cuboid?

A. $5, 2a - b, 2a + b$

B. $5, 2a - b, a + 2b$

C. $5, a - b, a + 4b$

D. $5, a - 4b, a + 4b$



Q15 Mathematics

If 3 is a root of the equation $x^2 - px + 15 = 0$ and the quadratic equation $x^2 + px + q = 0$ has equal roots, then the value of q is:

A. 64

B. 12

C. 16



D. 32

Q16 Mathematics

The value of $16^3 - 12^3$ is:

A. 2358

B. 2368



C. 2378

D. 2388

Q17 Mathematics

If $a : b :: b : c$; $c = 4a$; and $b = 6$, find the positive value of c .

A. 12



B. 9

C. 8

D. 7

Q18 Mathematics

Simplify the given expression.

$$6.5 \times [22.6 \div \{14.5 + 2.8 - 4.2 \div 0.7\}]$$

A. 13



B. 8.75

C. 6.23

D. 4



Q19 Mathematics

The difference between two numbers is 26. One number is 3 times of the other. The smaller number is:

A. 13



B. 26

C. 39

D. 52

Q20 Mathematics

What is $6^0 \times 4^2 \times 2^{-4}$?

A. 0

B. 1



C. 2

D. 4

Q21 Mathematics

Evaluate

$$.1 \times .1 \times .1 + .02 \times .02 \times .02$$

$$.2 \times .2 \times .2 + .04 \times .04 \times .04$$

A. 0.5

B. 0.25

C. 0.125



D. 0.0125

Q22 Mathematics

The average score of a cricketer for 10 matches is 40 runs. If the average for the first six matches is 44, then the average runs of the last four matches is:

A. 20

B. 42

C. 34



D. 38



Q23 Mathematics

A sum of money is to be distributed among the partners A, B and C in the proportion of $3 : 2 : 1\frac{1}{3}$. If A gets ₹1,500 more than B, then C's share is:

A. ₹3,750

B. ₹2,500

C. ₹2,000



D. ₹3,400

Q24 Mathematics

Which of the following is a quadratic equation written in standard form?

A. $5x^2 + 3 = \frac{1}{x}$

B. $x^3 + 5x^2 + 3 = x^4$

C. $5x^2 + 3x - 1 = 0$



D. $x^{-2} + 7x = 8$

Q25 Mathematics

Out of his total monthly salary, Mohan spends 20% on house rent and 50% of the rest is his total household expenditure. If he saves ₹10,600, then his total monthly salary is:

A. ₹25,000

B. ₹26,500



C. ₹24,500

D. ₹27,000

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Each of the digits in the number 5384972 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. One



B. Two

C. Three

D. None



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Q27 General Intelligence and Reasoning

Punit was driving a car towards the north direction, then he turned to his left and drove 10 km. Again, he turned left and drove a distance of 20 km, and further took a left turn and drove a distance of 10 km. His present location is 10 km south of his starting point. How far did he drive towards the north direction initially? (All turns are 90 degree turns only)

A. 10 km



B. 20 km

C. 15 km

D. 18 km

Q28 General Intelligence and Reasoning

Each vowel in the word 'PAIR' is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter of the word thus formed is arranged in alphabetical order, which letter will be third from the right?

A. B

B. J



C. O

D. Q

Q29 General Intelligence and Reasoning

Supriya, Tanmay, Umesh, Viplav and Wasim are sitting around a circular table facing the centre (but not necessarily in the same order). Supriya is the immediate neighbour of Tanmay and Wasim. Umesh is to the immediate right of Tanmay. Viplav is the immediate neighbour of Umesh and Wasim.

Who is sitting to the immediate left of Supriya?

A. Tanmay

B. Umesh

C. Viplav

D. Wasim



Q30 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

465 638 359 987 563

If the positions of the first two digits in each number are reversed, then the difference between the first digit of the greatest number and the first digit of the lowest number is equal to:

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

A. 7

B. 6

C. 5



D. 4

Q31 General Intelligence and Reasoning

Taruni drives 65 km towards the east to reach city park. Then she turns right and drives another 85 km, then turns left and drives another 53 km to reach the metro station. In which direction is she facing now? (All turns are 90 degree turns only)

A. East



B. West

C. North

D. South

Q32 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some blues are greens.

All greens are emeralds.

All emeralds are gems.

Conclusions:

I. Some blues are gems.

II. Some gems are greens.

A. Only conclusion I follows

B. Only conclusion II follows

C. Both conclusions I and II follow

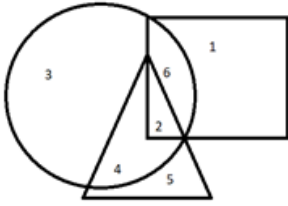


D. Neither conclusion I nor II follows



Q33 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'professors', the square represents 'poets', and the triangle represents 'women'. How many professors are there who are women and also poets?



A. 1

B. 2

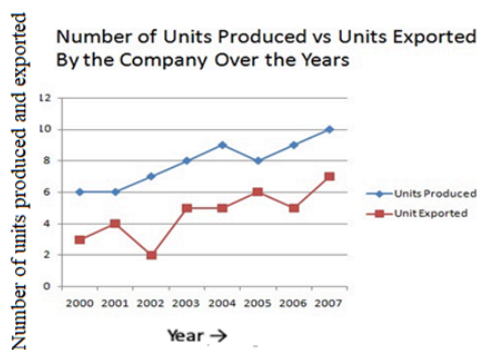


C. 3

D. 4

Q34 General Intelligence and Reasoning

The following graph shows the number of units produced and number of units exported by a company over the years. Study the graph and answer the question that follows.



During which year did the units produced decline?

A. 2000 - 2001

B. 2004 - 2005



C. 2005 - 2006

D. 2001 - 2002



Q35 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	7	@	3	\$	^	7	6	4	%	&	#	2	*	9
Code Letter	G	O	K	I	R	M	A	T	L	D	F	B	Q	O

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for '7 % # @ 4' ?

A. GLFOT

B. ©LFOT

C. ©LFO©

D. GLFO©

**Q36 General Intelligence and Reasoning**

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

7 : 42 :: 9 : 54 :: 11 : ?

A. 55

B. 66

C. 77

D. 88

**Q37 General Intelligence and Reasoning**

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

33 : 55 :: 46 : 68 :: 68 : ?

A. 94

B. 96

C. 90

D. 100



Q38 General Intelligence and Reasoning

A certain number of advocates are sitting in a row in a bar council, facing north. Piyush is an immediate neighbour of both Vinod and Taman, while Rudir is an immediate neighbour of both Taman and Biswas. Vinod is sitting at the extreme right end. There are only two advocates to the left of Biswas. If no other advocate is sitting in the row, what is the total number of advocates seated in that row?

A. Eight

B. Nine

C. Ten

D. Seven



Q39 General Intelligence and Reasoning

C, E, K, M, O, Q and Z are sitting around a round table facing towards the center (but not necessarily in the same order). C is the immediate neighbour of Z and M. O is neither an immediate neighbour of M nor E. Q, who is second to the left of O has K and E as immediate neighbours?

Who is sitting to the immediate right of O?

A. G

B. M

C. K

D. Z



Q40 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement:

Statement: $W \leq P < S > Y = R \geq T > M$

A. $Y < P$

B. $S > W$



C. $Y \geq P$

D. $M > R$



Q41 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

6, 12, 30, 84, 246, ?

A. 741

B. 732

C. 763

D. 743

Q42 General Intelligence and Reasoning

Six players, Aman, Bidya, Chahal, Druv, Elia and Flintoff, were born on different dates 1st, 2nd, 3rd, 4th, 5th and 6th of the same month. None of them were born after Druv, who was born on the date which is immediately after Elia. Only three players were born before Aman. Only two players were born between Chahal and Elia. Bidya was not born after Chahal.

Who among the following was born on 3rd?

A. Bidya

B. Chahal

C. Flintoff

D. Aman

Q43 General Intelligence and Reasoning

Letters are coded as numbers/symbols as per the table given below and the conditions which follow. Refer to the codes and conditions and then select the correct code for JUPITER.

Letters	A	C	P	I	T	U	E	R	J
Number/Symbol	+	8	-	6	%	@	4	9	#

Conditions:

(i) If a letter is immediately followed by a vowel, it will be coded as 7.

(ii) If a word ends with a vowel, the vowel will be coded as 3.

A. 7@76%49

B. 7@-6%49

C. #@-6%49

D. 7@76749



Q44 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.

_ T U _ R T _ S _ _ W S R T X _

A. RTUSRX

B. RSVTRR

C. RSVRTR

D. RSVRTS



Q45 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

DXB : GSI :: KVR : NQY :: JNP : ?

A. MIV

B. NIW

C. MHW

D. MIW



Q46 General Intelligence and Reasoning

Refer to the following number series and answer the question that follows.

(Left) 2 5 4 3 3 4 5 2 4 6 5 1 1 4 6 7 4 5 8 7 3 1 5 7 (Right)

If every odd number in the above series is dropped, which number would appear at the eighth place from the right?

A. 8

B. 6

C. 2

D. 4



Q47 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$7.98 \times 2 + 3.96 \times 6 - 18 \div 2 + 1 = ?$$

A. 36

B. 40

C. 32



D. 25

Q48 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

People are becoming more conscious about moving towards a healthy lifestyle.

Arguments:

- I. Many people are switching to organic farming as the food is healthier.
- II. People are planning meals and cooking at home more than before.

A. I weakens, while II strengthens the statement

B. II weakens, while I strengthens the statement

C. Both I and II weaken the statement

D. Both I and II strengthen the statement



Q49 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $A = T > I > D$, $Q > M > J > T$

A. $I > Q$

B. $D < Q$



C. $M < I$

D. $A = Q$



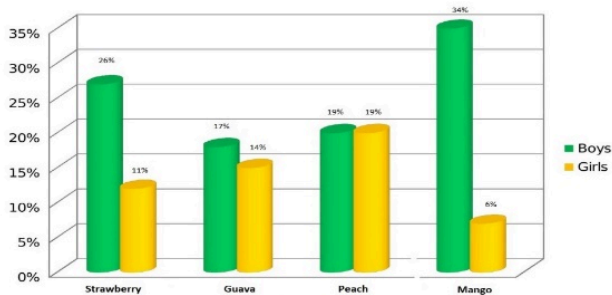
Q50 General Intelligence and Reasoning

If 15 May 2001 is a Tuesday, then what will be the day of the week on 11 June 2013?

- A. Monday
- B. Tuesday
- C. Wednesday
- D. Sunday

Q51 General Intelligence and Reasoning

The percentage of boys and girls liking four different fruits are shown in the following graph. Study the graph and answer the question.



The respective ratio of the number of boys to the number of girls is 2 : 3. If the total number of boys and girls together is 11,500, then total how many boys and how many girls like peaches?

- A. 874 boys and 1311 girls
- B. 874 boys and 874 girls
- C. 1311 boys and 874 girls
- D. 1311 boys and 1311 girls

Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

15, 17, 37, 115, ?

- A. 455
- B. 460
- C. 465
- D. 470



Q53 General Intelligence and Reasoning

If '+' means '×', '×' means '+', '-' means '÷', and '÷' means '-', then what will be the value of the given expression?

$$490 \times 7 + 2 - 8 \div 6$$

A. 142



B. 136

C. 98

D. 202

Q54 General Intelligence and Reasoning

Seven Woodland shoe boxes marked with A, B, C, D, E, F and G are kept one above the other but not necessarily in the same order. G is kept fourth from the bottom and immediately below E and immediately above B. There are only three boxes between C and F where C is placed somewhere above F. D is placed at the bottom most position. How many shoe boxes are placed between A and F?

A. Four



B. Three

C. Two

D. Five

Q55 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some pens are books.

Some books are pencils.

Some pencils are chairs.

Conclusions:

(I) Some chairs are pens.

(II) Some pencils are pens.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follows



D. Both conclusions I and II follow



Q56 General Science

Which of the following are bisexual flowers?

- A. Watermelon and papaya
- B. Mustard and watermelon
- C. Hibiscus and mustard
- D. Papaya and hibiscus



Q57 General Science

Considering Fleming's right hand rule, the thumb indicates:

- A. the motion of the conductor
- B. the magnetic force
- C. the magnetic flux
- D. the induced EMF



Q58 General Science

Which of the following can change sex, indicating that sex is not genetically determined?

- A. Snake
- B. Frog
- C. Fish
- D. Snail



Q59 General Science

Two wires, A and B, are made of the same material, but the length of A is 3 times that of B, and the cross-section of A is $\frac{1}{4}$ th of that of B. The resistance of A is:

- A. 3 times that of B
- B. 6 times that of B
- C. 9 times that of B
- D. 12 times that of B



Q60 General Science

In which of the following processes is the pyruvate converted into ethanol and carbon dioxide?

- A. Translocation
- B. Diffusion
- C. Transpiration
- D. Fermentation



Q61 General Science

Which of the following is the correct product formed by the combination reaction of calcium oxide with water?

- A. Calcium carbonate
- B. Calcium hydroxide
- C. Calcium bicarbonate
- D. No reaction takes place



Q62 General Science

In a circuit, there are five resistors each of $5\ \Omega$, and they are connected in such a way that the resistance of the circuit is the maximum. Now this circuit is connected to a battery of 15 V. The current flowing through the circuit is:

- A. 0.4 A
- B. 0.6 A
- C. 0.8 A
- D. 0.9 A



Q63 General Science

Which of the following statements is INCORRECT about properties of ionic compounds?

- A. Ionic compounds are solids because of the weak force of attractions between positive and negative ions.
- B. Ionic compounds are generally brittle and break into pieces when pressure is applied.
- C. Ionic compounds have high melting and boiling points.
- D. Electrovalent compounds are generally soluble in water and insoluble in petrol.



Q64 General Science

Silver chloride turns grey in sunlight.

Which of the following is the correct explanation for the given statement?

- A. Displacement of silver chloride into silver and chlorine by light.
- B. Decomposition of silver chloride into silver oxide and chlorine by light.
- C. Decomposition of silver chloride into silver and chlorine by light ✓
- D. Displacement of silver chloride into silver oxide and chlorine by light.

Q65 General Science

The tissue that stores fat is called:

- A. areolar tissue
- B. connective tissue
- C. adipose tissue ✓
- D. epithelial tissue

Q66 General Science

An object is placed at a distance of 0.5 m in front of a converging mirror. If the focal length of the mirror is 0.2 m, then the magnification of the image is:

- A. $\frac{3}{2}$
- B. $\frac{2}{3}$ ✓
- C. $\frac{1}{3}$
- D. $\frac{4}{3}$

Q67 General Science

What are the chemical formulas of gypsum and plaster of Paris, respectively?

- A. $\text{CaCO}_3 \cdot 2\text{H}_2\text{O}$ and $\text{CaCO}_3 \cdot 1/2\text{H}_2\text{O}$
- B. $\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$ and $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
- C. $\text{CaCO}_3 \cdot 1/2\text{H}_2\text{O}$ and $\text{CaCO}_3 \cdot 2\text{H}_2\text{O}$
- D. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ and $\text{CaSO}_4 \cdot 1/2\text{H}_2\text{O}$ ✓

Q68 General Science

If the value of the refractive index increases then:

- A. deviation decreases
- B. there is no deviation in direction of light
- C. deviation in direction of light increases ✓
- D. light will follow curved path

Q69 General Science

Which of the following is the respiratory organ in earthworms?

- A. Gill pouches
- B. Spiracles
- C. Skin ✓
- D. Lungs (air sacs)

Q70 General Science

Which of the following substances is/are NOT reabsorbed by the kidneys?

- A. Creatinine ✓
- B. Amino acids
- C. Glucose
- D. Salts



Q71 General Science

The refractive indices of mediums 1, 2 and 3 are 1.50, 1.36 and 1.54, respectively. If the speed of light in the mediums are v_1 , v_2 and v_3 , respectively, which of the following relations between them is correct?

A. $v_1 > v_3 > v_2$

B. $v_2 > v_1 > v_3$ ✓

C. $v_3 > v_2 > v_1$

D. $v_1 = v_2 = v_3$

Q72 General Science

Which statement shows interaction of an abiotic component with a biotic component in an ecosystem?

A. A frog feeding on a grasshopper

B. Tap water running into a stream

C. An earthworm making a burrow in the soil ✓

D. Two birds fighting with each other for food

Q73 General Science

In Newlands' octaves, which of the following pairs of elements were placed in the same column along with H, F, Cl and Br?

A. Co and Ni ✓

B. P and S

C. Cr and Zr

D. C and K

Q74 General Science

In the displacement reaction between iron metal and copper sulphate solution _____.

A. iron displaces copper from copper sulphate solution because it is more reactive than copper ✓

B. iron displaces sulphate from copper sulphate solution because it is more reactive than sulphate

C. iron displaces copper from copper sulphate solution because it is less reactive than copper

D. iron displaces sulphate from copper sulphate solution because it is less reactive than sulphate



Q75 General Science

Which of the following compounds does NOT belong to the homologous series of alcohols?

A. C_2H_5OH

B. C_3H_7OH

C. $C_4H_{10}OH$



D. CH_3OH

Q76 General Science

In which year, were the total faecal coliform levels from Gangotri to Diamond harbour, high?

A. 2020

B. 2014

C. 2007

D. 2011



Q77 General Science

Which of the following was considered as a limitation of Mendeleev's periodic table?

A. Resemblance of hydrogen to alkali metals as well as halogens and a specific position was assigned to hydrogen.

B. Resemblance of hydrogen to alkaline earth metals as well as halogens and no specific position was assigned to hydrogen

C. Resemblance of hydrogen to alkali metals as well as halogens and no specific position was assigned to hydrogen



D. Resemblance of hydrogen to alkaline earth metals as well as halogens and a specific position was assigned to hydrogen

Q78 General Science

Consider two coils A and B. Suppose coil A is replaced with coil B that has the number of loops 2 times as that of loop A and the rate of change of magnetic flux is constant. Determine the ratio of the initial to the final induced EMF.

A. 1 : 2



B. 2 : 1

C. 2 : 3

D. 3 : 2



Q79 General Science

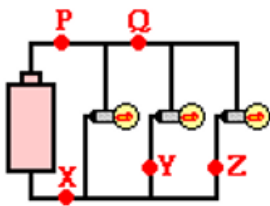
When parallel beam of light rays are incident on the concave mirror of radius of curvature 0.8 m, reflected rays:

- A. appear to diverge from a point at a distance 0.8 m behind the mirror
- B. appear to diverge from a point at a distance 0.4 m behind the mirror
- C. converge to a point at a distance 0.8 m from the concave surface
- D. converge to a point at a distance 0.4 m from the concave surface



Q80 General Science

Three identical light bulbs are connected to a battery as shown below. P, Q, X, Y and Z represent several points in the circuit. Which of the following holds true for this circuit?



- A. The current at P is greater than the current at Q.
- B. The current at Q is greater than the current at P.
- C. The current is the same at all locations.
- D. Only the currents at P and Q are the same.



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following committees was constituted by RBI to study issues and concerns in the Micro Finance Institutions sector?

- A. Y H Malegam committee
- B. Kelkar committee
- C. Abid Hussain committee
- D. Malhotra committee



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Q82 General Awareness and Current Affairs

As of August 2022, the objective of the Maulana Azad Fellowship Scheme (MANF) is to provide _____ fellowships in the form of financial assistance to students from six notified minority communities, namely Buddhist, Christian, Jain, Muslim, Parsi and Sikh, notified by the Central Government, to pursue M.Phil. and Ph.D.

- A. 2-year
- B. 3-year
- C. 4-year
- D. 5-year



Q83 General Awareness and Current Affairs

_____ was among the 7 Recipients of the 2020 Tenzing Norgay National Award for land adventure, and received the award from then President Ram Nath Kovind during the 2021 National Sports Awards function.

- A. Priyanka Mangesh Mohite
- B. Srikaanth Viswanathan
- C. Lt. Col. Servesh Dhadwal
- D. Jai Kishan



Q84 General Awareness and Current Affairs

In the year 2022, which of the following chess champions was beaten by a 16-year old Indian chess player Rameshbabu Praggnanandhaa?

- A. Anatoly Karpov
- B. Bobby Fischer
- C. Magnus Carlsen
- D. Garry Kasparov



Q85 General Awareness and Current Affairs

$\text{Change in savings} \div \text{Change in Income} = \underline{\hspace{2cm}}$.

- A. Average propensity to save
- B. Marginal propensity to save
- C. Marginal propensity to consume
- D. Average propensity to consume



Q86 General Awareness and Current Affairs

The tenure of the Village Panchayat is for how many years?

- A. 2
- B. 3
- C. 4
- D. 5



Q87 General Awareness and Current Affairs

What is the name of India's first indigenous aircraft carrier?

- A. INS Vijaya
- B. INS Virat
- C. INS Vishakhapatnam
- D. INS Vikrant



Q88 General Awareness and Current Affairs

Nuakhai is an agricultural or harvesting festival mainly observed by people of which state in India?

- A. Odisha
- B. Kerala
- C. Manipur
- D. Madhya Pradesh



Q89 General Awareness and Current Affairs

The SAFE (SIDBI Assistance to Facilitate Emergency response against Corona Virus) scheme, launched by SIDBI (Small Industries Development Bank of India) in March 2020, provided loans at an interest rate of _____ per annum.

- A. 2%
- B. 3%
- C. 5%
- D. 4%



Q90 General Awareness and Current Affairs

Which of the following State's police introduced 'Pink Beat' patrols for enhancing the safety for women and children in public places?

- A. Odisha
- B. Kerala
- C. Maharashtra
- D. Karnataka

Q91 General Awareness and Current Affairs

When was Coal India Limited came into existence?

- A. 1975
- B. 1976
- C. 1977
- D. 1978

Q92 General Awareness and Current Affairs

Which Vedic God falls under the category of 'Prithivisthana'(Terrestrial God)?

- A. Brihaspati
- B. Indra
- C. Varuna
- D. Vishnu

Q93 General Awareness and Current Affairs

Which of the following is the longest range in the lesser Himalayas?

- A. Pir Panjal Range
- B. Zaskar Range
- C. Karakoram Range
- D. Ladakh Range



Q94 General Awareness and Current Affairs

Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth, has been laid under _____ of the Fundamental Rights in the Constitution of India.

A. Article 14

B. Article 15



C. Article 16

D. Article 17

Q95 General Awareness and Current Affairs

Which Indian state has the largest reserves of Bauxite as per Indian Minerals Yearbook 2017?

A. Andhra Pradesh

B. Odisha



C. Jharkhand

D. Madhya Pradesh

Q96 General Awareness and Current Affairs

The Hindu Widows' Remarriage Act was passed in the year _____ legalising the remarriage of widows in all jurisdictions of India under East India Company rule.

A. 1856



B. 1857

C. 1858

D. 1859

Q97 General Awareness and Current Affairs

Which of the following conditions is NOT required by a candidate to become the President of India?

A. Should be a citizen of India

B. Should have completed the age of 35 years

C. Should have 10 years of experience in the parliament



D. Should not hold any office of profit



Q98 General Awareness and Current Affairs

On 28 March 2022, Minister of Information and Broadcasting of India, Anurag Thakur launched a scheme called TEJAS at Dubai Expo, which is an initiative under the Skill India International Project to train Indians so that they can get employed overseas. What is the full form of TEJAS?

- A. Training for Emirates Jobs and Skills ✓
- B. Training for Eccentric Jobs and Skills
- C. Technology for Emirates Jobs and Skills
- D. Training for Empowering Jobs and Skills

Q99 General Awareness and Current Affairs

Kangri language is mostly spoken in which of the following states of India?

- A. Karnataka
- B. Kerala
- C. Himachal Pradesh ✓
- D. Madhya Pradesh

Q100 General Awareness and Current Affairs

Along its course, River _____ passes through Tibet, where it is known as Tsangpo, and also passes through the Indian states of Arunachal Pradesh, Assam and Bangladesh.

- A. Mahanadi
- B. Brahmani
- C. Ramganga
- D. Brahmaputra ✓



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The value of $\frac{\sin(90^\circ - \theta) \cos(90^\circ - \theta) \cot(90^\circ - \theta)}{\cos^2 \theta - 1}$ is _____.

- A. $2\sin\theta\cos\theta$
- B. -1
- C. 0
- D. $\tan \theta$

Q2 Mathematics

What kind of roots does the quadratic equation $5x^2 + 7x + 4 = 0$ have?

- A. Real and equal roots
- B. Real and unequal roots
- C. No real roots
- D. Only one real root

Q3 Mathematics

The price of a laptop in a shop is decreased by 35%, as a result of which the sales increased by 20%. What is the effect on the total revenue of the shop from the sale of laptops?

- A. 10% decrease
- B. 22% decrease
- C. 10% increase
- D. 18% increase

Q4 Mathematics

Two adjacent angles of a parallelogram are such that one is two-thirds the other. Find the measure of the smaller angle.

- A. 18°
- B. 108°
- C. 72°
- D. 36°



Q5 Mathematics

Which of the following pairs of numbers are co-prime?

A. 59, 97



B. 65, 91

C. 51, 119

D. 133, 171

Q6 Mathematics

The radius of the base of a cylinder is increased from 4 cm to 16 cm, but its curved surface area remains unchanged. If the initial height of the cylinder was 4 cm, what will be its new height?

A. 4 cm

B. 1 cm



C. 2 cm

D. 3 cm

Q7 Mathematics

If the ratio of the areas of two squares is 2: 3, then the ratio of the perimeters of these two squares, in the order mentioned, is _____.

A. 4 : 9

B. $\sqrt{2} : 3$

C. $2 : \sqrt{3}$

D. $\sqrt{2} : \sqrt{3}$



Q8 Mathematics

The median of the observations below, given in ascending order, is $n - 1$.

4, 8, $n - 14$, 17, $n + 5$, 30, 32 and 35

What is the value of n ?

A. 19

B. 17

C. 18

D. 24



Q9 Mathematics

The distance between two stations, Delhi and Amritsar is 450 km. A train starts at 4 p.m. from Delhi and moves towards Amritsar at an average speed of 60 km/h. Another train starts from Amritsar at 3:20 p.m. and moves towards Delhi at an average speed of 80 km/h. At what distance from Delhi will the two trains meet?

A. 170 km



B. 160 km

C. 180 km

D. 165 km

Q10 Mathematics

If ₹3.50 : ₹7.50 :: ₹8.26 : x, then what is the value of x?

A. ₹17.70



B. ₹17.00

C. ₹18.10

D. ₹17.85

Q11 Mathematics

The lengths of corresponding sides of two similar triangles are in the ratio 5 : 6. The areas of these triangles are in the ratio:

A. 3 : 4

B. 25 : 36



C. 16 : 42

D. 36 : 25

Q12 Mathematics

Seven toy cars and five toy bikes together cost ₹600. Five toy cars and three toy bikes together cost ₹400. The cost of each toy car is:

A. ₹200

B. ₹150

C. ₹100

D. ₹50



Q13 Mathematics

Simplify the given expression.

$$11.4\overline{565} \div 2.\overline{67}$$

A. $4\frac{2}{25}$

B. $3\frac{7}{25}$

C. $4\frac{7}{25}$ ✓

D. $3\frac{4}{25}$

Q14 Mathematics

The compound interest in 2 years on ₹30,000 at 7% interest per annum, compounded annually, is _____.

A. ₹4,437

B. ₹4,347 ✓

C. ₹4,447

D. ₹4,777

Q15 Mathematics

Anand bought a car for ₹8,00,000 and sold it at a profit of 5% to Dhiraj. Dhiraj sold it at a loss of 4% to Anil. What is the amount paid by Anil for the car?

A. ₹8,06,400 ✓

B. ₹8,40,000

C. ₹8,60,000

D. ₹8,73,600

Q16 Mathematics

Factorise $(64x^6 - y^6)$.

A. $(2x - y)(2x + y)(4x^2 + 2xy + y^2)(4x^2 - 2xy + y^2)$ ✓

B. $(2x - y)(2x + y)(4x^2 + 2xy + y^2)(4x^2 - 2xy - y^2)$

C. $(2x - y)(2x + y)(4x^2 - 2xy + y^2)(4x^2 - 2xy - y^2)$

D. $(2x - y)(2x + y)(4x^2 + 2xy - y^2)(4x^2 - 2xy + y^2)$



Q17 Mathematics

Which of the following is the standard representation of quadratic equation $(x - 4)(x + 1) = 2$?

A. $x^2 - 3x - 4 = 0$

B. $x^2 - 4x - 2 = 0$

C. $x^2 - 3x - 6 = 0$ ✓

D. $x^2 - x - 2 = 0$

Q18 Mathematics

Two consecutive numbers are such that one-fourth of the smaller number exceeds one-fifth of the larger number by 3. The larger number is _____.

A. 25

B. 45

C. 65 ✓

D. 75

Q19 Mathematics

The greatest number which on dividing 50, 58 and 69 leaves remainders of 1, 2 and 6, respectively, is:

A. 0

B. 8

C. 6

D. 7 ✓

Q20 Mathematics

Simplify the given expression.

$$11 - \{7 - 56 \div (2 \times 3 + 1)\}$$

A. 12 ✓

B. 11

C. 10

D. 9



Q21 Mathematics

If $10:16::30:y$, then find the value of y .

A. 40

B. 42

C. 48



D. 54

Q22 Mathematics

Which of the following expressions is correct?

1. $\text{Mode} - \text{median} = 2 (\text{median} - \text{mean})$

2. $\text{Median} = \frac{\text{Mode} + \text{median}}{2}$

3. $\text{Mode} = 2 \text{ Median} - \text{mean}$

4. $\text{Mean} = \frac{2\text{Median} - \text{mode}}{2}$

A. 1



B. 2

C. 4

D. 3

Q23 Mathematics

The value of $0.8\bar{7}$ is _____.

A. $\frac{87}{9}$

B. $\frac{8}{90}$

C. $\frac{79}{90}$



D. $\frac{7}{90}$



Q24 Mathematics

The total amount payable for completing a piece of work is ₹800. C can do it alone in 24 days, while B can do it alone in 8 days. With the help of A, they complete this work in 3 days. What is the sum of money received by A as his share in completing the work?

A. ₹450

B. ₹350

C. ₹400



D. ₹300

Q25 Mathematics

The cost of a pen is twice the cost of a pencil. If the cost of the pencil is ₹1, the cost of 3 pens and 2 pencils is:

A. ₹2

B. ₹7

C. ₹8



D. ₹10

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

In a queue, Rahul is 21st from the front end and Ankit is 10th from the rear end, and there are 4 people between them. How many people are there in the queue if Ankit is standing somewhere behind Rahul in the queue?

A. 35



B. 36

C. 37

D. 38



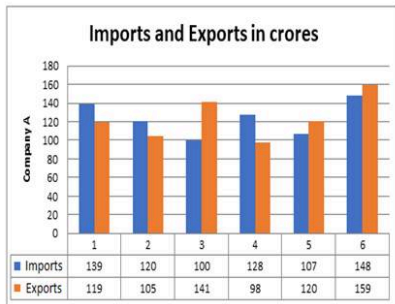
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Q27 General Intelligence and Reasoning

The given bar graph shows the exports and imports of Company A over a period of time. Study the bar graph and answer the question that follows.

The numbers 1 to 6 in the graph represent the years from 2001 to 2006.



What is the average of the imports for the period 2001 to 2006 (in crores)?

A. 80.24

B. 172.40

C. 123.66



D. 56.61

Q28 General Intelligence and Reasoning

Each of the six graduate students, Anudeep, Yamuna, Chinmayi, Divija, Esha and Guna, has an online PG entrance exam on a different day of a week, starting from Monday and ending on Saturday of the same week, but not necessarily in the same order. None of them have the exam before Chinmayi and after Yamuna. Guna has the exam immediately after Anudeep and immediately before Divija. Esha has the exam on Tuesday and immediately before Anudeep.

Who among the following has the exam on Friday?

A. Guna

B. Divija



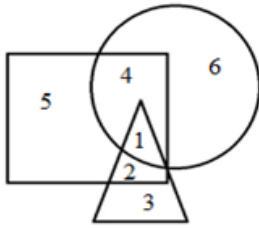
C. Anudeep

D. Yamuna



Q29 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'men', the square represents 'photographers', and the triangle represents 'musicians'. How many men are there who are NEITHER photographers NOR musicians?



A. 4

B. 6



C. 5

D. 2

Q30 General Intelligence and Reasoning

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 5613743658, which of the following digits will be second from the left?

A. 6

B. 4



C. 2

D. 3

Q31 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

3 : 25 :: 8 : 100 :: 12 : ?

A. 144

B. 169

C. 225

D. 196



Q32 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Education is the backbone of human society.

Arguments:

- I. Schools are learning centres of societal norms and regulations.
- II. Any society with less concern about education, cannot grow and develop in present times.

- A. I weakens while II strengthens the statement.
- B. II weakens while I strengthens the statement.
- C. Both I and II weaken the statement.
- D. Both I and II strengthen the statement. ☒

Q33 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'SHIRT' is arranged in alphabetical order?

- A. One ☒
- B. Two
- C. Three
- D. Four

Q34 General Intelligence and Reasoning

Each of six friends has a different height. Anant is taller than Gagan. Manoj is shorter than Janak. Parth is taller than Janak but shorter than Gagan. If Anurag is the shortest, then who is the tallest among them?

- A. Parth
- B. Anant ☒
- C. Janak
- D. Manoj



Q35 General Intelligence and Reasoning

Which of the following letter-clusters will replace the question mark (?) in the given series to make it logically complete?

MON 4, QSR 10, UWV 16, YAZ 22, ?

A. AED 24

B. DED 25

C. CED 28



D. CFD 28

Q36 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

8 13 17 20 22 ?

A. 23



B. 24

C. 22

D. 25

Q37 General Intelligence and Reasoning

In this question, a group of letters is coded using symbols as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letters	D	T	V	O	I	A	P	E
Codes	@	>	^	%	=	#	\$	+

Conditions:

- If both the first and the last letters of the word are vowels, then both these letters will be coded as '&'.
- If both the first and the last letters of the word are consonants, then both these letters will be coded as '*'.

What will be the code for the word 'ADOPTIVE'?

A. # @ % \$ > = ^ &

B. & @ % \$ > = ^ +

C. # @ % \$ > = ^ +

D. & @ % \$ > = ^ &



Q38 General Intelligence and Reasoning

In a queue, Mahima is 28th from the front end and Anshul is 22th from the rear end, and there are 5 people between them. How many people are there in the queue if Anshul is standing somewhere behind Mahima in the queue?

A. 53

B. 54

C. 55



D. 56

Q39 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statements:

All sachets are bags.

Some bags are clocks.

No clock is a toaster.

Conclusions:

I. Some toasters are clocks.

II. No sachet is a toaster.

III. Some bags are sachets.

A. Only conclusions I and II follow.

B. Only conclusions II and III follow.

C. Only conclusion I follows.

D. Only conclusion III follows.



Q40 General Intelligence and Reasoning

In a certain code language, 'BOY' is written as 'ACNPXZ' and 'TOY' is written as 'SUNPXZ'. How will 'JOY' be written in that code language?

A. XZNPIK

B. IKXZNP

C. ZXPNKI

D. IKNPXZ



Q41 General Intelligence and Reasoning

If ‘+’ means ‘-’, ‘-’ means ‘×’, ‘×’ means ‘÷’, ‘÷’ means ‘+’, what will come in place of the question mark (?) in the following equation?

$$44 \div 120 \times 5 - 2 + 10 \times 2 = ?$$

A. 84

B. 85

C. 86

D. 87



Q42 General Intelligence and Reasoning

If in the word ‘BOARD’ all the letters are arranged in alphabetical order from left to right, then the position of how many letters will remain unchanged?

A. One

B. None



C. Three

D. Four

Q43 General Intelligence and Reasoning

Six doctors are sitting in a row facing north. Omprakash is sitting third to the left of Tanvi, who is sitting second to the right of Matank. Yadhu is sitting to the immediate right of Sunil, who is sitting somewhere to the left of Omprakash. Neither Yadhu nor Karuna sit at the extreme ends. What is Karuna's position with respect to Yadhu?

A. Third to the left

B. Third to the right



C. Fourth to the right

D. Fourth to the left

Q44 General Intelligence and Reasoning

Rohit started on his bicycle from his home and travelled a distance of 5 km in the south direction. He then turned towards the right and travelled a distance of 2.5 km, and again took a turn towards the right and travelled a distance of 5 km. Finally, after taking a left turn, he travelled a distance of 5 km. What is the shortest distance between his present location and his home? (All turns are 90 degree turns only)

A. 9.5 km

B. 8.5 km

C. 7.5 km



D. 6.5 km



Q45 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

15, 16, 32, 35, 140, ?

A. 144

B. 142

C. 145



D. 700

Q46 General Intelligence and Reasoning

If 14 April 2005 is a Thursday, then what will be the day of the week on 10 May 2017?

A. Thursday

B. Tuesday

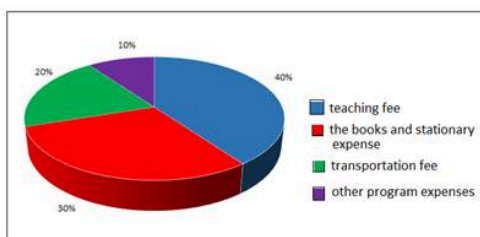
C. Friday

D. Wednesday



Q47 General Intelligence and Reasoning

The percentage expenditure of a school is shown in the following pie-chart. Blue represents the teaching fee, red represents the books and stationary expense, green represents transportation fee, and purple represents other program expenses. Study the pie-chart and answer the question.



The total income is ₹27,00,000. What is the amount spent on teaching fee and transportation fee if the total school expense is one-third of the total income?

A. ₹9,00,000

B. ₹4,30,000

C. ₹7,50,000

D. ₹5,40,000



Q48 General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

$$25 : 4 :: 49 : 6 :: 9 : 2 :: 100 : ?$$

A. 9



B. 6

C. 4

D. 7

Q49 General Intelligence and Reasoning

If '+' means '÷', '-' means '×', '×' means '+', '÷' means '-', what will come in place of the question mark (?) in the following equation?

$$81 \div 3 - 14 \div 7 \times 6 + 6 - 5 = ?$$

A. 37



B. 43

C. 50

D. 55

Q50 General Intelligence and Reasoning

Refer to the letter and symbol series, and answer the question that follows.

(Left) G H T % K & L M # S T * Q @ N O (Right)

How many symbols are there between the seventh element from the right end and the fifth element from the left end of the given series?

A. 4

B. 2



C. 3

D. 1



Q51 General Intelligence and Reasoning

Pallavi starts walking towards the north and after covering a distance, she turns to the right, then again to the right and after covering some more distance, she again turns to the right. Now, in which direction is she facing? (All turns are 90 degree turns only)

- A. South
- B. North
- C. West
- D. East

**Q52** General Intelligence and Reasoning

Anu, Dilip, Eshwar, Jahnavi, Komal, Pallavi, Riya, and Tara are sitting around a square table facing the centre of the table (but not necessarily in the same order). Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. Tara is to the immediate right of Komal and to the immediate left of Jahnavi. Anu is to the immediate left of Riya. Dilip and Jahnavi have only one person between them. Eshwar is sitting at the exact centre of one of the sides and has Riya to the immediate left and Komal to the immediate right.

Who is sitting to the immediate right of Pallavi?

- A. Anu
- B. Dilip
- C. Jahnavi
- D. Tara

**Q53** General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $E < T = D \leq Q > Z = G$

Conclusions:

- I. $T < G$
- II. $Z > D$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Both conclusions I and II are true
- D. Neither conclusion I nor II is true



Q54 General Intelligence and Reasoning

Given below are two letter-cluster pairs in which the second letter-cluster is related to the first letter-cluster following a certain logic. Select the letter-cluster pair from among the options that follows the same logic.

NZF : FAN

HSE : EHH

A. CPN : NQC

B. CPN : NKC

C. CPN : NEC

D. CPN : NFC

Q55 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All anklets are printers.

Some printers are birds.

Some birds are cherries.

Conclusions:

I. Some birds are printers.

II. All printers are anklets.

III. Some cherries are birds.

A. Only conclusion I follows.

B. Only conclusion II follows.

C. Both conclusions I and III follow.

D. None of the conclusions follow.

General Science

25 Questions • Answer Key

Q56 General Science

What happens during menstruation?

A. A mature egg is released from an ovary

B. The wall of the uterus becomes vascular

C. There is failure of fertilisation of the ovum

D. The uterine lining is shed.



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Q57 General Science

Adolescence begins around the age of 11 and lasts upto:

- A. 18 or 19 years of age
- B. 16 or 17 years of age
- C. 19 or 20 years of age
- D. 15 or 16 years of age

Q58 General Science

What happens when we exhale during normal breathing?

- A. The diaphragm is flattened
- B. The lungs are contracted
- C. All carbon dioxide is expelled from the body
- D. A residual amount of air remains in the lungs

Q59 General Science

In an electrical circuit four identical bulbs are connected in parallel to each other to a battery of 10 V (negligible internal resistance). When all the four bulbs glow, a current of 4 A is recorded. Then the power dissipated in the circuit and the resistance of each bulb are _____ and _____, respectively.

- A. 22.4 W, 1.4 Ω
- B. 24 W, 1.5 Ω
- C. 25.6 W, 1.6 Ω
- D. 27.2 W, 1.7 Ω

Q60 General Science

Which of the following is a heterotrophic organism?

- A. Tiger
- B. Neem tree
- C. Grass
- D. Algae



Q61 General Science

Which of the following compounds gets precipitated when lead nitrate solution is mixed with sodium iodide solution?

- A. Sodium nitrite
- B. Lead iodide
- C. Lead nitrite
- D. Sodium nitrate



Q62 General Science

Suppose Sita has kept a needle in front of a concave mirror of focal length f at a distance $(f + x)$ and a real image of the needle is seen on a screen at a distance $(f + y)$. Then the focal length f can be expressed as:

- A. $f = -2\sqrt{xy}$
- B. $f = 2\sqrt{xy}$
- C. $f = \sqrt{xy}$
- D. $f = -\sqrt{xy}$



Q63 General Science

Which of the following is INCORRECT regarding the flow of energy between various components of the environment?

- A. Green plants capture about 10% of the solar energy that falls on leaves.
- B. The amount of organic matter present at each trophic level is 10%.
- C. Energy flow is unidirectional.
- D. Every trophic level loses some energy as heat to the environment.



Q64 General Science

Which of the following statements is correct for saturated carbon compounds?

- A. They have carbon-carbon single bond only.
- B. They have carbon-carbon double bond only.
- C. They have carbon-carbon triple bond only.
- D. They have both double and triple bond.



Q65 General Science

Which group in the Modern Periodic Table has only one non-metallic element?

A. 14



B. 15

C. 16

D. 17

Q66 General Science

If a pin is placed in front of the converging lens at a distance of 20 cm, the converging lens forms an image that is real, inverted and equal to the size of the object. Then the power of the lens is:

A. +10 D



B. -10 D

C. -5D

D. +5D

Q67 General Science

The radius of curvature of a spherical mirror is the distance between:

A. pole and principal focus

B. principal focus and centre of curvature

C. centre of curvature and pole



D. centre of curvature and infinity

Q68 General Science

Carbon shows greater tendency for catenation than silicon.

Which of the following statements is the correct explanation for the given assertion?

A. Carbon-carbon bond is weaker than Si-Si bond due to the smaller size of carbon as compared to silicon.

B. Carbon-carbon bond is stronger than Si-Si bond due to the smaller size of carbon as compared to silicon.



C. Carbon-carbon bond is stronger than Si-Si bond due to the larger size of carbon as compared to silicon.

D. Carbon-carbon bond is weaker than Si-Si bond due to the larger size of carbon as compared to silicon.



Q69 General Science

A salt is dissolved in water and the pH of this salt solution is measured with a universal indicator paper. If the pH of solution is more than 7, the salt is most likely to be

A. Na_2SO_4

B. K_2CO_3



C. KCl

D. NH_4Cl

Q70 General Science

Who among the following is popularly known as 'Waterman of India'?

A. Dr. MS Swaminathan

B. Dr. Hiralal Chaudhuri

C. Dr. Rajendra Singh



D. Dr. Arun Krishnsnan

Q71 General Science

Which of the following statements about conductivity of electricity in ionic compounds is correct?

A. Ionic compounds conduct electricity in both solid as well as in molten state.

B. Ionic compounds conduct electricity in molten state but not in solid state.



C. Ionic compounds conduct electricity in solid state but not in molten state.

D. Ionic compounds are bad conductors of electricity in both solid as well as in molten state.

Q72 General Science

Which of the following forms the lining of kidney tubules and ducts of salivary glands?

A. Cuboidal epithelium



B. Squamous epithelium

C. Columnar epithelium

D. Glandular epithelium



Q73 General Science

Suppose a proton moves towards the east by entering a uniform magnetic field in the downward direction. The direction of the force acting on the proton will be:

- A. towards the east
- B. towards the west
- C. towards the north
- D. towards the south



Q74 General Science

A $10\ \Omega$ resistor is connected across a battery. The heat produced in the resistor in 5 seconds is 200 J. The potential difference across the resistor is:

- A. 10 V
- B. 20 V
- C. 30 V
- D. 40 V



Q75 General Science

Ferrous sulphate on heating gives a solid product and two different gases. Select the gases evolved during the reaction.

- A. Sulphur dioxide and sulphur trioxide
- B. Sulphur trioxide and oxygen
- C. Sulphur dioxide and oxygen
- D. Oxygen and disulphur



Q76 General Science

Which of the following elements is a metal?

- A. Sodium
- B. Germanium
- C. Bromine
- D. Neon



Q77 General Science

Due to _____ phenomena, when light is passed through suspended particles in a medium, some portion of light is absorbed and emitted in all directions.

- A. reflection of light
- B. refraction of light
- C. dispersion of light
- D. scattering of light



Q78 General Science

Which of the following statements is INCORRECT about AIDS?

- A. The virus can pass on to a normal person from an infected person by sharing the syringes used for injecting drugs.
- B. The virus can be transmitted to an infant from the infected mother through her milk.
- C. The virus can be transmitted through sexual contact with a person infected with HIV.
- D. The virus can be transmitted by shaking hands with a person infected with HIV.



Q79 General Science

1 commercial unit of electrical energy is equal to _____ joules.

- A. 3.6×10^8
- B. 3.6×10^7
- C. 3.6×10^6
- D. 3.6×10^5



Q80 General Science

The direction of the magnetic field produced by the current carrying solenoid is:

- A. parallel to the direction of the current
- B. perpendicular to the axis of the solenoid
- C. parallel to the axis of the solenoid
- D. parallel to the diameter of the solenoid



Q81 General Awareness and Current Affairs

In November 2021, Manisha Kalyan scored India's first-ever goal against _____ in senior level football.

- A. Germany
- B. France
- C. Brazil
- D. Sweden

**Q82** General Awareness and Current Affairs

Doddabetta peak, which means a big mountain, is the highest mountain peak in the _____

- A. Shevaroy Hills
- B. Nilgiri Hills
- C. Cardamom Hills
- D. Ananthagiri Hills

**Q83** General Awareness and Current Affairs

In the reference of Constitution of India, who was the elected president of the Constituent Assembly from following?

- A. Dr. Rajendra Prasad
- B. Dr. BR Ambedkar
- C. Lal Bahadur Shastri
- D. Jawahar Lal Nehru

**Q84** General Awareness and Current Affairs

Lala Lajpat Rai was associated with the _____ since 1921.

- A. Chinmaya Mission
- B. Satyashodhak Samaj
- C. Sarbatatyadipika Sabha
- D. Servants of the People Society



Q85 General Awareness and Current Affairs

Islam is a major world religion promulgated by the Prophet Muhammad in Arabia in the:

- A. 4th century
- B. 5th century
- C. 6th century
- D. 7th century



Q86 General Awareness and Current Affairs

Which Lok Sabha was constituted after the General Elections to Lok Sabha, 2019?

- A. 15th
- B. 16th
- C. 17th
- D. 18th



Q87 General Awareness and Current Affairs

In the psychology of motivation, balance theory is a theory of attitude change, proposed by_____.

- A. Milton Friedman
- B. Adam Smith
- C. John A List
- D. Fritz Heider



Q88 General Awareness and Current Affairs

The Government of India, on January 2022, approved the Production Linked Incentive (PLI) Scheme 'National Programme on Advanced Chemistry Cell (ACC) Battery Storage with a budgetary outlay of _____.

- A. ₹21,100 crore
- B. ₹20,100 crore
- C. ₹18,100 crore
- D. ₹19,100 crore



Q89 General Awareness and Current Affairs

At which of these places is the thickness of the troposphere the greatest?

A. South Pole

B. Equator



C. North Pole

D. Above Mountains

Q90 General Awareness and Current Affairs

Sangam literature was composed in which classical language?

A. Sanskrit

B. Malayalam

C. Tamil



D. Odiya

Q91 General Awareness and Current Affairs

Which of the following is NOT an elected functionary?

A. Executive Officer - Municipal Board



B. Chairman - Municipal Board

C. Chairman - District Board

D. Chairman - Municipal Corporation

Q92 General Awareness and Current Affairs

Majuli, in the _____, is the largest inhabited riverine island in the world.

A. Ganga river

B. Brahmaputra river



C. Yamuna river

D. Godavari river



Q93 General Awareness and Current Affairs

What is the primary function of money?

- A. It is the basis of distribution of income
- B. It is a medium of exchange
- C. It is the basis of debit
- D. It is a store house of goods

Q94 General Awareness and Current Affairs

On entering Amrit Kaal, the 25 year long lead up to India @100, the Union Budget 2022-23 provides impetus for growth along _____ priorities.

- A. Two
- B. Three
- C. Six
- D. Four

Q95 General Awareness and Current Affairs

_____ of trade refers to the type of goods and services a country exports and imports.

- A. Value
- B. Volume
- C. Composition
- D. Gain

Q96 General Awareness and Current Affairs

Buhsu Jiba is a festival celebrated in the state of _____.

- A. Odisha
- B. Himachal Pradesh
- C. Nagaland
- D. Sikkim



Q97 General Awareness and Current Affairs

Which of the following parts is responsible to give a specific colour to the eyes?

- A. Iris
- B. Retina
- C. Lens
- D. Cornea



Q98 General Awareness and Current Affairs

Dipika Pallikal and Joshna Chinappa won the doubles title at the World Championships in which sport on 9 April 2022?

- A. Badminton
- B. Table Tennis
- C. Squash
- D. Lawn tennis



Q99 General Awareness and Current Affairs

The e-PGPathshala scheme of the Government of India is related to which of the following?

- A. Nursery education
- B. Primary education
- C. Secondary education
- D. Higher education



Q100 General Awareness and Current Affairs

Which Union Territory launched two women's squads headed by Khalida Parveen, for ensuring the safety and security of women in February 2022?

- A. Chandigarh
- B. Jammu And Kashmir
- C. Ladakh
- D. Puducherry



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The equation $(x + 1)^3 - (x - 1)^3 = 0$ is:

- A. a quadratic equation with real roots
- B. a quadratic equation with non-real roots ✓
- C. a linear equation with real roots
- D. a linear equation with non-real roots

Q2 Mathematics

A father is four times as old as his son. After 10 years the father's age will be 2.5 times that of his son. Find the son's present age.

- A. 40 years
- B. 10 years ✓
- C. 15 years
- D. 60 years

Q3 Mathematics

The circum-centre of a triangle is the:

- A. point of concurrence of its altitudes
- B. point of concurrence of its medians
- C. point of concurrence of bisectors of angles
- D. point of concurrence of perpendicular bisectors of its sides ✓

Q4 Mathematics

If $x + \frac{1}{x} = 8$, then the value of $x^3 + \frac{1}{x^3}$ is:

- A. 688
- B. 588
- C. 488 ✓
- D. 388



Q5 Mathematics

The following observations are arranged in ascending order.

29, 32, 48, 50, x , $x + 2$, 72, 78, 84, 95

If the median is 63, then the value of x is:

A. 62



B. 31

C. 63

D. 50

Q6 Mathematics

If three taps are opened together, a tank is filled in 12 hrs. One of the taps can fill it in 10 hrs and another in 15 hrs, whereas the third pipe is a drainpipe that empties the tank. In how much time can the third pipe can empty the filled tank when no other pipe is open?

A. 11 hrs

B. 12 hrs



C. 10 hrs

D. 9 hrs

Q7 Mathematics

Find the scale with the greatest possible length which can measure poles of length 3 m 96 cm, 5m 28 cm, and 7 m 92 cm exact number of times.

A. 1 m 32 cm



B. 3 m 21 cm

C. 66 cm

D. 33 cm

Q8 Mathematics

The HCF and the LCM of two numbers are 15 and 300, respectively. If the difference of the two numbers is 15, find the sum of those two numbers.

A. 135



B. 140

C. 130

D. 145



Q9 Mathematics

A watch passes through three hands and each gains 25%. If the third seller sells the watch for ₹1,250, the cost price of the watch to the first seller is:

A. ₹540

B. ₹740

C. ₹640



D. ₹840

Q10 Mathematics

The area (in cm^2) of a triangle, the lengths of whose sides are 5 cm, 7 cm and 8 cm, is _____.

A. 280

B. 140

C. $10\sqrt{3}$



D. $60\sqrt{3}$

Q11 Mathematics

If α, β are the roots of $px^2 + qx + r = 0$, then $\alpha^2 + \beta^2 =$ _____.

A. $2pq$

B. $\frac{q^2 - 2pr}{p^2}$



C. $\frac{q^2 + 2pr}{p^2}$

D. $-2pq$

Q12 Mathematics

If the curved surface area of a solid right circular cylinder is 2310 cm^2 and its radius of base is 21 cm, then the total surface area (in cm^2) of the given cylinder is _____.

(Take $\pi = \frac{22}{7}$)

A. 3696

B. 5082



C. 4250

D. 5892



Q13 Mathematics

If $a \sec A + b \tan A + c = 0$ and $a' \sec A + b' \tan A + c' = 0$, then $(bc' - b'c)^2 - (ca' - c'a)^2$ is equal to:

A. $(ab' - a'b)^2$ ✓

B. $(a'b + ab')^2$

C. $(ab + a'b')^2$

D. $(ab - a'b')^2$

Q14 Mathematics

The value of $216^{\frac{2}{3}} + \frac{1}{256^{-\frac{3}{4}}} + 32^{\frac{1}{5}} - \frac{1}{10^{-2}} - 2$ is _____.

A. 0 ✓

B. 1

C. -1

D. -2

Q15 Mathematics

If $a^2 - 4a + 1 = 0$, find $a^2 + \frac{1}{a^2}$.

A. 12

B. 14 ✓

C. 16

D. 18



Q16 Mathematics

If $a = \frac{x}{2x + y + z} = \frac{y}{x + 2y + z} = \frac{z}{x + y + 2z}$, then find the value of a.

A. $\frac{1}{2}$

B. $\frac{1}{4}$ ✓

C. $\frac{2}{5}$

D. $\frac{3}{2}$

Q17 Mathematics

At a health club, 80% of the members are men and the remaining 20% are women. The average age of the male members is 30 years and the average age of the female members is 40 years. The combined average age of all the members of this health club is _____ years.

A. 35

B. 31

C. 32 ✓

D. 33

Q18 Mathematics

The value of $[x^{m(n-p)} \cdot x^{n(p-m)} \cdot x^{p(m-n)}][\sqrt[4]{625} - \sqrt{25}]$ is _____.

A. 1

B. 5

C. 0 ✓

D. 2



Q19 Mathematics

The value of $326.\overline{786} - 10.19\overline{3}$ is:

A. $316.49\overline{575}$

B. $316.59\overline{345}$ ✓

C. $316.50\overline{365}$

D. $316.65\overline{345}$

Q20 Mathematics

The product of $(x - 5)$ and $(x + 3)$ is:

A. $x^2 - 2x - 15$ ✓

B. $x^2 + 3x - 15$

C. $x^2 + 2x + 15$

D. $x^2 + 3x + 15$

Q21 Mathematics

The price of a TV set increases by 20% in the first year and again by 5% in the next year. The net effect on the price of the TV set after two years compared to its initial price is a:

A. 25% increase

B. 20% increase

C. 15% increase

D. 26% increase ✓

Q22 Mathematics

A shopkeeper sells pulses at ₹100 per kg that he purchased for ₹80 per kg. While selling, he cheats and gives 800 g instead of 1 kg. What is his actual profit?

A. 64.00%

B. 58.00%

C. 56.25% ✓

D. 62.75%



Q23 Mathematics

If the principal amount is ₹13,000, then the simple interest for 4 years at a rate of 5% per annum is _____.

A. ₹1,300

B. ₹2,600



C. ₹2750

D. ₹5,200

Q24 Mathematics

If each interior angle of a regular polygon measures 108° , that polygon has _____ sides.

A. 4

B. 5



C. 6

D. 10

Q25 Mathematics

Two pipes A and B can fill a tank completely in 5 hours and 8 hours, respectively. Pipe C can empty the tank completely in 10 hours. If all the three pipes are opened simultaneously in an empty tank, then how much time will it take to fill the tank completely?

A. 6 hours

B. $4\frac{2}{9}$ hours

C. 3 hours

D. $4\frac{4}{9}$ hours

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

This question is based on the five, four-digit numbers given below.

(Left) 6338 5345 4127 7253 6176 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

(NOTE: All operations to be done from left to right)

If 3 is subtracted from the first digit of every number, in how many numbers will the first digit be exactly divisible by 3?

A. Two



B. Three

C. Four

D. Five



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Q27 General Intelligence and Reasoning

Refer to the following number series and answer the question.

(Left) 7 5 3 3 9 1 4 6 2 7 8 3 7 5 6 8 9 1 3 9 5 3 (Right)

Find the sum of all the odd numbers in the above number series.

A. 100

B. 90

C. 80



D. 70

Q28 General Intelligence and Reasoning

Sakshi got 18th rank from the top and Ravina got 13th rank from the bottom. Only three students have rank in between the ranks of Sakshi and Ravina. Sakshi got higher rank than Ravina. Find the number of students in the class.

A. 33

B. 34



C. 35

D. 32

Q29 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $K \geq L > T \geq Z > V \leq X < R$

A. $K \geq T > Z$

B. $R > V > K$

C. $L > Z > V$



D. $X = T = K$



Q30 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	6	8	4	+	5	#	%	2	\$	1	^	7	9	*	@
Code	S	U	T	W	N	P	V	D	A	Z	J	M	O	M	Y

Conditions:

- (i) If the first and last elements are numbers, then the last element will be replaced by the symbol @.
- (ii) If the first element is a symbol, then the first element will be coded as ©.
- (iii) If both the first and second elements are numbers, then the third element will be coded as *.

What will be the code for the following?

% 5 6 7 @

A. ©NSMY



B. YMSN©

C. AYNSM

D. NSMYV

Q31 General Intelligence and Reasoning

एक कथन और उसके बाद दो धारणाएं I और II दी गई हैं। आपको कथन में दी गई जानकारी को सत्य मानते हुए यह बताना है कि दी गई धारणाओं में से कौन सी कथन में निहित हैं?

कथन:

क्वींस जयंती वर्ष मनाने हेतु आयोजित एक कला प्रदर्शनी, गर्मियों में एक महीने तक लगी रहेगी, और यह जनता के लिए खुली रहेगी।

धारणाएं:

- I. कलाकृतियां रानी के जीवन और उनकी विरासत के इर्द-गिर्द केंद्रित हैं।
- II. प्रदर्शनी में भाग लेना, सभी के लिए निःशुल्क है।

A. Only assumption I is implicit

B. Only assumption II is implicit

C. Neither assumptions I nor II is implicit

D. Both assumptions I and II are implicit

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



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Q32 General Intelligence and Reasoning

Following table shows the marks of five students in 5 different subjects in a school examination. Each subject carries a maximum of 100 marks. Study the table and answer the question.

Students Subject	Rohan	Mohan	Radha	Ali	Johan
Mathematics	70	88	70	90	95
Statistics	74	78	75	70	85
Hindi	65	78	76	53	50
English	60	64	70	65	85
Social Science	58	54	62	46	66

Who among them has achieved the second highest aggregated marks?

A. Johan

B. Radha

C. Mohan



D. Rohan

Q33 General Intelligence and Reasoning

All 30 students of a class are standing in a straight row facing the north. Komal is 8th from the right end while Priya is 14th from the left end. How many students are standing between Komal and Priya?

A. 7

B. 9

C. 8



D. 10

Q34 General Intelligence and Reasoning

This question is based on the following 3-letter words.

AID, BAD, CAT, DOG, EAT

If in each of the words, each letter is changed to the next letter in the English alphabetical order, how many words (not necessarily meaningful) thus formed will have no vowel?

A. Three

B. Two

C. One

D. None



Q35 General Intelligence and Reasoning

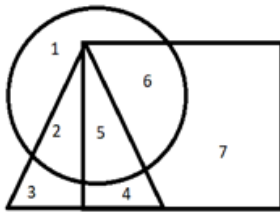
In a certain code language, 'LALIT' is written as 'ODOLW' and 'MOHIT' is written as 'PRKLW'. How will 'SUMIT' be written in that code language?

- A. VXLPW
- B. VXPLW
- C. LPWVX
- D. XVPWL



Q36 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. 'Hindi speakers' are represented by the circle, 'Urdu speakers' are represented by the square, and 'Tamil speakers' are represented by the triangle. How many people can speak all the three languages?



- A. 2
- B. 3
- C. 4
- D. 5



Q37 General Intelligence and Reasoning

Select the option that is related to the fifth term in the same way as the second term is related to the first term and the fourth term is related to the third term.

A3E7S21 : 1C5G19U :: B4I11U23 : 2D9K21W :: C5H10L14 : ?

- A. 3E8J12O
- B. 3E8J13N
- C. 3E8J13O
- D. 3E8J12N



Q38 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

62 : 50 :: 72 : 60 :: 82 : ?

A. 70



B. 72

C. 74

D. 76

Q39 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if ‘+’ and ‘-’ are interchanged and also ‘×’ and ‘÷’ are interchanged?

$160 \times 8 - 22 \times 11 \div 180 \times 6 - 4 = ?$

A. 64

B. 74

C. 84



D. 94

Q40 General Intelligence and Reasoning

Aakash starts from Point O and drives 3 km towards the north. He then takes a right turn, drives 5 km, turns right and drives 10 km. He then takes a right turn and drives 5 km. He takes a final right turn, drives 3 km and stops at Point Z. How far and towards which direction should he drive in order to reach Point O from Point Z? (All turns are 90 degree turns only)

A. 4 km towards the north



B. 2 km towards the east

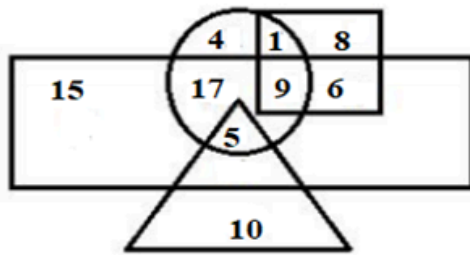
C. 3 km towards the east

D. 2 km towards the west



Q41 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The triangle represents 'motivational speakers', the circle represents 'women', the square represents 'scientists', and the rectangle represents 'married'. Find the number of married women who are scientists but NOT motivational speakers.



A. 17

B. 6

C. 9

D. 5

Q42 General Intelligence and Reasoning

If all the directions are moved 135 degrees clockwise, then which new direction does the original south point to?

A. North-West

B. South-East

C. South-West

D. North-East

Q43 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

WXN13, UVL19, STJ25, QRH31, ?

A. OPF37

B. OFP27

C. PFO36

D. FPO37



Q44 General Intelligence and Reasoning

Eight politicians, Prudhvi, Samrat, Rajesh, Unadkat, Narayan, Vimal, Tapasvi and Wazid, are standing in a straight line facing north, but not necessarily in the same order. Rajesh and Wazid are the immediate neighbours of Samrat. Vimal is an immediate neighbour of Unadkat and Wazid. Tapasvi and Narayan are the immediate neighbours of Prudhvi. Neither Tapasvi nor Rajesh is at the extreme ends of the line. Unadkat is somewhere to the right of Tapasvi.

Who among the following is standing second to the right of Prudhvi?

A. Tapasvi

B. Rajesh



C. Wazid

D. Vimal

Q45 General Intelligence and Reasoning

Seven friends, Monika, Janak, Pawan, Lokesh, Rupesh, Sohan and Anand, are sitting in a straight line facing north but not necessarily in the same order. Anand is sitting to the immediate right of Rupesh. Rupesh is sitting fourth to the right of Sohan. Pawan is an immediate neighbour of Janak and Lokesh. Lokesh is third to the right of Sohan, who is sitting at one of ends.

What is the position of Monika with respect to Lokesh?

A. Immediate neighbour

B. Third to the left

C. Second to the left

D. Third to the right



Q46 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

45, 50, 60, 75, 95, ?

A. 130

B. 115

C. 120



D. 125



Q47 General Intelligence and Reasoning

If 12 April 2010 is a Monday, then what will be the day of the week on 8 March 2022?

- A. Tuesday
- B. Friday
- C. Sunday
- D. Wednesday

Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

6, 3, 13, 7, 20, 11, 27, 15, 34, ?

- A. 20
- B. 19
- C. 18
- D. 17

Q49 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

32 : 150 :: 22 : 100 :: 12 : ?

- A. 50
- B. 55
- C. 60
- D. 65



Q50 General Intelligence and Reasoning

Five film makers, Pragati, Ratan, Tomar, Vihari and Ujwala, live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 5. Vihari lives on the floor immediately below Ujwala. Pragati lives on the floor immediately above Tomar. Ratan lives on the floor immediately above Pragati. Ujwala lives on the floor immediately below Tomar.

Who lives on the third floor?

- A. Ratan
- B. Pragati
- C. Tomar
- D. Ujwala



Q51 General Intelligence and Reasoning

In the following question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $F \leq I < G > J \geq H > L$

Conclusions: I. $G > F$

II. $L < J$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Neither conclusion I nor II is true
- D. Both conclusions I and II are true



Q52 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation

$$55.98 \div 7.09 \times 5.05 + 33.98 - 26.99 \div 2.97 = ?$$

- A. 65
- B. 64
- C. 63
- D. 62



Q53 General Intelligence and Reasoning

Each of the digits in the number 1428935 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. One



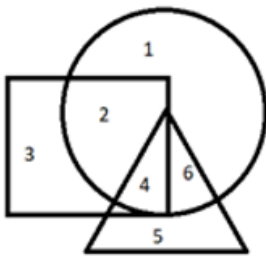
B. Two

C. Three

D. None

Q54 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'healthy people', the square represents 'men', and the triangle represents 'graduates'. How many men are there who are healthy but NOT graduates?



A. 1

B. 2



C. 3

D. 4

Q55 General Intelligence and Reasoning

The table given shows the total number of students of a college and the number of girls who are studying in four different courses – Data science, Cloud computing, Statistics and Image processing in 3 different years.

Year/Courses	2016		2017		2018	
	Total number of students	Total number of girls	Total number of students	Total number of girls	Total number of students	Total number of girls
Data science	800	500	900	450	760	400
Cloud computing	1600	400	1800	1000	1500	700
Statistics	1400	600	1500	700	1040	400
Image processing	1200	600	1300	600	800	200

What is the average number of boys studying in all the four courses in the year 2017?

A. 586.5

B. 687.5



C. 734.5

D. 492.5



Q56 General Science

Name the physico-chemical process by which plants convert light energy into chemical energy.

- A. Physical synthesis
- B. Physico-chemical conversions
- C. Photosynthesis
- D. Starch synthesis



Q57 General Science

Why should plastic cups be replaced by paper cups for selling tea in public places?

- A. Plastic cups are cheaper
- B. Paper cups are biodegradable
- C. Paper cups are stronger
- D. Paper cups keep things safe



Q58 General Science

Which of the following statement is INCORRECT?

- A. Sex is determined by different factors in various species.
- B. All human chromosomes are not paired.
- C. All children will inherit a Y chromosome from their mother.
- D. Animals, such as snails, individuals can change sex.



Q59 General Science

Which of the following compounds is used as a raw material for making plaster of Paris?

- A. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
- B. $\text{CuSO}_4 \cdot 2\text{H}_2\text{O}$
- C. $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
- D. $\text{MgSO}_4 \cdot 2\text{H}_2\text{O}$



Q60 General Science

A student measured the magnification of a spherical lens and a spherical mirror. He found that both are +3.0. He would conclude that:

- A. the lens and the mirror both are concave
- B. the lens and the mirror both are convex
- C. the lens is concave but the mirror is convex
- D. the lens is convex but the mirror is concave ✓

Q61 General Science

When you put a plant cell, fungal cell or a bacterial cell in a very dilute external medium, the plant cell or fungal cell will absorb water but will not burst, whereas an animal cell will burst. Which part of the plant cell helps it to withstand the pressure of incoming water?

- A. Plasma membrane
- B. Cell wall ✓
- C. Nucleus
- D. Cytoplasm

Q62 General Science

If the induced EMF in the coil of a conductor of resistance $10\ \Omega$ is -2 V , then the induced current in the coil is:

- A. 0.2 A
- B. -2 A
- C. 2 A
- D. -0.2 A ✓

Q63 General Science

Which of the following is the least reactive metal in the reactivity series?

- A. Cu
- B. Ag
- C. Au ✓
- D. Hg



Q64 General Science

Which of the following methods is used to prevent STDs to some extent?

- A. Vasectomy
- B. Tubectomy
- C. Copper-T
- D. Condoms



Q65 General Science

A ball of diameter 10 cm is placed at a distance of 40 cm in front of a lens with a power of +5.0 D. The diameter of the image of the ball will be:

- A. 6 cm
- B. 8 cm
- C. 10 cm
- D. 12 cm



Q66 General Science

The correct relation between v , u , and f for a spherical mirror is:

- A. $v = u + f$
- B. $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$
- C. $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$
- D. $\frac{1}{f} + \frac{1}{u} = \frac{1}{v}$



Q67 General Science

Out of the following options, which is the best strategy to avoid acquiring HIV?

- A. Simply by avoiding sex with people who have AIDS
- B. Only restrict sex with prostitutes
- C. Only avoid sex with drug addicts
- D. Restrict sex to a single known healthy person



Q68 General Science

Which of the following is the general formula of alkene?

A. C_nH_{2n+2}

B. C_nH_{2n} ✓

C. C_nH_{2n-2}

D. C_nH_{2n+4}

Q69 General Science

Metals are electropositive in nature.

Which of the following is the correct explanation for the given assertion?

A. Metals lose electrons to form anions.

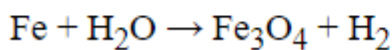
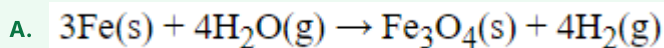
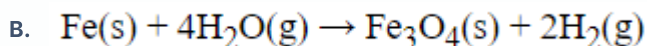
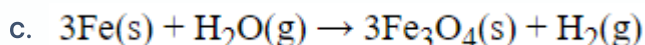
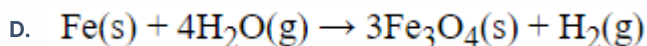
B. Metals gain electrons to form anions.

C. Metals gain electrons to form cations.

D. Metals lose electrons to form cations. ✓

Q70 General Science

Which of the following is the correct balanced equation for the given chemical reaction?



Q71 General Science

The correct relation between ρ , R , l and A is:

A. $R = \rho l A$

B. $\rho = \frac{Rl}{A}$

C. $\rho = \frac{RA}{l}$ ✓

D. $R = \frac{\rho A}{l}$



Q72 General Science

Who among the following was first to find that every eighth element had properties similar to that of the first element?

- A. Dmitri Ivanovich Mendeléev
- B. Johann Wolfgang Döbereiner
- C. John Newlands
- D. Henry Moseley



Q73 General Science

The only thing that we do not get from natural resources but directly from outside the earth is _____.

- A. Coal
- B. Natural gases
- C. Minerals
- D. Energy



Q74 General Science

A current of 15 mA is flowing through an electronic device when the voltage across the device is 0.3 mV. The resistance of the device is:

- A. 0.2 mΩ
- B. 2.0 mΩ
- C. 20 mΩ
- D. 200 mΩ



Q75 General Science HINDI - no English version saved

किसी परिनालिका में उत्पन्न चुंबकीय क्षेत्र की प्रबलता, निम्नलिखित में से किस कारक पर निर्भर नहीं करती है?

- A. परिनालिका में फेरों की संख्या
- B. परिनालिका में धारा की प्रबलता
- C. क्रोड सामग्री के रूप में लकड़ी की छड़ का उपयोग किए जाने पर
- D. क्रोड सामग्री के रूप में नर्म लोहे का उपयोग किए जाने पर



Q76 General Science

In an electric circuit 2 lamps of resistances $10\ \Omega$ and $20\ \Omega$ are in parallel and a battery of 20 V is applied. If power, voltage, current and resistance are represented by P, V, I and R , respectively, then which of the following relations holds true?

A. $P = V^2 R$

B. $P = \frac{V^2}{R}$

C. $P = \frac{V}{R^2}$

D. $P = IR^2$

Q77 General Science

What is the percentage of oxygen in air normally inhaled and exhaled by human beings?

A. Around 18% in inhaled air and 10% in exhaled air

B. Around 19% in inhaled air and 17% in exhaled air

C. Around 20% in inhaled air and 2% in exhaled air

D. Around 21% in inhaled air and 16% in exhaled air

Q78 General Science

What happens when concentrated hydrochloric acid is added to manganese dioxide?

A. Hydrogen gas is liberated.

B. Hydrochloric acid is reduced to chlorine gas.

C. Manganese dioxide is reduced to manganese (II) chloride.

D. Hydrochloric acid is reduced while MnO_2 is oxidised.

Q79 General Science

Which of the following compounds reacts with carbon dioxide to form lime stone?

A. Calcium carbide

B. Calcium

C. Calcium oxide

D. Calcium hydroxide



Q80 General Science

Suppose a ball is placed in front of a concave mirror and a real image that is twice the size of the ball is formed on a screen. The ball and the screen are then moved until the image is five times the size of the object. If the shift of the screen is d , then the shift in the object is:

A. $\frac{d}{10}$



B. $\frac{d}{12}$

C. $\frac{d}{15}$

D. $\frac{d}{18}$

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following depict the characteristics of the Reserve Bank of India?

A. It issues the currency of the country.

B. It controls money supply of the country through various methods.

C. It acts as a banker to the government.

D. It accepts deposits from the public and lends out part of these funds to those who want to borrow.

A. A, B and D

B. B, C and D

C. A, C and D

D. A, B and C



Q82 General Awareness and Current Affairs

Which of the following lies under the jurisdiction of the Central Government?

A. District Board

B. Municipal Board

C. Cantonment Board

D. Town Area



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Q83 General Awareness and Current Affairs

The Bhakhra Nangal dam is built on which river?

- A. Godavari
- B. Brahmaputra
- C. Sutlej
- D. Jhelum



Q84 General Awareness and Current Affairs

Which agency coordinates with various federal and state government agencies and departments to collect and compile the data required to calculate the GDP in India?

- A. Ministry of Commerce and Industry
- B. Reserve Bank of India
- C. Indian Statistical Institute
- D. National Statistical Office



Q85 General Awareness and Current Affairs

The words Socialist, Secular and Integrity were added in the preamble of Indian Constitution by which amendment?

- A. 72nd
- B. 44th
- C. 42nd
- D. 52nd



Q86 General Awareness and Current Affairs

Who is the Chairperson of the National Commission for Women as on 1 April 2022?

- A. Mohini Giri
- B. Rekha Sharma
- C. Swati Maliwal
- D. Jayanti Patnaik



Q87 General Awareness and Current Affairs

The registry of The Supreme Court is headed by who among the following?

A. Secretary General



B. Attorney General

C. President

D. Chief Justice of India

Q88 General Awareness and Current Affairs

In July 2022, the 17th campus of the National Institute of Fashion Technology (NIFT) was inaugurated by the Union Textile Minister Sri Piyush Goyal at which place?

A. Patna

B. Panchkula



C. Shillong

D. Rae Bareli

Q89 General Awareness and Current Affairs

Who gave the concept of the Grameen Bank Model, which has inspired the creation of Regional Rural Banks (RRBs) in India?

A. Ziaur Rahman

B. Rejwan Ahammad Taufiq

C. Abdul Hamid

D. Muhammad Yunus



Q90 General Awareness and Current Affairs

Who among the following was widely remembered for hoisting the Indian National flag at the Gowalia Tank maidan, Bombay during a Quit India Movement in 1942?

A. Aruna Asaf Ali



B. Durgavati Devi

C. Rani Gaidinliu

D. Velu Nachiyar



Q91 General Awareness and Current Affairs

The Ancient Indian Epic ' _____ ' Stands as the longest epic poem known, and has been described as 'the longest poem ever written'.

- A. The Ramayana
- B. The Mahabharata
- C. The Bhagawad Gita
- D. The Buddhacharita

Q92 General Awareness and Current Affairs

Tata Iron and Steel Company (TISCO) was incorporated in which of the following years?

- A. 1905
- B. 1906
- C. 1907
- D. 1908

Q93 General Awareness and Current Affairs

Where was the latest Regional Centre of the Sports Authority of India opened on 2 November 2020?

- A. Zirakpur
- B. Sonipat
- C. Imphal
- D. Bhopal

Q94 General Awareness and Current Affairs

The part of the Himalayas lying between Satluj and Kali rivers is known as:

- A. Purvanchal
- B. Assam Himalayas
- C. Nepal Himalayas
- D. Kumaun Himalayas



Q95 General Awareness and Current Affairs

Who won the Men's Single title at the 2022 Australian Open tennis tournament?

- A. Roger Federer
- B. Novak Djokovic
- C. Daniil Medvedev
- D. Rafael Nadal



Q96 General Awareness and Current Affairs

Which IIT, along with Visual Quest and Youth4Jobs, developed India's first AI-based job portal for persons with disabilities called 'Swarajability'?

- A. IIT-Kharagpur
- B. IIT-Delhi
- C. IIT-Bombay
- D. IIT-Hyderabad



Q97 General Awareness and Current Affairs

The 8th Schedule of the Constitution of India recognises a total of _____ languages as the official languages.

- A. 20
- B. 21
- C. 22
- D. 23



Q98 General Awareness and Current Affairs

The SVAMITVA (Survey of Villages Abadi and Mapping with Improvised Technology in Village Areas) Scheme, implemented by the Ministry of Panchayati Raj, uses _____ for mapping of land parcels.

- A. drones
- B. earth- orbiting satellites
- C. rockets
- D. helicopters



Q99 General Awareness and Current Affairs

Which sanctuary has the largest number of one-horned Rhinoceros as on June 2022?

- A. Sariska
- B. Kaziranga
- C. Mudumalai
- D. Kanha



Q100 General Awareness and Current Affairs

Mayurbhanj Chhau dance is native to which state?

- A. Jharkhand
- B. Odisha
- C. Manipur
- D. Bihar



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Sony and Mary can complete a painting in 4 days and 6 days, respectively. They work on same painting on alternate days starting with Mary. In how many days will they together complete the painting?

A. 4.5

B. 5



C. 5.25

D. 4.75

Q2 Mathematics

If $m = -9$ and $n = 13$, find the value of $25m^2 + 40mn + 16n^2$.

A. 49



B. 64

C. 81

D. 100

Q3 Mathematics

Which of the options given below correctly describes the nature of the roots of the quadratic equation $x^2 + 4\sqrt{3}x + 3 = 0$?

A. irrational and equal

B. rational and equal

C. rational and unequal

D. irrational and unequal



Q4 Mathematics

The number $0.\overline{335}$ can be represented in the form of $\frac{P}{Q}$ (where P and Q are natural numbers) as:

A. $\frac{332}{995}$

B. $\frac{332}{895}$

C. $\frac{332}{990}$



D. $\frac{332}{980}$

Q5 Mathematics

A shopkeeper allows 18% discount on the marked price of an article and still makes a profit of 23%. If he gains ₹1,840 on the sale of the article, then what is the marked price of the article?

A. ₹12,000



B. ₹10,000

C. ₹15,000

D. ₹9,840

Q6 Mathematics

Johnny borrows ₹7,000 from a bank at simple interest. After 3 years he pays ₹4,000 to the bank, this amount being entirely adjusted as repayment of part of the principal borrowed. At the end of 5 years from the date of borrowing he pays ₹4,350 to the bank to settle the account. Find the rate of interest.

A. 4%

B. 5%



C. 6%

D. 7%



Q7 Mathematics

The expression $(3.7)^3 - 3 \times (3.7)^2 \times (0.7) + 3(3.7) \times (0.7)^2 - (0.7)^3$ is equal to:

A. 30

B. 10

C. 35

D. 27 ☒

Q8 Mathematics

If $x \neq y, z > 0$, and $(x + z)^2 : (y + z)^2 :: x : y$, then find a , where $a > 0$, such that $x : a :: a : y$.

A. $x^2 y^2$ B. $x - y$ C. $-z$ D. z ☒

Q9 Mathematics

The ratio of the present ages of A to B is 7 : 3. The ratio of A's age 4 years ago to B's age 4 years hence is 2 : 1. The difference between A's age 4 years hence and B's age 4 years ago is:

A. 46 years

B. 56 years ☒

C. 88 years

D. 36 years

Q10 Mathematics

The total cost price of 100 apples is ₹700. They are sold at a rate of ₹96 per dozen. The profit percentage is _____.

A. $8\frac{2}{3}\%$ B. $14\frac{2}{7}\%$ ☒C. $13\frac{1}{7}\%$ D. $24\frac{1}{7}\%$ 

Q11 Mathematics

The volume (in cm^3) of a right circular cone, whose slant height is 28 cm and radius of base is 21 cm, is _____. (Take $\pi = \frac{22}{7}$)

A. 38808

B. $3234\sqrt{7}$ ✓

C. $1617\sqrt{7}$

D. 30808

Q12 Mathematics

Raju's age after 30 years will be 2 times his age 4 years ago. The present age of Raju is:

A. 42 years

B. 40 years

C. 38 years ✓

D. 36 years

Q13 Mathematics

Five years ago the sum of the ages of A and B was 58 years. The difference between B's age 8 years ago and A's age 8 years hence is 16 years. The ratio of the present ages of A and B is:

A. 9 : 25 ✓

B. 25 : 9

C. 36 : 52

D. 5 : 13

Q14 Mathematics

For a certain number of observations the median is 55 and the mean is 58. Find the mode.

A. 50

B. 49 ✓

C. 51

D. 52



Q15 Mathematics

The measures of three angles of a quadrilateral are given as 110° , 55° and 125° . The measure of its fourth angle is _____.

A. 110° B. 60° C. 90° D. 70° ✓**Q16** Mathematics

Two trains start at the same time from A and B and proceed towards each other at speeds of 85 km per hour and 105 km per hour, respectively. When they meet, it is found that train from B has travelled 200 km more than the train from A. The distance between A and B is:

A. 1950 km

B. 1800 km

C. 1900 km ✓

D. 2000 km

Q17 Mathematics

The value of $40 - [3 - \{4 - (6 - \overline{6-4})\}]$ is _____.

A. 300

B. 100

C. 37 ✓

D. 47

Q18 Mathematics

The length of each edge of a cube is increased by 50%. The percentage increase in the surface area is:

A. 25 %

B. 125% ✓

C. 150%

D. 225%



Q19 Mathematics

The product of the HCF and the LCM of 4, 20, 28 is:

A. 560



B. 140

C. 564

D. 136

Q20 Mathematics

A hollow cylinder of height h has inner and outer radii of base given as r and R , respectively. The ratio of the curved surface area to the total surface area of this cylinder is:

A. $h : (h + R - r)$



B. $(R + r - h) : h$

C. $(R - r - h) : r$

D. $h : (R - r - h)$

Q21 Mathematics

Which of the numbers below is exactly divisible by 33?

A. 19679

B. 27441

C. 73205

D. 25080

**Q22** Mathematics

A train travels at a speed of 30 km/h for 6 hours and at 45 km/h for 4 hours. What is the average speed of the train during these 10 hours?

A. 35 km/h

B. 36 km/h



C. 40 km/h

D. $37\frac{1}{2}$ km/h



Q23 Mathematics

If $\cot A + \cos A = m$ and $\cot A - \cos A = n$, then:

A. $m^2 - n^2 = 16 mn$

B. $(m^2 - n^2)^2 = 4 mn$

C. $(m^2 - n^2)^2 = 16 mn$ ✓

D. $m^2 + n^2 = 4 mn$

Q24 Mathematics

If one angle of a quadrilateral measures 120° and its remaining three angles are equal in measure to one another, then the measure of each of these three remaining angles is equal to _____.

A. 110°

B. 80° ✓

C. 60°

D. 90°

Q25 Mathematics

The roots of $2^{2x} - 10 \times 2^x + 16 = 0$ are:

A. 2, 8

B. 1, 3 ✓

C. 1, 8

D. 2, 3



Q26 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(7, 127, 6)

(8, 129, 5)

A. (9, 168, 3)

B. (11, 144, 9)

C. (10, 156, 4)



D. (13, 131, 5)

Q27 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

ON : NPMO

IN : HJMO

A. GO : ARED

B. TO : SUNP



C. AT : CDUV

D. DO : ACMN

Q28 General Intelligence and Reasoning

Mohan drives 6 km towards the south and takes a turn to the right at 90° . After driving a distance of 3 km, he turns to the right and drives further 3 km. Now, in which direction is he from the starting place? (All turns are 90 degree turns only)

A. North

B. South

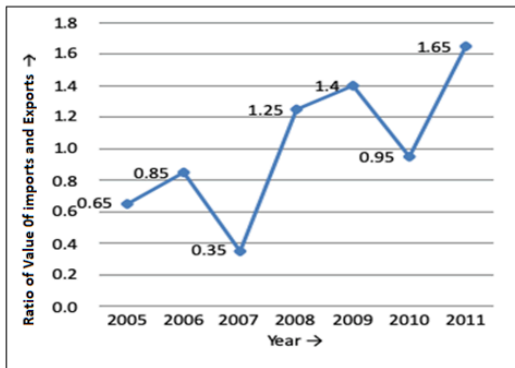
C. South-East

D. South-West



Q29 General Intelligence and Reasoning

The following graph shows the ratio of the imports and exports of an industry during the period from 2005 to 2011. Study the graph and answer the question that follows.



If the imports of the company in 2009 were 420 crore, then how much were the exports?

- A. 250 crore
- B. 300 crore
- C. 350 crore
- D. 400 crore



Q30 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All jugs are cans.

All cans are engines.

Some jugs are stoves.

Conclusions:

I. Some engines are stoves.

II. Some cans are jugs.

- A. Only conclusion I follows.
- B. Only conclusion II follows.
- C. Neither conclusion I nor II follows.
- D. Both conclusions I and II follow.



Q31 General Intelligence and Reasoning

Seven friends, Chandan, Aman, Falak, Manoj, Mahima, Bony and Fatima, are standing in a line facing east but not necessarily in the same order. Chandan is to the immediate right of Fatima. Fatima is fourth to the right of Falak. Manoj is an immediate neighbour of both Aman and Bony. Falak, who is third to the left of Aman, is standing at one of the extreme end.

What is the correct position of Mahima?

- A. To the immediate left of Chandan
- B. To the immediate left of Bony
- C. Immediate neighbour of Bony and Fatima
- D. Fourth to the right of Manoj

**Q32** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	6	8	4	+	5	#	%	2	\$	1	^	7	9	*	@
Code	S	U	T	W	N	P	V	D	A	Z	J	M	O	M	Y

Conditions:

- (i) If the first and last elements are numbers, then the last element will be replaced by the symbol @.
- (ii) If the first element is a symbol, then the first element will be coded as ©.
- (iii) If both the first and second elements are numbers, then the third element will be coded as *.

What will be the code for the following?

6 % \$ 8 5

- A. SVAU©
- B. SVAU@
- C. ©UAV@
- D. SUAV©



Q33 General Intelligence and Reasoning

The given statements are followed by two conclusions. Find out which conclusion is true based on the given statements.

Statements:

$J > K = L, M \geq N < K, O < J < P, N > Q > R$

Conclusions:

I. $P > M$

II. $N < P$

A. Only conclusion I is true

B. Only conclusion II is true



C. Neither conclusion I nor II is true

D. Both conclusions I and II are true

Q34 General Intelligence and Reasoning

A statement is given followed by two conclusions numbered I and II. You have to assume everything in the statement to be true and decide which of the conclusions logically follow(s) beyond a reasonable doubt from the information given in the statement.

Statement:

It is reported that heavy and erratic rainfall has destroyed many agricultural crops and farmers are in debt.

Conclusions:

I. Farmers need not repay the debt.

II. Prices of groceries and other essential food items such as lentils and grains will surge.

A. Only conclusion I follows

B. Only conclusion II follows



C. Neither conclusion I nor II follows

D. Both conclusions I and II follow

Q35 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.

K P _ L Z _ P _ M Z K _ B _ Z _ P B _ Z

A. B K B P N P O

B. B K B P N K P

C. B K P P O K P

D. B K B P N K O



Q36 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word GERMANY is arranged in alphabetical order?

A. 2

B. 4

C. 5

D. 3



Q37 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$160 \times 8 + 12 - 6 \div 180 \times 6 - 4 = ?$$

A. 172

B. 182

C. 192



D. 202

Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

100, 90, 81, 73, 66, 60, 55, ?

A. 50

B. 51



C. 52

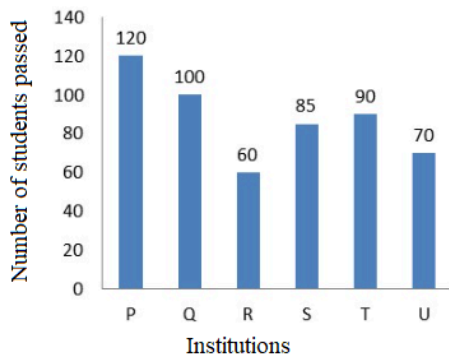
D. 53



Q39 General Intelligence and Reasoning

Study the graph and answer the question that follows.

The following bar graph shows the number of students passed in class XII board exam from six different institutions.



Students passed from institutions U, T, P and Q together is how much more than that of institutes S and R together?

A. 234

B. 235



C. 265

D. 225

Q40 General Intelligence and Reasoning

Each of the six security guards, L, M, N, O, P and Q, have their night shift duties on six different days of a week, starting from Monday and ending on Saturday of the same week, but not necessarily in the same order. L's nightshift duties are on the day immediately after N. O's nightshift duties are on the day immediately before P but it is not on Monday. M's nightshift duty is on Saturday. Q's nightshift duty is on Wednesday.

Who among the following has nightshift duties on Tuesday?

A. O

B. N

C. L



D. P

Q41 General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

6 : 36 :: 13 : 169 :: 17 : 289 :: 23 : ?

A. 578

B. 533

C. 521

D. 529



Q42 General Intelligence and Reasoning

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 5613742678, what will be the sum of the digits which are third from the left and second from the right, in the number thus formed?

A. 8

B. 9

C. 10



D. 11

Q43 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$38 \div 10 \times 5 - 7 + 10 \times 2 = ?$$

A. 47



B. 45

C. 48

D. 50

Q44 General Intelligence and Reasoning

Five students are sitting in a straight row facing the north. A and B are sitting at the extreme left and the extreme right end of the row, respectively. D is an immediate neighbour of B. C is an immediate neighbour of D and second to the right of A. E is an immediate neighbour of A. Who among the following is sitting in the third position from the extreme right end?

A. E

B. C



C. D

D. B



Q45 General Intelligence and Reasoning

Three statements are given, followed by four conclusions numbered I, II, III and IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some pouches are combs.

All combs are reds.

All reds are sticks.

Conclusions:

I. All pouches are sticks.

II. All combs are sticks.

III. Some reds are combs.

IV. Some sticks are pouches.

A. Only conclusions I, II and III follow.

B. Only conclusions II, III and IV follow.

C. Only conclusions I, III and IV follow.

D. All the conclusions follow.

**Q46** General Intelligence and Reasoning

In a class of 100 students, 24 students score more marks than Sharmistha whereas 18 students score lesser marks than Amit. How many students score lesser marks than Sharmistha but more marks than Amit?

A. 54

B. 55

C. 56



D. 57

Q47 General Intelligence and Reasoning

Ajay is driving in the east direction and covers a distance of 2.5 km and then takes a turn in the left direction and travels a distance of 3 km. Further, he turns to the right and travels a distance of 4.5 km. Lastly, he turns to his right and travels a distance of 3 km. How far is he from the starting point? (All turns are 90 degree turns only)

A. 5 km

B. 6 km

C. 7 km



D. 8 km



Q48 General Intelligence and Reasoning

Each vowel in the word FLOWER is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter, thus formed, is arranged in alphabetical order, which letter will be second from the right?

A. K

B. P

C. Q



D. E

Q49 General Intelligence and Reasoning

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All creepers are vegetables.

All vegetables are fruits.

Some fruits are flowers.

Conclusions:

I. Some creepers are flowers.

II. Some fruits are creepers.

III. All vegetables are flowers.

A. Only conclusions I and II follow



B. Only conclusions I and III follow

C. Only conclusions II and III follow

D. Only conclusion II follows

Q50 General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. S is taller than only two other friends. R is shorter than only one friend. P is shorter than S but taller than Q. T is shorter than U. Who is the shortest among all the friends?

A. P

B. T

C. Q



D. R



Q51 General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

(Left) D # Y * C \$ O A T U @ I & E % N F P % & L # Z (Right)

How many such symbols are there which are immediately preceded and immediately followed by a vowel?

A. Four

B. Three

C. Two



D. One

Q52 General Intelligence and Reasoning

In a queue, Manish is 18th from the front end and Aman is 12th from the rear end, and there are 8 people between them. How many people are there in the queue if Aman is standing somewhere behind Manish in the queue?

A. 37

B. 38



C. 39

D. 40

Q53 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

2, 3, 4, 4, 6, 8, 6, 9, 12, 8, 12, 16, ?

A. 12

B. 10



C. 15

D. 20

Q54 General Intelligence and Reasoning

How many such pairs of letters are there in the word REPUBLICAN (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. 2

B. 4

C. 5

D. 6

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



Q55 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbols	2	@	9	5	\$	&	3	%	#	7	+	4	8	6
Code	T	F	A	J	L	E	W	Q	D	P	R	B	U	S

Conditions:

- (i) If the first element is a symbol and the last is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last is an even number, the first and the last elements are to be coded as ©
- (iii) If both the second and the third elements are perfect squares, the third element is to be coded as the code for the second element.

Question: + # 7 & 6

A. SDPER



B. RDPRS

C. PERDS

D. DEPSR

General Science

25 Questions • Answer Key

Q56 General Science

Which of the following is produced when baking powder is heated?

A. Carbon monoxide and sodium salt of tartaric acid is produced.

B. Carbon dioxide and sodium carbonate is produced.



c. Carbon dioxide and sodium salt of tartaric acid is produced.

D. Carbon monoxide and sodium carbonate is produced.

Q57 General Science

The most essential difference between a DC and an AC generator is _____.

A. Higher voltages are generated by DC generator only

B. Higher Voltages are generated by AC generator Only

c. DC generator uses a commutator and AC generator uses Slip rings



D. DC generator has permanent magnet and AC has an electromagnet



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Q58 General Science

Suppose in a circuit, several electric lamps are required to be used on a 220 V electric supply line, and they are rated as 20 W. If the maximum allowable current is 10 A, then the number of lamps that can be connected in parallel with each other across the two wires of the 220 V line is:

- A. 55
- B. 110
- C. 165
- D. 220

**Q59** General Science

Consider two circuits, A and B, each of which has six resistors and each Circuit of resistance R_A and R_B respectively. In each circuit, the resistors are in such a way that the net resistance of each circuit is the minimum. Now a 20 V battery with negligible internal resistance is connected across each circuit separately, and the current drawn by circuit A and circuit B are 6 A and 8 A, respectively. Then R_A and R_B will be:

- A. $R_A = 15 \Omega$ and $R_B = 20 \Omega$
- B. $R_A = 20 \Omega$ and $R_B = 15 \Omega$
- C. $R_A = 30 \Omega$ and $R_B = 15 \Omega$
- D. $R_A = 15 \Omega$ and $R_B = 30 \Omega$

**Q60** General Science

Precipitation reactions occur when cation of one reactant and anion of second reactant, found in an aqueous solution, combine to form _____.

- A. a soluble acid
- B. a soluble ionic solid
- C. an insoluble acid
- D. an insoluble ionic solid

**Q61** General Science

The HIV-AIDS virus CANNOT be transmitted by:

- A. shaking hand
- B. blood transfusion
- C. sexual contact
- D. breast feeding



Q62 General Science

Which of the following gases are evolved at the anode and the cathode, respectively, during electrolytic decomposition of aqueous sodium chloride?

- A. H_2 gas at the anode and Cl_2 gas at the cathode.
- B. Cl_2 gas at the anode and H_2 gas at the cathode.
- C. H_2 gas at the anode and O_2 gas at the cathode.
- D. O_2 gas at the anode and H_2 gas at the cathode.

Q63 General Science

When an object is placed at a point 21 cm in front of a convex mirror, the image is formed at 7 cm behind the mirror. Now, someone moves the object to a distance of 14 cm in front of the mirror. The distance of the image from the mirror (in cm) now is:

- A. +6
- B. -6
- C. -3
- D. +3

Q64 General Science

Which of the following organelles are present only in plants?

- A. Mitochondria
- B. Plastids
- C. Vacuoles
- D. Lysosomes

Q65 General Science

$6CO_2(aq) + 12H_2O(l) \xrightarrow{\quad?} C_6H_{12}O_6(aq) + 6O_2(aq) + 6H_2O(l)$ Select correct reaction conditions for given reaction.

- A. Sunlight and chlorophyll
- B. High pressure
- C. High temperature
- D. Inert atmosphere



Q66 General Science

In the Modern Periodic Table, atomic size increases down the group because:

- A. number of shells increases ✓
- B. valency increases
- C. tendency to lose electrons decreases
- D. nuclear charge increases

Q67 General Science

What is the unit of magnification?

- A. Dioptre
- B. cm
- C. Newton
- D. It has no unit ✓

Q68 General Science

What happens when aqueous silver nitrate is added to sodium chloride solution?

- A. Brown precipitate of silver chloride is produced.
- B. Yellow precipitate of silver chloride is produced.
- C. White precipitate of silver chloride is produced. ✓
- D. No precipitate of silver chloride is produced.

Q69 General Science

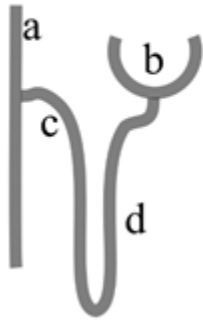
Saturated carbon compounds are normally:

- A. less stable than unsaturated compounds
- B. less reactive than unsaturated compounds ✓
- C. having electrostatic force of attraction
- D. having a double bond between carbon atoms



Q70 General Science

The following figure shows a human nephron. Which part is the collecting duct?



A. Region a



B. Region b

C. Region c

D. Region d

Q71 General Science

Many groups like the 'Narmada Bachao Andolan' oppose building of big dams. What is the negative social impact of a big dam that such groups oppose?

A. People have to wait for many years (decades) to get benefits.

B. It causes flash floods in the downstream area.

C. It displaces people in the upstream reservoir area.



D. It leads to conflicts between people of different States.

Q72 General Science

The term 'triads' was used by:

A. Mendeleev

B. Johann Wolfgang Döbereiner



C. John Newlands

D. Henry Moseley



Q73 General Science

Which of the following develops into a seedling under appropriate conditions?

- A. Cotyledons
- B. Endosperm
- C. Seed coat
- D. Embryo



Q74 General Science

Which of the following dams was constructed on river Ganga?

- A. Tehri dam
- B. Rihand dam
- C. Koyna dam
- D. Chamera dam



Q75 General Science

Name the process through which gaseous exchange takes place across the cell membrane.

- A. Diffusion
- B. Osmosis
- C. Endocytosis
- D. Absorption



Q76 General Science

The sky appears blue due to:

- A. scattering of light of higher wave length
- B. scattering of light of lower wave length
- C. dispersion of light of higher wave length
- D. dispersion of light of lower wave length



Q77 General Science

A needle of height 4 cm is placed at a distance of 45 cm in front of a concave lens of focal length 30 cm. The height of the image of the needle will be:

A. 1.6 cm



B. 1.9 cm

C. 2.2 cm

D. 2.5 cm

Q78 General Science

What is the heat energy produced in a resistance of $10\ \Omega$ when 5 A current flows through it for 5 minutes?

A. $7.5 \times 10^3\text{ J}$

B. $7.5 \times 10^4\text{ J}$



C. $7.5 \times 10^5\text{ J}$

D. $7.5 \times 10^6\text{ J}$

Q79 General Science

Bone cells are embedded in a hard matrix that is composed of:

A. phosphorus and potassium

B. potassium and calcium

C. fluoride and calcium

D. calcium and phosphorus



Q80 General Science

If coil A of resistance $15\ \Omega$ and coil B of resistance $5\ \Omega$ are subjected to time varying magnetic field, then the current induced in these coils are:

A. same

B. different



C. in the ratio 1 : 2

D. in the ratio 1 : 1



Q81 General Awareness and Current Affairs

Which of the following functions does NOT fall under the jurisdiction of local bodies?

- A. Public Health
- B. Sanitation
- C. Registration of Births and Deaths
- D. Law and Order



Q82 General Awareness and Current Affairs

In which state is the 'Solung' festival celebrated?

- A. Arunachal Pradesh
- B. Uttar Pradesh
- C. Madhya Pradesh
- D. Himachal Pradesh



Q83 General Awareness and Current Affairs

Which sportsperson among the following was honoured with the Padma Bhushan in 2022?

- A. Avani Lekhara
- B. Sumit Antil
- C. Pramod Bhagat
- D. Devendra Jhajharia



Q84 General Awareness and Current Affairs

Whom did PV Sindhu beat to win the women's singles title at the Swiss Open Super 300 Badminton Tournament in Basel on 27 March 2022?

- A. Chen Yu Fei
- B. Busanan Ongbamrungphan
- C. Kristy Gilmour
- D. Michelli Li



Q85 General Awareness and Current Affairs

_____ is the leading manganese ore producing State of India and accounted for 33% of the total production in 2018-19.

- A. Odisha
- B. Maharashtra
- C. Karnataka
- D. Madhya Pradesh



Q86 General Awareness and Current Affairs

In Economics, which of the following curves is 'inverse U-shaped'?

- A. Average variable cost curve
- B. Short run marginal cost curve
- C. Long run average cost curve
- D. Marginal product curve



Q87 General Awareness and Current Affairs

Which social reformer founded the Satyashodhak Samaj?

- A. Narayan Guru
- B. Dayananad Saraswati
- C. Keshab Chandra Sen
- D. Jyotirao Phule



Q88 General Awareness and Current Affairs

Article 123 of the Constitution of India gives the power of enacting Ordinances to who among the following?

- A. President
- B. Prime Minister
- C. Vice-President
- D. Speaker of the Lok Sabha



Q89 General Awareness and Current Affairs

_____ was launched in January 2021 to conceptualise innovative toys based on the Indian value system which will inculcate the positive behaviour and good value among the children.

- A. Smart India Hackathon
- B. Code Gladiators
- C. Toycathon
- D. Great Indian Alexa Hackathon

Q90 General Awareness and Current Affairs

Of the options listed below, _____ is considered the most important contribution of the British rule in India in terms of infrastructural development.

- A. railways
- B. ports
- C. airways
- D. highways

Q91 General Awareness and Current Affairs

What is the term used for pricing strategy in which a firm charges different customers different prices for the same product?

- A. Two Part Pricing
- B. Price mechanism
- C. Price discrimination
- D. Price elasticity

Q92 General Awareness and Current Affairs

Which of the following rivers is NOT a tributary of the Yamuna?

- A. Chambal
- B. Gandak
- C. Betwa
- D. Ken



Q93 General Awareness and Current Affairs

In which North Eastern City will you find The Christ Church which is regarded as the oldest Church of North East India?

- A. Aizawl
- B. Guwahati
- C. Kohima
- D. Itanagar

Q94 General Awareness and Current Affairs

In which place of Tamil Nadu will you find 'The Tamil University'?

- A. Salem
- B. Madurai
- C. Erode
- D. Thanjavur

Q95 General Awareness and Current Affairs

What is the age limit for a judge of the Supreme Court of India?

- A. 70 years
- B. 65 years
- C. 60 years
- D. 62 years

Q96 General Awareness and Current Affairs

In March 2022, the Reserve Bank of India (RBI) increased the eligibility criteria for microfinance loans to a household having an annual income of up to _____.

- A. ₹3 lakhs
- B. ₹3.25 lakhs
- C. ₹4 lakhs
- D. ₹3.5 lakhs



Q97 General Awareness and Current Affairs

Identify the states from following which are related to Pre-Monsoon shower 'Nor westers'

- A. Kerala and Karnataka
- B. West Bengal and Assam
- C. Rajasthan and Punjab
- D. Gujarat and Maharashtra

Q98 General Awareness and Current Affairs

According to Economic Survey Report of 2021-22, as on September 2021, what percentage of people have opted for ₹1,000 pension per month under the Atal Pension Yojana?

- A. 78%
- B. 80%
- C. 85%
- D. 90%

Q99 General Awareness and Current Affairs

Under the NITI Aayog SDG India Index, overall State and UT scores are generated from goal-wise scores to measure aggregate performance of the sub-national unit based on its performance across the 16 SDGs. Based on these scores, States/UTs are categorised in four categories. Which of the following is NOT one of the categories?

- A. Aspirant
- B. Performer
- C. Front Runner
- D. Excellent

Q100 General Awareness and Current Affairs

Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) kendras added nutraceuticals to their product basket in March 2022. Which of the following is NOT included under nutraceuticals?

- A. Protein powder
- B. Immunity bars
- C. Vitamin supplements
- D. Dry fruits



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The ratio of the present ages of Shinjan and Aamyia is 3 : 4. After 10 years this ratio will become 5 : 6. The present age (in years) of Aamyia is:

A. 18

B. 60

C. 20



D. 65

Q2 Mathematics

In a rectangle PQRS, if $m\angle QPR = 26^\circ$, then $m\angle SQR =$ _____.

A. 26° B. 52° C. 64° D. 74°

Q3 Mathematics

Bina and Neena together weave one dozen sweaters in 8 days working for 10 hours per day. If they have to finish the work in 5 days, for how many hours should they work per day?

A. 16



B. 12

C. 14

D. 11

Q4 Mathematics

First find the median of 46, 64, 87, 41, 58, 77, 35, 90, 55, 92, and 33. If 92 is replaced with 99 and 41 is replaced with 43 in the data, then find the new median. What is the difference between the old median and the new median?

A. 6

B. 3

C. 2

D. 0



Q5 Mathematics

Arindam purchased a coat for ₹2,100 after getting a discount of 20% and but then paying GST at a rate of 5% on the discounted price. Find the marked price of the coat.

A. ₹2,490

B. ₹2,520

C. ₹2,480

D. ₹2,500 ☒**Q6 Mathematics**

Each side of an equilateral triangle is 6 cm long. What is its area (in cm^2)?

A. 210

B. $6\sqrt{3}$ C. $21\sqrt{3}$ D. $9\sqrt{3}$ ☒**Q7 Mathematics**

The marked price of an article is ₹7,200. Two successive discounts of 9% and 15% are offered. Find the selling price of the article.

A. ₹5,472.00

B. ₹6,400.00

C. ₹5,569.20 ☒

D. ₹5,600.00

Q8 Mathematics

Let r be the greatest number which when divides 41, 71 and 91 leaves the same remainder. Find the LCM of r and 45.

A. 45

B. 90 ☒

C. 10

D. 75



Q9 Mathematics

If $x = a \sec^n \theta$, $y = b \tan^n \theta$, then:

A. $\left(\frac{x}{a}\right)^{2/n} - \left(\frac{y}{b}\right)^{\frac{2}{n}} = 1$



B. $\left(\frac{a}{x}\right)^{2/n} - \left(\frac{b}{y}\right)^{\frac{2}{n}} = 1$

C. $\left(\frac{x}{a}\right)^{2/n} + \left(\frac{y}{b}\right)^{\frac{2}{n}} = 1$

D. $\left(\frac{a}{x}\right)^{2/n} + \left(\frac{b}{y}\right)^{\frac{2}{n}} = 1$

Q10 Mathematics

The positive root of $4x^2 - 1 = 0$ is:

A. 2

B. $\frac{1}{4}$

C. $\frac{1}{2}$



D. 1



Q11 Mathematics

Study the given table and answer the question that follows.

The table show the percentage of marks obtained by a candidate in five subjects and the weightage given to the subjects, in an examination.

Subject	English	Hindi	Maths	Social Studies	Science
Marks Percentage	90	92	93	78	86
Weightage to subjects	2	2	3	1	2

Find the difference between the weighted average and the average if all subjects had equal weightage.

- A. 2%
- B. 1%
- C. 1.5%
- D. 0.5%

**Q12** Mathematics

If $\sqrt{21} = 4.58$, then the value of $\sqrt{\frac{7}{3}}$, correct to 3 decimal places, is:

- A. 1.520
- B. 1.521
- C. 1.523
- D. 1.527

**Q13** Mathematics

If one of the roots of a quadratic equation with rational coefficients is $2 + \sqrt{3}$, then the quadratic equation is given as _____.

- A. $x^2 - 2 = 0$
- B. $x^2 = 2 - \sqrt{3}$
- C. $x^2 - 4x + 1 = 0$
- D. $x^2 + 4x - 1 = 0$



Q14 Mathematics

If $(x + y + z) = 0$ and $x^2 + y^2 + z^2 = 36$, then the value of $xy + yz + zx$ is:

- A. 18
- B. -28
- C. -6
- D. -18

**Q15** Mathematics

If $a + \frac{1}{a} = 9$, then the value of $a^3 + \frac{1}{a^3}$ is:

- A. 732
- B. 702
- C. 729
- D. 726

**Q16** Mathematics

What is the smallest natural number by which 217800 must be multiplied so that the product is a perfect square?

- A. 2
- B. 3
- C. 4
- D. 5

**Q17** Mathematics

When a man travels equal distances at speeds of V_1 and V_2 km/h, his average speed is 5 km/h. But when he travels at these speeds for equal time periods, his average speed is 5.5 km/h. Find the positive difference between the two speeds.

- A. $\sqrt{10}$ km/h
- B. 10 km/h
- C. 11 km/h
- D. $\sqrt{11}$ km/h



Q18 Mathematics

The value of $(x^{\frac{2}{3}} - x^{\frac{1}{3}}y^{\frac{1}{3}} + y^{\frac{2}{3}})(x^{\frac{1}{3}} + y^{\frac{1}{3}})$ is _____.

A. $x - y$

B. $\frac{1}{x} + \frac{1}{y}$

C. $x + y$ ✓

D. $\frac{1}{x} - \frac{1}{y}$

Q19 Mathematics

₹3,903 is divided between A and B, so that A's share at the end of 7 years will be equal to B's share at the end of 9 years, with interest being compounded annually at the rate of 4% per annum. The share of A is:

A. ₹2,028 ✓

B. ₹1,875

C. ₹1,828

D. ₹2,075

Q20 Mathematics

A field is in the form of a triangle. Its area is 25000 m^2 and the length of the base is 500 m. Its height (in m), corresponding to the given base, is _____.

A. 50

B. 100 ✓

C. 175

D. 200

Q21 Mathematics

If the monthly salary of a person is ₹28,000 and the expenditure for the month is 92% of his salary, then the remaining amount from that month's salary is _____.

A. ₹2,200

B. ₹2,240 ✓

C. ₹2,340

D. ₹2,400



Q22 Mathematics

What is the smallest positive fraction that must be added to the fraction $\frac{3}{5} \times \frac{16}{21} \times \frac{7}{10} \times \frac{3}{4}$ to make it a whole number?

A. $\frac{20}{5}$

B. $\frac{23}{2}$

C. $\frac{19}{25}$ ✓

D. $\frac{19}{16}$

Q23 Mathematics

The ratio of the present ages of Monu and Sonu is 3 : 4. The ratio of the age of Monu 5 years ago and that of Sonu 5 years hence is 2 : 5. Find Monu's present age.

A. 15 years ✓

B. 20 years

C. 18 years

D. 66 years

Q24 Mathematics

The measures of three angles of a quadrilateral are given as 90° , 96° and 88° . The measure of its fourth angle is _____.

A. 82°

B. 86° ✓

C. 88°

D. 96°



Q25 Mathematics

Which of the following statements is NOT correct?

1. There are only four single-digit prime numbers.
2. There are infinitely many prime numbers.
3. A prime number has only two factors.
4. All prime numbers are odd.

A. 1

B. 2

C. 3

D. 4



General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

81: 49 :: 36 : 16 :: 64 :: ?

A. 32

B. 36

C. 25

D. 49



Q27 General Intelligence and Reasoning

Refer to the following number series and answer the question.

7 2 9 6 3 7 3 9 7 7 3 9 7 3 2 2 1 3 3 9 3 7 3 9 3 9

How many 3s are there that are immediately preceded by 7 and immediately followed by 9?

A. Five

B. Two

C. Three

D. Four



Q28 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

ADJUST : BEKWUV :: BACKED : CBDMGF :: PACKUP : ?

A. QBDMWQ

B. QBDMWS

C. QBDMWR



D. QBDMVR

Q29 General Intelligence and Reasoning

Three statements are given, followed by four conclusions numbered I, II, III and IV. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All carpets are scholars.

All scholars are trip advisors.

No hat is a trip advisor.

Conclusions:

I. No trip advisor is a scholar.

II. All carpets are trip advisors.

III. Some trip advisors are scholars.

IV. No carpet is a hat.

A. Only conclusion I follows.

B. Only conclusion I and II follow.

C. Only conclusions II, III and IV follow.



D. All the conclusions follow.

Q30 General Intelligence and Reasoning

A certain number of class I students are sitting in a row on their graduation day, facing north. Ruchi is ninth to the right of Pranavi. No student is to the left of Pranavi. Tanya is fifth to the right of Ruchi. Vipanchi is seventh to the right of Tanya. If no other student is sitting in the row, what is the total number of students seated?

A. 19

B. 20

C. 21

D. 22



Q31 General Intelligence and Reasoning

Each of the six professors of same department, Jayanth, Kiran, Lasya, Mythili, Nischal and Omprakash, have their classes on six different days of a week, starting from Monday and ending on Saturday of the same week, but not necessarily in the same order. Only two professors have classes before Mythili's class. Jayanth has the class on Tuesday and Omprakash has the class on Saturday. Only one professor has the class after the class of Kiran. The class of Nischal is not on any of the days between the classes of Kiran and Mythili.

Who among the following has the class on Monday?

- A. Kiran
- B. Nischal
- C. Mythili
- D. Lasya

**Q32** General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- All eggs are millets.
- All millets are balloons.
- All balloons are prisoners.

Conclusions:

- I. All balloons are eggs.
- II. Some prisoners are millets.
- III. All prisoners are balloons.

- A. Only conclusion I follows.
- B. Only conclusion III follows.
- C. Only conclusion II follows.
- D. All the conclusions follow.

**Q33** General Intelligence and Reasoning

If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 5317846, what will be the sum of the digits which are second from the left and second from the right, in the number thus formed?

- A. 8
- B. 10
- C. 11
- D. 12



Q34 General Intelligence and Reasoning

A statement is followed by two conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$H > L \geq M \geq N > O \leq P \leq Q$$

Conclusions:

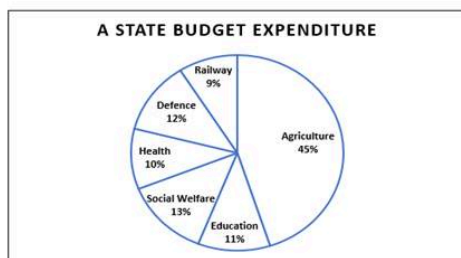
I. $L > P$

II. $M \leq Q$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Neither conclusion I nor II is true
- D. Both conclusions I and II are true

**Q35** General Intelligence and Reasoning

The following pie chart represents the percentage distribution of expenditure of a state's budget. Study the pie chart and answer the question that follows.



Approximately how many degrees should be there in the central angle of the sector for agriculture expenditure?

- A. 142°
- B. 152°
- C. 162°
- D. 172°

**Q36** General Intelligence and Reasoning

Rohini walked for 2 kilometres on a straight road, facing North. Then she took a right turn and walked for 1 kilometre. Then she again took a right turn and walked 2 kilometres. In which direction is she facing now? (All turns are 90 degree turns only)

- A. North
- B. South
- C. East
- D. West



Q37 General Intelligence and Reasoning

If each vowel in the word 'SCIENCE' is changed to the letter preceding it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order, which letter will occur maximum times in the newly formed word?

A. T

B. H

C. O

D. D



Q38 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) J B I S O E Z I L U B O P A R D I H O M A K O (Right)

How many such consonants are there, each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A. Eight



B. Six

C. Three

D. Four

Q39 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

D _ B _ A _ C _ _ G F _ E _ _ H

A. CABDHEFG



B. BACDHEFG

C. CABDEFGH

D. BACDEFGH



Q40 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(16, 64, 5)

(9, 27, 4)

A. (11, 56, 7)

B. (10, 50, 5)

C. (13, 91, 10)

D. (21, 126, 7)



Q41 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Reclaimed land should be avoided as it only has disadvantages.

Arguments:

- I. Many countries have no option but to reclaim land to provide for the increasing population.
- II. Land that is reclaimed has long lasting effect on nature as it deteriorates ecosystems and biodiversity.

A. I weakens, while II strengthens the statement



B. II weakens, while I strengthens the statement

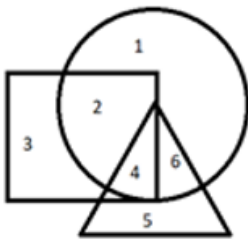
C. Both I and II weaken the statement

D. Both I and II strengthen the statement



Q42 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'actors', the square represents 'directors', and the triangle represents 'producers'. How many actors are there who are directors and also producers?



A. 1

B. 2

C. 3

D. 4

**Q43** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

14, 27, 40, 53, 66, 79, 92, ?

A. 105

B. 104

C. 102

D. 103

**Q44** General Intelligence and Reasoning

Each of the six students, Pavan, Vinay, Reshma, Sunayana, Tarun and Unmukth, has an engineering entrance exam on a different day of a week, starting from Monday and ending on Saturday of the same week, but not necessarily in the same order. Reshma has the exam on Tuesday. Only one student has the exam between Pavan and Reshma. Vinay has the exam on the day immediately after Pavan. None of them have the exam before Unmukth. Sunayana has the exam on the day immediately after Reshma.

On which day does Tarun have the exam?

A. Friday

B. Saturday

C. Wednesday

D. Thursday



Q45 General Intelligence and Reasoning

Each vowel in the word MAJESTY is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter, thus formed, is arranged in alphabetical order, which letter will be third from the left?

A. L

B. I



C. B

D. F

Q46 General Intelligence and Reasoning

Study the following table and answer the question.

Name of the Student	Marks		
	Paper I	Paper II	Paper III
Anushri	83	79	83
Jay	71	90	60
Vinay	64	93	72
Pooja	81	88	87

An exam consists of three papers. If each paper was of 100 marks, then who scored the highest percentage in the exam?

A. Jay

B. Anushri

C. Pooja



D. Vinay

Q47 General Intelligence and Reasoning

Rishabh starts from his house and walks 14 m southwards. Then, he turns left and walks 30 m. Then, he turns left and walks 50 m. Then, he turns left and walks 10 m. He then turns left and walks 36 m. In which direction and how many meters away is he now from his house?

A. 68 m, South-east

B. 30 m, West

C. 20 m, East



D. 10 m, South



Q48 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number /symbol	2	&	5	^	@	6	4	*	3	+	#	7	%	9
Code Letter	A	O	B	Q	T	D	J	G	L	M	K	S	N	R

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for $3 * 6 2$?

A. ©GD©



B. ©GDA

C. LGDA

D. LGD©

Q49 General Intelligence and Reasoning

Seven friends, Anmol, Bhawna, Komal, Diksha, Ekta, Falak and Gopi, are sitting in a row facing north (but not necessarily in the same order). Falak is sitting to the immediate right of Ekta. Ekta is sitting fourth of the right to Gopi. Komal is an immediate neighbour of Bhawna and Diksha. The person who is sitting third to the left of Diksha is at one of the extreme ends.

Who among the following is an immediate neighbour of Gopi and Komal?

A. Bhawna



B. Ekta

C. Falak

D. Diksha

Q50 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$120 \times 4 \div 2 - 8 + 10 = ?$$

A. 58



B. 68

C. 78

D. 48



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Q51 General Intelligence and Reasoning

In a certain code language, 'TALCUM' is written as 'LSZHVN' and 'GRAINS' is written as 'RLFWMA'. How will 'LOWER' be written in that language?

- A. QCTKH
- B. QDTKH
- C. PCTKG
- D. QCTKG



Q52 General Intelligence and Reasoning

Mona, Rahul, Vikas, Kavita, Poonam and Khushi, each has a different height. They are standing in a line according to their heights in an increasing order. Vikas is taller than only one person. Only Rahul is standing between Khushi and Vikas. Mona is shorter than only one person. Exactly two people are standing between Poonam and Rahul. Who is the shortest person in this group?

- A. Rahul
- B. Vikas
- C. Poonam
- D. Kavita



Q53 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1, 5, 13, 29, 61, ?

- A. 131
- B. 128
- C. 253
- D. 125



Q54 General Intelligence and Reasoning

A, C, E, G, J, L, N and O are sitting around a square table facing the centre of the table (but not necessarily in the same order). Some of them are sitting at the corners while some are sitting at the exact centre of the sides. 'E' has 'A' and 'G' as immediate neighbours. The 'A' is immediately left to 'C'. The 'O' is at the immediate right of 'J'. 'L' has 'J' and 'N' as immediate neighbours.

Who is sitting to the immediate left of G?

A. N

B. C

C. E

D. O

**Q55** General Intelligence and Reasoning

Which two mathematical operators should be interchanged to make the given equation correct?

$$18 \times 6 + 12 - 7 \div 2 = 1$$

A. $\times$ and $\div$



B. $\div$ and $-$

C. $-$ and $+$

D. $+$ and $\times$

General Science

25 Questions • Answer Key

Q56 General Science

If the focal length of a spherical mirror increases to double, then the radius of curvature of the mirror will:

A. remain the same

B. increase to double



C. decrease to half

D. increase to four times

Q57 General Science

Which of the following organisations in India advises people how to save petrol/diesel while driving?

A. PCRA



B. PRCA

C. ACRP

D. PARC



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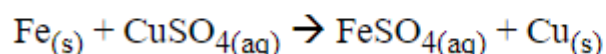
Q58 General Science

Which nitrogenous waste produced in the body is removed by the human kidney?

- A. Urea and uric acid
- B. Urea and ammonia
- C. Only ammonia
- D. Ammonia and uric acid

Q59 General Science

Which of the following explanations regarding the given reaction is correct?



- A. Iron displaces copper because iron is more reactive than copper.
- B. Iron displaces copper because the atomic number of iron is less than copper.
- C. Iron displaces copper because the atomic mass of iron is less than copper.
- D. Iron displaces copper because iron is less reactive than copper.

Q60 General Science

The reproductive parts of a flower are:

- A. sepals and petals
- B. stamens and pistil
- C. stamens and petals
- D. pistil and sepals

Q61 General Science

A compound with molecular formula C_3H_4 belongs to the homologous series of _____.

- A. alkane only
- B. alkene only
- C. alkyne only
- D. alcohol



Q62 General Science

Which of the following is a hydrate of sodium carbonate containing ten molecules of water of crystallisation?

- A. Baking soda
- B. Baking powder
- C. Washing soda
- D. Bleaching powder



Q63 General Science

Which of the following reactions produces water insoluble salts?

- A. Addition reaction
- B. Displacement reaction
- C. Catalytic reaction
- D. Precipitation reaction



Q64 General Science

Suppose in a circuit, a silver wire of length L and cross-sectional area A is replaced by an aluminium wire of length $5L$ and cross-sectional area $9A$. The resistance of the circuit will _____.

(Given that $\rho_{\text{silver}} = 1.6 \times 10^{-8} \Omega \text{ m}$ and $\rho_{\text{Aluminium}} = 2.6 \times 10^{-8} \Omega \text{ m}$)

- A. increase to 1.1 times of itself
- B. increase to 1.2 times of itself
- C. decrease to 0.9 times of itself
- D. decrease to 0.8 times of itself



Q65 General Science

Which of the following statements about the gradation of boiling point in a homologous series is correct?

- A. The boiling points increase with increasing molecular mass.
- B. The boiling points decrease with increasing molecular mass.
- C. The boiling point does not depend on molecular mass.
- D. The boiling points increase with decreasing molecular mass.



Q66 General Science

What type of nutrition is observed in mushrooms?

- A. Autotrophic
- B. Saprotrophic
- C. Chemotrophic
- D. Symbiotic



Q67 General Science

What is the trend for the atomic number while moving across a period in the modern periodic table?

- A. The atomic number increases by one unit.
- B. The mass number increases by one unit.
- C. The atomic number increases by two units.
- D. The atomic number decreases by one unit.



Q68 General Science

Which of the following statements is correct?

- A. Plastics and paper are biodegradable.
- B. Plastic cannot be recycled.
- C. Paper is biodegradable.
- D. Paper cannot be recycled.



Q69 General Science

Plaster of Paris should be stored in sealed containers.

Which of the following is the correct explanation for the given assertion?

- A. It turns into a hard solid after reacting with moisture present in air.
- B. It decomposes in the presence of sunlight.
- C. It turns into hard solid after reacting with oxygen present in the air.
- D. It decomposes in the presence of oxygen.



Q70 General Science

When a car is moving through a dusty road during night, a path of beam from the headlight is clearly visible due to _____ effect.

- A. dispersion
- B. immersion
- C. refraction
- D. scattering



Q71 General Science

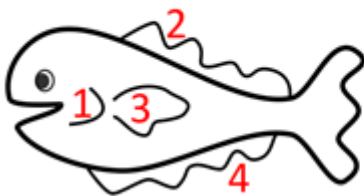
Consider a wire of resistance $10\ \Omega$. If there is another wire of the same material and the same length as the previous one, but the cross-sectional area is double, then the resistance of the new wire is:

- A. $20\ \Omega$
- B. $10\ \Omega$
- C. $7.5\ \Omega$
- D. $5\ \Omega$



Q72 General Science

In the following figure of a fish, where are the gills located?



- A. Position 1
- B. Position 2
- C. Position 3
- D. Position 4



Q73 General Science

Which hormone is particularly high in fruits?

- A. Gibberellins
- B. Auxins
- C. Cytokinin
- D. Absciscic acid



Q74 General Science

In Mendel's cross, a pure tall plant (TT) is crossed with a dwarf plant (tt). The Phenotypic ratio in F₂ generation is:

- A. 1 : 1
- B. 2 : 1
- C. 3 : 1
- D. 1 : 3

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q75 General Science

A house is supplied electricity through a 15 A fuse. The number of 100 W lamps that can be used simultaneously along with a 2KW AC is: (The AC and lamps both are rated for 220 V Supply)

- A. 23
- B. 18
- C. 15
- D. 13



Q76 General Science

How many elements occur naturally?

- A. 92
- B. 93
- C. 94
- D. 95



Q77 General Science

In order to obtain an inverted and magnified image of an object by a spherical mirror of radius of curvature 40 cm, the object should be placed:

- A. 20 cm from a convex mirror
- B. between 20 cm and 40 cm from a concave mirror
- C. between 20 cm and 40 cm from a convex mirror
- D. at infinity from a Convex mirror



Q78 General Science

The resistance of a metal wire of length 1 m is $50\ \Omega$ at $30\ ^\circ\text{C}$. Suppose the diameter of the wire is 0.3 mm. Now another wire has the same material and the same length (at $30\ ^\circ\text{C}$), but the diameter is increased to 0.6 mm. The resistance of the new wire is:

- A. $120.5\ \Omega$
- B. $20.5\ \Omega$
- C. $12.5\ \Omega$ ✓
- D. $2.5\ \Omega$

Q79 General Science

The strength of magnetic field inside a long current-carrying straight solenoid is:

- A. the maximum at the middle
- B. the minimum at the centre
- C. more at the end than the centre
- D. uniform at all points inside the solenoid ✓

Q80 General Science

A light ray enters from medium A to medium B, and as a result, it bends away from the normal in the medium B. The refractive index of medium B relative to medium A is:

- A. less than unity ✓
- B. greater than unity
- C. equal to unity
- D. equal to 2

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following functions is NOT a part of District Administration?

- A. Postal Services ✓
- B. Revenue Collection
- C. Rural Development
- D. Civil Justice



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Q82 General Awareness and Current Affairs

Which academic institution in India has installed the most powerful supercomputer in the country named as Param Pravega, the supercomputer is also the largest in an Indian academic institution as on February 2022?

- A. Indian Institute of Technology-Delhi
- B. Indian Institute of Science (IISc)-Bengaluru ✓
- C. Inter-University Centre for Astronomy and Astrophysics(IUCAA)-Pune
- D. Indian Institutes of Science Education and Research(IISER)-Tirupati

Q83 General Awareness and Current Affairs

Which of the following Ministries of India released draft National Air Sports Policy, 2022 (NASP) for public comments?

- A. Ministry of Civil Aviation ✓
- B. Ministry of Youth Affairs and Sports
- C. Ministry of Culture
- D. Ministry of Education

Q84 General Awareness and Current Affairs

Under which ministry was Tele Counselling through SAMVEDNA started for children impacted by the Covid-19 pandemic in India in 2021?

- A. Ministry of Women and Child Development ✓
- B. Ministry of Health
- C. Ministry of Education
- D. Ministry of Ayush

Q85 General Awareness and Current Affairs

Which of the following is an example of revenue expenditure?

- A. Financial help given to other country as loan
- B. Construction of hospitals and school buildings
- C. Repayment of loans by the government
- D. Salaries of government employees ✓



Q86 General Awareness and Current Affairs

Which of the following rivers flows into India from Nepal?

- A. Son
- B. Dhauliganga
- C. Karnali
- D. Bhilangana



Q87 General Awareness and Current Affairs

The birth centenary of which famous Indian hockey captain was celebrated on 2 February 2022?

- A. Major Dhyan Chand
- B. Balbir Singh Dosanjh
- C. Kunwar Digvijay Singh 'Babu'
- D. Leslie Claudius



Q88 General Awareness and Current Affairs

In which year did the cyclone 'Tauktae' hit India?

- A. 2019
- B. 2020
- C. 2021
- D. 2022



Q89 General Awareness and Current Affairs

In which year did the Federal Court of India start functioning?

- A. 1935
- B. 1937
- C. 1947
- D. 1950



Q90 General Awareness and Current Affairs

The fundamental duties of citizens were added to the constitution of India by the 42nd amendment in:

- A. 1973
- B. 1974
- C. 1975
- D. 1976



Q91 General Awareness and Current Affairs

On 4 June 2021, India's first CAR-T cell therapy, which was done at Mumbai's Tata Memorial Centre, was for which of the following ailments?

- A. Blood cancer
- B. AIDS
- C. Bone Transplant
- D. Lung Transplant



Q92 General Awareness and Current Affairs

From which budget year in India was the Railway budget merged with the Union budget and was not presented separately?

- A. 2017 - 18
- B. 2016 - 17
- C. 2015 -16
- D. 2014 - 15



Q93 General Awareness and Current Affairs

The Cultural performances 'MILAN 2022' was organised by the Ministry of Culture as a part of Azadi ka Amrit Mahostav in which City?

- A. Mysuru
- B. Madurai
- C. Coimbatore
- D. Visakhapatnam



Q94 General Awareness and Current Affairs

Which of the following states is home to the Great Indian Bustard?

- A. Sikkim
- B. Bihar
- C. Uttar Pradesh
- D. Rajasthan



Q95 General Awareness and Current Affairs

In July 2021, which Union Territory of India launched 'Tejaswini' _____ an initiative centred around women empowerment and safety?

- A. Puducherry
- B. Chandigarh
- C. Delhi
- D. Lakshadweep



Q96 General Awareness and Current Affairs

On which of the following dates was Hindi adopted as the official language of the Indian Union?

- A. 14 September 1949
- B. 15 August 1947
- C. 26 January 1950
- D. 30 November 1954



Q97 General Awareness and Current Affairs

The 'Tripitaka' is a holy book of which religion from following-

- A. Zoroastrianism
- B. Sikhism
- C. Jainism
- D. Buddhism



Q98 General Awareness and Current Affairs

Which of the following is calculated as the percentage change in the demand for the goods divided by the percentage change in the price for the goods?

- A. Surplus
- B. Product Cost
- C. Total Utility
- D. Elasticity of Demand



Q99 General Awareness and Current Affairs

Who was the Chief Election Commissioner of India as on 1 April 2022?

- A. Sunil Arora
- B. Sushil Chandra
- C. Achal Kumar Jyoti
- D. Om Prakash Rawat



Q100 General Awareness and Current Affairs

Air India's journey begins in the year _____, when the distinguished entrepreneur J.R.D. Tata founded the company.

- A. 1930
- B. 1932
- C. 1942
- D. 1947



Mathematics

25 Questions • Answer Key

Q1 Mathematics

A sum is borrowed for two years at the rate of 5% compound interest per annum, compounded annually. If it is paid back in two equal annual instalments of ₹882, then the sum borrowed is:

A. ₹1,560

B. ₹1,740

C. ₹1,680

D. ₹1,640



Q2 Mathematics

Four years ago the ratio of the age of the son to that of his father was 2 : 7 and 10 years hence it will change to 3 : 7. The positive difference between their ages is:

A. 60 years

B. 40 years

C. 50 years

D. 30 years



Q3 Mathematics

If $\frac{y}{x} = \frac{5}{6}$, then $\frac{x^2 - y^2}{x^2 + y^2} = \underline{\hspace{2cm}}$.

A. $\frac{25}{36}$ B. $\frac{36}{25}$ C. $\frac{11}{61}$ D. $\frac{9}{61}$ 

Q4 Mathematics

Five years ago, Roshan was three times as old as Preethi. If the difference between their ages is 6 years, the present age (in years) of Preethi is _____.

A. 4

B. 8

C. 7

D. 6

Q5 Mathematics

One pipe can fill a tank three times as fast another one. Both the pipes opened together can fill the tank completely in 36 minutes. In how many hours will the faster pipe alone fill the empty tank completely?

A. $\frac{1}{2}$ B. $\frac{4}{5}$ C. $\frac{12}{5}$ D. $\frac{8}{5}$ **Q6 Mathematics**

Successive discounts of 10% and 20% are equivalent to a single percentage discount of:

A. 22%

B. 30%

C. 28%

D. 27.5%

Q7 Mathematics

The product of two consecutive positive integers is 552. If the smaller of these two integers is represented by x , which of the options below will correspond to the equation for finding out the value of x ?

A. $x^2 + x + 552 = 0$ B. $x^2 + x - 552 = 0$ C. $x^2 - x + 552 = 0$ D. $x^2 - x - 552 = 0$ 

Q8 Mathematics

How many sides will a polygon have if the sum of the measures of its interior angles is 900° ?

A. 6

B. 7



C. 54

D. 8

Q9 Mathematics

If $\sqrt{6} = 2.45$, then the value of $\sqrt{6} + \sqrt{24} + \sqrt{54}$ is:

A. 15.70

B. 14.70



C. 15.75

D. 13.75

Q10 Mathematics

If the radius of a sphere is 7 cm, then the surface area in (cm^2) of the sphere is _____.

(Take $\pi = \frac{22}{7}$)

A. 243

B. 616



C. 343

D. 729

Q11 Mathematics

Select the smallest natural number that should be added to or subtracted from the sum of the squares of 15 and 16 to make it a perfect square?

A. 81

B. 3



C. 40

D. 19



Q12 Mathematics

The dimensions of a cuboidal storage space are 20 m, 25 m, and 10 m. How many boxes of dimension $2\text{ m} \times 1.25\text{ m} \times 1\text{ m}$ can be kept in it?

A. 2000



B. 4000

C. 6000

D. 8000

Q13 Mathematics

If 8 – digit number $27x65y31$ is divisible by 3, find the lowest possible positive value of $x \times y$.

A. 1

B. 3

C. 4

D. 2

**Q14** Mathematics

The ratio of the present ages of Somu and Ramu is $5 : 4$ and the sum of their ages is 27 years. The ratio of their ages after 8 years will be _____.

A. $3 : 4$

B. $25 : 29$

C. $23 : 20$



D. $8 : 3$

Q15 Mathematics

In a triangle, if the measure of one of its angles is twice the measure of the smallest angle of the same triangle, and the measure of the third angle of the triangle is three times the measure of the smallest angle of the same triangle, then the measure of the greatest angle of the given triangle is _____.

A. 75°

B. 70°

C. 90°



D. 120°



Q16 Mathematics

₹651 is divided among A, B, C in such a way that twice of A's share, thrice of B's and five times of C's share are equal. Find C's share.

A. ₹126



B. ₹315

C. ₹210

D. ₹150

Q17 Mathematics HINDI - no English version saved

किसी व्यक्ति ने एक घोड़े को 7% की हानि पर बेचा। यदि वह घोड़े को 9% के लाभ पर बेचता, तो उसे इस घोड़े को 7% की हानि पर बेचने से प्राप्त राशि की तुलना में ₹6,400 अधिक प्राप्त होते। घोड़े का क्रय मूल्य कितना था?

A. ₹50,000

B. ₹40,000



C. ₹45,000

D. ₹55,000

Q18 Mathematics

The value of $(\sin x + \sec x)^2 + (\operatorname{cosec} x + \cos x)^2$ is:

A. $(1 - \sec x \operatorname{cosec} x)^2$ B. $(2 - \sec x \operatorname{cosec} x)^2$ C. $(\sec x \operatorname{cosec} x + 1)^2$ D. $(2 + \sec x \operatorname{cosec} x)^2$ 

Simplify the given expression.

$$\frac{76 \times 76 \times 76 - 74 \times 74 \times 74}{76 \times 76 + 76 \times 74 + 74 \times 74}$$

A. 2



B. 120

C. 5

D. 121

Which of the numbers below is divisible by all the natural numbers from 1 to 10 (both inclusive)?

A. 100

B. 608

C. 2520



D. 10

Mridul's working hours per day increased by 25% and his hourly wages increased by 20%. By how much per cent did his daily earnings increase?

A. 46%

B. 50%



C. 40%

D. 30%

If the two roots of a quadratic equation are -3 and 3 , then the quadratic equation is given as _____.

A. $x^2 + 5 = 0$ B. $x^2 - 9 = 0$ C. $9x^2 - 1 = 0$ D. $x^2 - 6 = 0$ 

Q23 Mathematics

Study the given table and answer the question that follows.

The table shows the demand of different shoe sizes as obtained in a survey.

Shoe size	Number of pairs demanded
5	44
6	48
7	58
8	46
9	39
10	37

Find the modal size of shoes demanded that one can obtain from the survey.

A. 6

B. 7



C. 5

D. 9

Q24 Mathematics

Two trains 240 m and 320 m long are travelling on parallel tracks in the same direction at speeds of 59 km/h and 50 km/h. How long will it take for the two trains to pass each other from the instant they meet?

A. 2 min 24 sec

B. 3 min 44 sec



C. 3 min 24 sec

D. 2 min 18 sec

Q25 Mathematics

Find the median age, given the ages of 10 persons (in years) are as follows:

22, 23.5, 26, 22.5, 24, 26, 23, 24.5, 25, 21

A. 22.00

B. 22.25

C. 25.00

D. 23.75



Q26 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:

All boys are girls.
All dancers are boys.
No girl is a singer.

Conclusions:

1. Some boys are singers.
2. No singer is a dancer

- A. Only conclusion 1 follows.
- B. Only conclusion 2 follows. ✓
- C. Both conclusions 1 and 2 follow.
- D. Neither conclusions 1 nor 2 follows.

Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

20, 30, 18, 27, 16, 24, 14, 21, 12, 18, ?

- A. 10 ✓
- B. 15
- C. 14
- D. 12

Q28 General Intelligence and Reasoning

If each of the digits in the number 8356427 is arranged in ascending order from left to right, then what will be the sum of the digits that are second from the left and second from the right in the new number thus formed?

- A. 9
- B. 10 ✓
- C. 11
- D. 12



Q29 General Intelligence and Reasoning

Bindi, Moni, Saya, Arjun, Himesh and Pankaj are six different friends, each of a different age. Bindi is younger than Moni but older than Saya. Arjun is younger than only one person. Himesh is older than Pankaj but younger than Moni. Saya is older than Pankaj but younger than Bindi. Who among the six is the youngest?

A. Saya

B. Pankaj



C. Himesh

D. Moni

Q30 General Intelligence and Reasoning

Garima walked 15 m towards the north and then turned to the right and walked 20 m. She further turned to the left and walked 5 m. Finally, she turned to the left again and walked 20 m. How many metres was she from the starting point and in which direction? (All turns are 90 degree turns only)

A. 15 m, North

B. 20 m, North



C. 15 m, South

D. 20 m, South

Q31 General Intelligence and Reasoning

Each vowel in the word 'ABRUPT' is changed to the letter immediately following it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. If each letter thus formed is arranged in alphabetical order, which letter will be fourth from the right?

A. O



B. B

C. Q

D. S

Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

289, 256, 225, 196, ?

A. 121

B. 151

C. 176

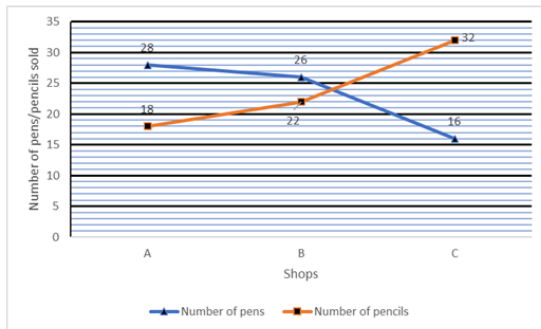
D. 169



Q33 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of pens and pencils sold by three shops (A, B and C).



What is the difference between the total number of pens sold by shops A and B and the number of pencils sold by shop C?

A. 22



B. 12

C. 24

D. 14

Q34 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$30 - 2 \div 4 + 12 \times 6 = ?$$

A. 50

B. 58

C. 62



D. 64

Q35 General Intelligence and Reasoning

DJ 15 is related to GM 20 in a certain way. In the same way, OW 25 is related to RZ 30. To which of the following is RM 35 related following the same logic?

A. UP 40



B. PU 04

C. PU 40

D. UP 45



Q36 General Intelligence and Reasoning

Read the given statements and conclusions carefully and decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. R is older than I.
2. I is N's twin brother who is older than P.
3. Y is not younger than R who is older than K.

Conclusions:

- I. K is older than I.
- II. I is younger than Y.

- A. Conclusion I follows
- B. Conclusion II follows ✓
- C. Both conclusions I and II follow
- D. Neither conclusions I nor II follows

Q37 General Intelligence and Reasoning

In a queue, Manoj is 10th from the front end and Ajay is 12th from the rear end, and there is no one between them. How many people are there in the queue if Ajay is standing behind Manoj in the queue?

- A. 20
- B. 21
- C. 22 ✓
- D. 23

Q38 General Intelligence and Reasoning

In a certain code language, 'BOAT' is written as 'DQCV' and 'PLAN' is written as 'RNCP'. How will 'PHONE' be written in that code language?

- A. JQPGR
- B. RJQPG ✓
- C. QPGRJ
- D. PGQST



Q39 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

2 : 19 :: 6 : 57 :: 44 : ?

A. 177

B. 399

C. 212

D. 418

**Q40** General Intelligence and Reasoning

Six persons are sitting around a circular table facing the centre. Saif is an immediate neighbour of both Raj and Sam. Kailash sits second to the left of Raj. Ankit sits second to the right of Saif. Kailash is an immediate neighbour of both Shiva and Ankit. Who is an immediate neighbour of both Raj and Kailash?

A. Shiva



B. Ankit

C. Sam

D. Saif

Q41 General Intelligence and Reasoning

Following table shows the distribution of marks obtained by 2 different set of 100 students who appeared for exams in Mathematics and statistics respectively. Study the table and answer the question.

Marks out of 100 Subject	80 and Above	60 and Above	40 and Above	20 and Above	0 and above
Mathematics	11	32	70	90	100
Statistics	9	21	64	81	100

The total number of students scoring less than 40% marks in their respective exams are:

A. 33

B. 66



C. 64

D. 29



Q42 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

23 : 44 :: 35 : 56 :: 43 : ?

A. 64



B. 66

C. 63

D. 70

Q43 General Intelligence and Reasoning

Six people are sitting around a circular table facing the centre. Q is to the immediate left of S and third to the right of T while K is third to the left of O. K is to the immediate right of S and second to the left of M. Who is to the immediate left of M?

A. Q

B. S

C. O

D. T

**Q44** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	6	8	4	+	5	#	%	2	\$	1	^	7	9	*	@
Code	S	U	T	W	N	P	V	D	A	Z	J	M	O	M	Y

Conditions:

- (i) If the first and last elements are numbers, then the last element will be replaced by the symbol @.
- (ii) If the first element is a symbol, then the first element will be coded as ©.
- (iii) If both the first and second elements are numbers, then the third element will be coded as *.

What will be the code for the following?

5 4 2 % @ 6

A. NT*VY@



B. NTDVYS

C. SNTDVY

D. NTDVYZ



Q45 General Intelligence and Reasoning

Five employees of the same company, Jagruti, Krishna, Laxman, Maya and Nirupam, live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 5. Krishna and Nirupam live on the topmost and bottommost floors, respectively. Jagruti lives on the floor immediately above Laxman. Maya lives on the floor immediately above Nirupam.

Who lives on the second floor?

- A. Krishna
- B. Jagruti
- C. Maya
- D. Laxman



Q46 General Intelligence and Reasoning

Which of the following letter-clusters will replace the question mark (?) in the given series to make it logically complete?

MAN 7, PDQ 16, SGT 25, VJW 34, ?

- A. ZLU 36
- B. YMZ 43
- C. YNZ 43
- D. ULZ 40



Q47 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

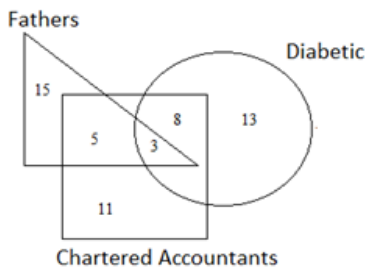
$$4 \times 2 \div 6 - 3 + 1 = ?$$

- A. 14
- B. 15
- C. 12
- D. 18



Q48 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many people are chartered accountants as well diabetic but NOT fathers?

A. 3

B. 8



C. 11

D. 5

Q49 General Intelligence and Reasoning

Each vowel in the word 'PREDICT' is changed to the letter immediately following it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. If each letter thus formed is arranged in alphabetical order, which letter will be third from the right?

A. J

B. O



C. Q

D. F

Q50 General Intelligence and Reasoning

Harbhajan is walking in the south direction and after covering a distance of 5 m, he takes a turn to the left and further walks a distance of 3 m. Finally, he turns to his right and walks a distance of 5 m. In which direction is Harbhajan facing now? (All turns are 90 degree turns only)

A. East

B. West

C. South



D. North



Q51 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 438 645 327 153 276 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

(NOTE: All operations to be done from left to right)

If 3 is added to the first digit of every number, in how many numbers will the first digit be exactly divisible by 2?

A. Four

B. Three

C. Two



D. One

Q52 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

More and more agricultural land should be sold for housing and industrialisation.

Arguments:

- I. Severe food shortage will be unavoidable if conversion of agricultural land into industrial land does not stop soon.
- II. It has been proven that industrialisation in an area destroys its ecosystem and biodiversity.

A. I weakens, while II strengthens the statement

B. II weakens, while I strengthens the statement

C. Both I and II weaken the statement



D. Both I and II strengthen the statement

Q53 General Intelligence and Reasoning

If 8 March 2009 is a Sunday, then what will be the day of the week on 1 February 2021?

A. Sunday

B. Tuesday

C. Monday



D. Saturday



Q54 General Intelligence and Reasoning

In a class Pallavi's rank is 25th from the top and 18th from the bottom. Find the number of students in the class?

A. 41

B. 42

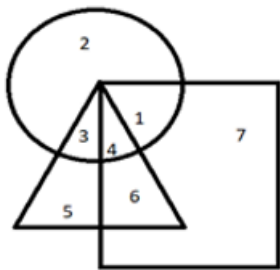


C. 43

D. 44

Q55 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. 'Managers' are represented by the circle, 'B. Tech degree holders' are represented by the square, and 'MBA degree holders' are represented by the triangle. How many managers are there who are B. Tech degree holders but not MBA degree holders?



A. 6

B. 1



C. 5

D. 2



Q56 General Science

Match the columns.

Group-I	Group-II
I. Mechanical barrier	A. Copper-T
II. Chemical method	B. Vasectomy
III. Device	C. Condom
IV. Surgical method	D. Pill

A. I-C; II-A; III-D; IV-B

B. I-C; II-D; III-A; IV-B



C. I-C; II-B; III-D; IV-A

D. I-C; II-A; III-B; IV-D

Q57 General Science

Dependence on the resistance R of a coil for the electromagnetically induced EMF and induced current in a coil follows:

A. induced EMF depends on R but induced current does not

B. induced EMF does not depend on R but induced current does



C. both are independent of R

D. Induced EMF and induced current both depend on R

Q58 General Science

Which of the following structures is formed with a closed chain of carbon atoms?

A. Straight chain structure

B. Branched chain structure

C. Ring structure



D. Acyclic structure



Q59 General Science

By which process do plants excrete excess water?

- A. Transportation
- B. Translocation
- C. Transpiration
- D. Photosynthesis



Q60 General Science

Which of the following compounds is prepared when sodium chloride reacts with carbon dioxide in the presence of ammonia and water?

- A. NaCO_3
- B. NaHCO_3
- C. Na_2SO_4
- D. CaCO_3



Q61 General Science

Which of the following statements regarding metals is NOT correct?

- A. Metals are electropositive in nature.
- B. Metals display electron losing tendency during bond formation.
- C. In general, metals form acidic oxides.
- D. Metals are placed towards the left in the periodic table.



Q62 General Science

Two resistors of $6\ \Omega$ and $4\ \Omega$ in series combination are connected to a 12 V battery. The effective current of the circuit will be:

- A. 2 Amp
- B. 0.5 Amp
- C. 1.2 Amp
- D. 0.8 Amp



Q63 General Science

Twinkling of stars occurs because:

- A. change in the density of different layers of air causes change in Tyndall effect continuously
- B. change in the density of different layers of air causes change in scattering intensity continuously
- C. change in the density of different layers of air causes change in refractive index continuously ✓
- D. change in the density of different layers of air causes change in colour of the sky continuously

Q64 General Science

The magnification of an image is +1.5 and the object distance is 30 cm from a spherical mirror. The image is formed at _____.

- A. 20 cm behind the mirror
- B. 45 cm behind the mirror ✓
- C. 45 cm in front of the mirror
- D. 20 cm in front of the mirror

Q65 General Science

Which of the following groups of elements were NOT discovered at the Mendeleev's periodic table?

- A. Alkali metals
- B. Alkaline earth metals
- C. Noble gases ✓
- D. Halogens

Q66 General Science

The power of a bulb is 40 W. Then the energy in SI units consumed by it in 100 s is:

- A. 40 J
- B. 400 J
- C. 4000 J ✓
- D. 40000 J



Q67 General Science

Which of the following statements is correct about non-biodegradable substances?

- A. Non-biodegradable substances take lesser time for degradation.
- B. Non-biodegradable substances can easily be degraded by enzymes.
- C. Non-biodegradable substances persist in the environment. ✓
- D. Non-biodegradable substances don't harm the members of the ecosystem.

Q68 General Science

Identify the correct sequential order of the excretory system in human beings.

- A. Kidney, ureters, urinary bladder, urethra ✓
- B. Kidney, urethra, ureters, urinary bladder
- C. Kidney, ureters, urethra, urinary bladder
- D. Kidney, urinary bladder, ureters, urethra

Q69 General Science

Why do plant cells have cell walls?

- A. They are required for photosynthesis
- B. They protect the plant cells from various environmental factors ✓
- C. They are living beings
- D. They do not have cell membrane

Q70 General Science

An object is placed at a distance of 10 cm from a projector to obtain an image with magnification of -60 . The screen, to receive the projected image, should be placed at a distance of:

- A. 4.5 metres
- B. 6.0 metres ✓
- C. 5.5 metres
- D. 5.0 metres



Q71 General Science

Baking soda is NOT generally used:

- A. as an antacid
- B. as a disinfectant
- C. as baking powder
- D. in fire extinguishers

Q72 General Science

A shaving mirror is constructed in such way that a man at a distance of 30 cm from the mirror sees his image magnified 1.33 times. Then the radius of curvature of the mirror is:

- A. 34.25 cm
- B. 30.4 cm
- C. 28.6 cm
- D. 27.5 cm

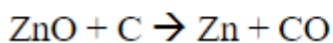
Q73 General Science

Stockholm water prize honours the persons who contributes to the:

- A. conservation and protection of soil
- B. conservation and protection of wild life
- C. conservation and protection of water resources
- D. conservation and protection of forests

Q74 General Science

Which of the following is reduced in the given reaction?



- A. ZnO
- B. Carbon
- C. Zn
- D. CO



Q75 General Science

Suppose an electric refrigerator of 500 W operates 12 hour/day. What is the cost of the energy to operate it for 30 days at ₹5.00 per kW h?

- A. ₹500/-
- B. ₹700/-
- C. ₹900/-
- D. ₹1,000/-



Q76 General Science

In reptiles, the sex of the offsprings is determined by the temperature at which:

- A. ovum is kept
- B. sperm is kept
- C. fertilised egg is kept
- D. unfertilised egg is kept



Q77 General Science

Magnetic field lines appear to move inside a bar magnet from

- A. middle to all sides
- B. middle to the north pole only
- C. south pole to north pole
- D. north pole to south pole



Q78 General Science

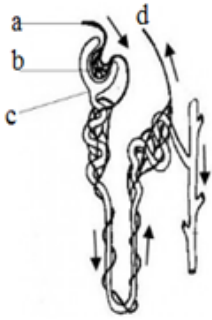
Select the functional group in five-carbon atom compound 'Pentanal'.

- A. Ketone
- B. Alcohol
- C. Alkene
- D. Aldehyde



Q79 General Science

Given below is the diagram of a nephron. Select the option with the correct labelling for a, b, c and d parts.



- A. a - Branch of renal vein, b – Bowman's capsule, c - Glomerulus, d - Branch of renal artery
- B. a - Branch of renal artery, b – Bowman's capsule, c - Glomerulus, d - Branch of renal vein
- C. a - Branch of renal vein, b - Glomerulus, c – Bowman's capsule , d - Branch of renal artery
- D. a - Branch of renal artery, b - Glomerulus, c – Bowman's capsule, d - Branch of renal vein ✓

Q80 General Science

Which of the following are produced in a neutralisation reaction?

- A. Salt and acid
- B. Acid and water
- C. Salt and water ✓
- D. Precipitate and base

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

When was SVAMITVA Scheme, which is a Central Sector Scheme of Ministry of Panchayati Raj launched?

- A. 2019
- B. 2020
- C. 2021 ✓
- D. 2022



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Q82 General Awareness and Current Affairs

Which cricket team reached their historic milestone to become the first team to play 1000 One Day International (ODI) Matches in the month of Feb 2022?

- A. West Indies
- B. Australia
- C. India
- D. England



Q83 General Awareness and Current Affairs HINDI - no English version saved

निम्न में से कौन-सा स्थान जैन धर्म से संबंधित नहीं है?

- A. कुशीनगर
- B. दिलवाड़ा
- C. श्रवणबेलगोला
- D. पार्श्वनाथ



Q84 General Awareness and Current Affairs

The Brahmaputra marks the _____ boundary of the Himalayas.

- A. Northern-most
- B. Southern-most
- C. Western-most
- D. Eastern-most



Q85 General Awareness and Current Affairs

Which formula is used to calculate M3 (i.e. measure of money supply)?

- A. $M3 = CU + DD + \text{Net time deposits of commercial banks}$
- B. $M3 = M2 + \text{Saving deposits with post office}$
- C. $M3 = M1 + \text{Total deposits with post office}$
- D. $M3 = M1 + \text{Total deposit with post office excluding National Saving Certificate}$



Q86 General Awareness and Current Affairs

In which of the following years did the Reserve Bank of India introduce a comprehensive regulatory framework for Non-Banking Finance Company- Micro Finance Institutions?

A. 2010

B. 2011



C. 2012

D. 2013

Q87 General Awareness and Current Affairs

The Budhabalanga and Baitarini rivers have their source in _____.

A. West Bangal

B. Chhattisgarh

C. Odisha



D. Jharkhand

Q88 General Awareness and Current Affairs

Who among the following was the last viceroy in India?

A. Lord Ripon

B. Lord Mountbatten



C. Lord Wavell

D. Lord Curzon

Q89 General Awareness and Current Affairs

The Zoological Survey of India (ZSI), with its headquarters in _____, and having presence in 16 regional stations, is responsible for surveying the faunal resources of India.

A. Karnataka

B. Kolkata



C. Kerela

D. Andhra Pradesh



Q90 General Awareness and Current Affairs

As per Article _____ of the Constitution of India, a person cannot be convicted for an act that was not an offence at the time of its commission.

A. 30

B. 27

C. 20



D. 23

Q91 General Awareness and Current Affairs

Identify the timeline of Twelfth Five Year Plan in India?

A. 2010 to 2015

B. 2013 to 2018

C. 2012 to 2017



D. 2011 to 2016

Q92 General Awareness and Current Affairs

What is the full form of INSPIRE scheme, which is one of the flagship programmes of the Department of Science & Technology (DST), Government of India?

A. Innovation in Science Pursuit for Indian Research

B. Innovation in Science Pursuit for Indigenous Research

C. Innovation in Science Pursuit for Inspired Research



D. Innovation in Science Pursuit for Interdisciplinary Research

Q93 General Awareness and Current Affairs

What is the full name of The POCSO Act?

A. The Protection of Children from Sexual Offences Act



B. The Prevention of Children from Sexual Offences Act

C. The Protection of Children from Sensual Offences Act

D. The Prevention of Children from Serious Offences Act



Q94 General Awareness and Current Affairs

The risk coverage on accidental death in the Pradhan Mantri Suraksha Bima Yojana (PMSBY) is _____ (As of July 2022).

- A. ₹2 lakh
- B. ₹5 lakh
- C. ₹10 lakh
- D. ₹15 lakh



Q95 General Awareness and Current Affairs

NEP 2020 recommends to establish which of the following institutes/organisations to accelerate the research and innovation in India?

- A. Indian Institute of Science Education and Research
- B. National Research Foundation
- C. National Foundation for Innovation and Research in India
- D. Mahatma Gandhi International Institute for Research in India



Q96 General Awareness and Current Affairs

As per 'Investment Trends Monitor' report released in January 2022, the Foreign Direct Investment (FDI) flows to India in 2021 were 26% lower as compared to 2020. Who released this report?

- A. Reserve Bank of India
- B. International Monetary Fund (IMF)
- C. United Nations Conference on Trade and Development (UNCTAD)
- D. World Bank



Q97 General Awareness and Current Affairs

Which of the following matters is a part of the Concurrent List of the Constitution of India?

- A. Liquor
- B. Adulteration
- C. Police
- D. Public Health



Q98 General Awareness and Current Affairs

Galo is a Tani language spoken in _____.

- A. Haryana
- B. Himachal Pradesh
- C. Jharkhand
- D. Arunachal Pradesh



Q99 General Awareness and Current Affairs

On 21st January 2022, Tripura, Manipur and Meghalaya celebrated their _____ Foundation Day.

- A. 25th
- B. 50th
- C. 55th
- D. 75th



Q100 General Awareness and Current Affairs

Which bowler became the all time highest wicket taker in the Indian Premier League in the fifteenth edition of the tournament on 31 March 2022?

- A. Pat Cummins
- B. Ravichandran Ashwin
- C. Mohammed Shami
- D. Dwayne Bravo



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Express $123.4\overline{7}$ in $\frac{p}{q}$ form, where p and q are integers and $q \neq 0$.

A. $\frac{12347}{99}$

B. $\frac{11113}{9}$

C. $\frac{12347}{90}$

D. $\frac{11113}{90}$ ✓

Q2 Mathematics

When a transversal intersects two straight lines, two angles formed on the same side of the transversal, such that the two angles are both positioned above or are both positioned below relative to the two lines on which they are formed, are known as a pair of _____ angles.

A. adjacent

B. corresponding ✓

C. complementary

D. alternate

Q3 Mathematics

If $x^3y : xy :: xy : a$, then which of the options below gives the value of a ?

A. $\frac{y}{x}$ ✓

B. $\frac{y}{x^2}$

C. $\frac{y^2}{x}$

D. $\frac{y^2}{x^2}$



Q4 Mathematics

A dishonest dealer professes to sell his goods at cost price, but he uses a weight of 950 gm for a kilogram. His gain per cent is:

A. $5\frac{5}{19}\%$



B. $4\frac{5}{19}\%$

C. $6\frac{5}{19}\%$

D. $7\frac{5}{19}\%$

Q5 Mathematics

If a, b are the roots of the equation $x^2 - 5x + 6 = 0$, then $a^2 + b^2 - ab$ is:

A. -7

B. 43

C. 7



D. 9

Q6 Mathematics

What is the sum of the deviations of the values of the data set 5, 6, 7, 9, 10, 12 and 14, from the mean of the values given in the same data set?

A. 0



B. -1

C. 1

D. 2

Q7 Mathematics

Three cubes, each of edge 5 cm are arranged next to each other. The surface area of the resulting cuboid is:

A. 27 cm^2

B. 37.5 cm^2

C. 350 cm^2



D. 125 cm^2



Q8 Mathematics

Find b if 256, b and 324 are in continued proportion.

A. 312

B. 308

C. 288



D. 296

Q9 Mathematics

When the price of an article is increased by 20% its sale reduces by 20%. What is the net effect on the revenue?

A. 20% increase

B. 20% decrease

C. 4% decrease



D. 4% increase

Q10 Mathematics

A triangle and a parallelogram have the same base and the same area. If the sides of the triangle are 26 cm, 28 cm, and 30 cm and the parallelogram stands on a base of 28 cm, then the height of the parallelogram is:

A. 12 cm



B. 10 cm

C. 14 cm

D. 11 cm

Q11 Mathematics

Find the value of $9\frac{1}{6} \times 4\frac{2}{3} + 5\frac{1}{2} \div 2\frac{2}{3}$.

A. $\frac{6457}{144}$



B. $\frac{6417}{144}$

C. $\frac{6457}{72}$

D. $\frac{6157}{144}$



Q12 Mathematics

The value of $\frac{\sin A - \sin B}{\cos A + \cos B} + \frac{\cos A - \cos B}{\sin A + \sin B}$ is:

A. 1

B. -1

C. 2

D. 0



Q13 Mathematics

What will be the area (in cm^2) of a semicircle whose perimeter is 72 cm? (Take $\pi = \frac{22}{7}$)

A. 144

B. 154

C. 616

D. 308



Q14 Mathematics

A and B have the same annual income. A saves one-fifth of his income but B spends ₹80,000 more than A annually and at the end of 4 years finds himself in a debt of ₹2,20,000. Each of A and B's annual income is:

A. ₹1,10,000

B. ₹1,30,000

C. ₹1,20,000

D. ₹1,25,000



Q15 Mathematics

If the HCF of two numbers is 6 and the product of the numbers is 2520, find their LCM.

A. 2520

B. 420

C. 1320

D. 880



Q16 Mathematics

If the area of an equilateral triangle is $25\sqrt{3}\text{ cm}^2$, then the length (in cm) of each side of this equilateral triangle is _____.

A. $5\sqrt{2}$

B. $10\sqrt{3}$

C. 10



D. 8

Q17 Mathematics

The weights (in kg) of 10 students of a class have been recorded as 35, 42, 56, 44, 55, 44, 36, 44, 49 and 35. Find the modal weight.

A. 44.0 kg



B. 35.0 kg

C. 36.0 kg

D. 35.5 kg

Q18 Mathematics

If $x = -\frac{1}{2}$ and $y = 2$, find the value of $\frac{4y}{5}(y-x) - 35\left[\frac{3x-4y}{5} - \frac{1}{10}\left\{3x - \frac{5}{7}(7x-4y)\right\}\right]$.

A. 90

B. 94



C. 92

D. 91

Q19 Mathematics

The product of the roots of $6\sqrt{3}x^2 + 3\sqrt{3} + 5x = 0$ is _____.

A. $\sqrt{3}$

B. 1

C. 0

D. $\frac{1}{2}$



Q20 Mathematics

If $4^{2n+1} = 2^{3n+9}$, then $n =$ _____.

A. -8

B. 7



C. 8

D. $\frac{9}{2}$

Q21 Mathematics

The sum of two co-prime numbers is 122 and their product is 3717. The numbers are:

A. (33; 89)

B. (53; 69)

C. (59; 63)



D. (79; 43)

Q22 Mathematics

Arbaz and Aman can complete painting a building in 16 days and 12 days, respectively. If Arbaz starts the work and they work on alternate days, then the building painting will be completed in how many days?

A. $13\frac{3}{4}$



B. $15\frac{1}{4}$

C. 12

D. 13



Q23 Mathematics

A dishonest dealer sells goods at a $6\frac{1}{4}\%$ loss on cost price but actually gives 14 gm of goods for every 16 gm that is mentioned on the weight. His gain or loss percent is:

A. $7\frac{1}{7}\%$ gain



B. $7\frac{1}{3}\%$ loss

C. $6\frac{1}{7}\%$ gain

D. $6\frac{1}{7}\%$ loss

Q24 Mathematics

What is the smallest natural number that must be added to 369 to make the result a perfect square?

A. 25

B. 31



C. 30

D. 40

Q25 Mathematics

If the sum of three consecutive odd numbers is 309, then the largest number among them is _____.

A. 101

B. 109

C. 105



D. 103



Q26 General Intelligence and Reasoning

Study the following arrangement and answer the question given below. All numbers given below are 2 digit numbers.

18 @ 61 # 22 63 76 \$ 42 48 % 29 94 Ø 56 27 75

If all the symbols are dropped from the series, what will be the product of the numbers which are third from the right end and fourth from the left end?

A. 3528



B. 3498

C. 3696

D. 3575

Q27 General Intelligence and Reasoning

The given statements are followed by three conclusions. Find out which conclusion is true based on the given statements.

Statements:

$$A = B \geq C = D, E > F \geq G = D$$

Conclusions:

I. $E > C$

II. $A \geq G$

III. $E \geq B$

A. Only conclusion I is true

B. Only conclusion II is true

C. Only conclusion III is true

D. Only conclusions I and II are true

**Q28** General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$(\sqrt{785} + 72 \div 4 \times 3 - \sqrt{120}) \times 2 = ?$$

A. 180

B. 124

C. 142



D. 200



Q29 General Intelligence and Reasoning

Select the correct conclusion that can be drawn from the given statements.

Statements:

1. $C > A \geq D > Z$
2. $Z = V \leq K$

A. $C > V$



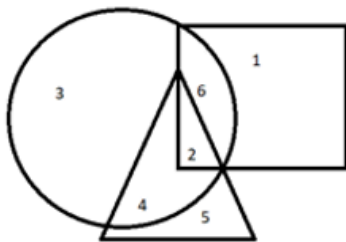
B. $K > A$

C. $K > D$

D. $C = D$

Q30 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. The circle represents 'teachers', the square represents 'men', and the triangle represents 'post graduates'. How many men are there who are NEITHER teachers NOR post graduates?



A. 4

B. 3

C. 2

D. 1

**Q31** General Intelligence and Reasoning

Vaani walks to her office from her home. After starting from home, while walking to office, she turned right twice and then left before reaching the office. If Vaani is facing South when she reaches her office, which direction was she facing when she started from her home?

A. East



B. West

C. North

D. South



Q32 General Intelligence and Reasoning

30 cricketers are standing in a straight row facing the north. Amar is standing 10th from the right end while Dinesh is standing 5th from the left end. How many cricketers are standing between Amar and Dinesh?

A. 16

B. 15



C. 18

D. 17

Q33 General Intelligence and Reasoning

Read the given statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

The monsoon season influences the lives of Mumbai people in many ways.

Arguments:

- I. Water logging is a common issue in Mumbai during the monsoon.
- II. Generally people enjoy the monsoon season in Mumbai.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement.

C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.



Q34 General Intelligence and Reasoning

Study the following table carefully and answer the questions based on it.

Number of visitors who visit different tourist places in different months in the same year are given in the following table.

Months	Visitors					Total
	Tourist Place A	Tourist Place B	Tourist Place C	Tourist Place D	Tourist Place E	
September	200	70	30	290	10	600
October	120	130	70	150	290	760
November	45	35	25	125	160	390
December	160	110	40	115	130	555
January	80	90	70	100	140	480
February	130	150	30	40	390	740

What is the difference in the number of visitors to the place A between the months of December and January?

A. 85

B. 75

C. 80



D. 70

Q35 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'MARGINS' is arranged in alphabetical order?

A. None

B. One



C. Two

D. Three



Q36 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some journals are novels.

Some novels are brochures.

All brochures are charts.

Conclusions:

I. Some charts are novels.

II. Some brochures are journals.

A. Only conclusion I follows.



B. Only conclusion II follows.

C. Neither conclusion I nor II follows.

D. Both conclusions I and II follow.

Q37 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

EXA : HSH :: LWQ : ORX :: KNO : ?

A. MIV

B. MIW

C. NHW

D. NIV



Q38 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

7 : 345 :: 8 : 514 :: 2 : ?

A. 110

B. 10



C. 8

D. 115



Q39 General Intelligence and Reasoning

In a certain code language, 'GRAND' is written as 'IVGVN' and 'NIGHT' is written as 'PMMPD'. How will 'MAGIC' be written in that language?

A. OBMRS

B. OEMQM



C. SDOFI

D. DFONR

Q40 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

2187, 729, 243, ?, 27

A. 143

B. 81



C. 51

D. 113

Q41 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(7, 5, 16807)

(8, 4, 4096)

A. (10, 3, 100)

B. (8, 6, 3456)

C. (12, 3, 1728)



D. (3, 4, 21)



Q42 General Intelligence and Reasoning

Three statements are given, followed by three conclusions I, II and III. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Choose which of the given conclusions logically follow/s from the given statements.

Statements:

All covers are jars.

No funnel is a jar.

Some wells are funnels.

Conclusions:

I. Some wells are covers.

II. Some wells are jars.

III. No funnel is a cover.

A. Only conclusions I and II follow.

B. Only conclusions II and III follow.

C. All the conclusions follow.

D. Only conclusion III follows.

**Q43** General Intelligence and Reasoning

Six friends B, D, F, H, J and L are sitting around a circular table facing the center (but not necessarily in the same order). F is the immediate neighbor of D and J. L is sitting to the immediate left of B. H is the immediate neighbour of D and L. Who is sitting to the immediate left of J?

A. L

B. B



C. F

D. H

Q44 General Intelligence and Reasoning

Each vowel in the word KETCHUP is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter, thus formed, is arranged in alphabetical order, which letter will be third from the right?

A. J

B. O



C. F

D. S



Q45 General Intelligence and Reasoning

In a certain code language, 'BUS' is written as 'ACTVRT' and 'CAT' is written as 'BDZBSU'. How will 'PUT' be written in that language?

A. OQTVSU



B. SUTVOQ

C. TVSUQO

D. VSTOQU

Q46 General Intelligence and Reasoning

Five friends P, M, Q, S and J have their shops in the same market. P's shop is to the north of M's shop, which is to the west of Q's shop, which is to the west of S's shop. S has his shop to the north of J's shop. Because of some reasons, M and J have exchanged their shops. What is the direction of J's Shop with respect to P's shop now ?

A. South



B. West

C. East

D. South-East

Q47 General Intelligence and Reasoning

Which of the following letter-clusters will replace the question mark (?) in the given series to make it logically complete?

DOG 8, ITL 13, NYQ 18, SDV 23, ?

A. YMF 30

B. XIB 28

C. XIA 28

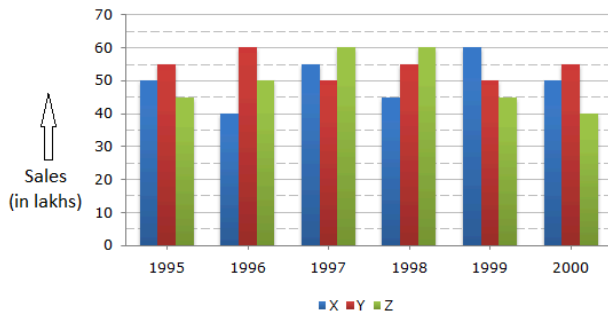


D. ZJD 25



Q48 General Intelligence and Reasoning

The sales of three companies X, Y and Z in different years are shown in the following graph. Study the graph and answer the question.



Which company has the highest total sales for the period from year 1996 to 1998? By what percentage is the sales of company Z more than company Y in the year 1997?

- A. Y, 20%
- B. Z, 20%
- C. Y, 10%
- D. Z, 10%

**Q49** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

256, 256, 243, 230, 230, 217, 204, ?

- A. 209
- B. 197
- C. 226
- D. 204

**Q50** General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$239.99 \times 20.01 - 99.99 \times 30.01 = ?$$

- A. 1800
- B. 1805
- C. 1810
- D. 1815



Q51 General Intelligence and Reasoning

How many such pairs of letters are there in the word LIBRARY (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabet?

A. Three

B. One

C. None



D. Two

Q52 General Intelligence and Reasoning

Five persons, Pravalika, Roshan, Tarak, Vitika and Yadhu, live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it number 2, and so on till the topmost floor is numbered 5. Vitika lives on the floor immediately below Yadhu. Pravalika lives on the floor immediately above Tarak. Roshan lives on the floor immediately above Pravalika. Yadhu lives on the floor immediately below Tarak.

Who lives on the third floor?

A. Roshan

B. Pravalika

C. Tarak



D. Yadhu

Q53 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if ‘+’ and ‘-’ are interchanged and also ‘×’ and ‘÷’ are interchanged?

$$16 \div 3 - 12 \times 4 \div 18 \times 3 - 7 = ?$$

A. 71

B. 72

C. 73



D. 74



Q54 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table (but not necessarily in the same order). Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. A is not sitting at any of the corners and is second to the right of H. G is sitting at one of the corners and is sitting fourth to the left to C. E and B are the immediate neighbours of C. F is sitting at one of the corners and is to the immediate left of B.

Who among the following are the immediate neighbours of H?

A. D and G



B. F and G

C. C and F

D. D and B

Q55 General Intelligence and Reasoning

All 25 students of a class are standing in a straight row facing north. Amit is 10th from the right end, while Madhu is 18th from the left end. How many students are standing between Amit and Madhu?

A. 3

B. 4

C. 2

D. 1



General Science

25 Questions • Answer Key

Q56 General Science

Which of the following compounds is an example of a covalent compound?

A. CaO

B. MgCl_2

C. P_2O_5



D. NaCl



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Q57 General Science

Suppose a dentist uses a spherical mirror which can result in an upright image that is magnified five times. Then the radius of curvature in terms of the object distance d_o is given by:

A. $+\frac{5}{4}d_o$

B. $-\frac{5}{4}d_o$

C. $-\frac{5}{2}d_o$



D. $+\frac{5}{2}d_o$

Q58 General Science

When light is incident along the normal and passes from air to water, then the direction of light will _____.

A. change before entering water

B. change after entering water

C. change at the boundary

D. not be changed



Q59 General Science

The magnetic field lines _____.

A. do not cross each other



B. intersect each other at an angle of 45°

C. intersect each other at an angle of 60°

D. intersect each other at an angle of 90°

Q60 General Science

A constant current of 0.1 A is passed through a copper wire by applying potential difference of 3 V across the wire. The resistance of the wire is:

A. $0.3\ \Omega$

B. $30\ \Omega$



C. $0.033\ \Omega$

D. $3\ \Omega$



Q61 General Science

What model did the Forest Officer AK Banerjee use to rejuvenate a degraded forest in West Bengal?

- A. He stopped the felling of old trees.
- B. He involved local people in silviculture. ✓
- C. He made a canal waterway in the forest to help the plants to grow.
- D. He controlled termites and other wood-destroying insects.

Q62 General Science

Which of the following carbon compounds is formed by fermentation of molasses?

- A. Methane
- B. Ethane
- C. Ethanol ✓
- D. Propanol

Q63 General Science

Select the product formed in a reaction between barium chloride and aluminium sulphate.

- A. Solid AlCl_3 is formed.
- B. Solid BaSO_4 is formed. ✓
- C. Aqueous solution of BaSO_4 is formed.
- D. AlCl_3 is released in gaseous form.

Q64 General Science

What happens to a pollen grain first after it is transferred on a stigma?

- A. It dissolves to release the nucleus into the ovule.
- B. It grows a tube to transfer the nucleus to the ovule. ✓
- C. It undergoes meiosis to produce the male gamete.
- D. It travels through the style to reach the ovary.



Q65 General Science

Suppose an electric kettle consumes 1.5 kW of electric power when it is operated at 240 V. What will be the rating of the fuse wire used for it?

A. 6.25 A



B. 5 A

C. 8 A

D. 9 A

Q66 General Science

During photosynthesis six water molecules are produced from:

A. $6\text{H}_2\text{O}$

B. $12\text{H}_2\text{O}$



C. $18\text{H}_2\text{O}$

D. $24\text{H}_2\text{O}$

Q67 General Science

A triangular glass prism has:

A. 3 faces and 4 edges

B. 5 faces and 8 edges

C. 5 faces and 9 edges



D. 9 faces and 5 edges

Q68 General Science

The maximum and minimum total resistance that can be obtained by the combination of 5 coils of resistances 2Ω , 3Ω , 4Ω , 6Ω and 12Ω will be _____.

A. 27Ω , 0.75Ω



B. 27Ω , 0.65Ω

C. 28Ω , 0.65Ω

D. 28Ω , 0.75Ω



Q69 General Science

Suppose a pin is placed in front of a concave mirror and a real image that is thrice the size of the pin is formed on a screen. The pin and the screen are then moved until the image is six times the size of the object. If the shift of the screen is 24 cm, then the shift in the object is:

A. $\frac{2}{3} \text{ cm}$

B. $\frac{4}{3} \text{ cm}$ ✓

C. $\frac{5}{3} \text{ cm}$

D. $\frac{7}{3} \text{ cm}$

Q70 General Science

In which of the following villages did the Chipko Andolan ('Hug the Trees Movement') originate?

A. Reni in Garhwal ✓

B. Malana in Kullu

C. Andretta in Kangra

D. Ziro in Lower Subansiri

Q71 General Science

The normal cell of human being consists of 46 chromosomes, however, the germ cell has:

A. 44 chromosomes

B. 46 chromosomes

C. 22 chromosomes

D. 23 chromosomes ✓

Q72 General Science

Compound 'A' reacts with dilute hydrochloric acid to produce effervescence. The gas evolved turns lime water milky. Select the compound A.

A. NaOH

B. Zn metal

C. Na_2CO_3 ✓

D. NaCl



Q73 General Science

The number of elements present in the third, fourth, fifth, sixth and seventh periods in the modern periodic table is:

- A. 8, 8, 18, 18 and 32, respectively
- B. 8, 18, 18, 32 and 32, respectively
- C. 8, 8, 18, 32 and 32, respectively
- D. 8, 18, 32, 32 and 32, respectively

Q74 General Science

The minimum resistance of a circuit which can be constructed using seven resistors, each of $\frac{1}{6} \Omega$, is:

- A. $\frac{7}{6} \Omega$
- B. $\frac{7}{5} \Omega$
- C. $\frac{6}{7} \Omega$
- D. $\frac{5}{7} \Omega$

Q75 General Science

Some characteristic features of autotrophs are listed below. Which of the given statements is INCORRECT with respect to autotrophs?

- A. Carbon and energy requirements of autotrophs are fulfilled by photosynthesis.
- B. All green plants and some bacteria are autotrophs.
- C. The carbohydrates not used immediately are stored in the form of glycogen.
- D. They are also called primary producers.

Q76 General Science

What is the fluid matrix of blood called?

- A. RBC (Red Blood Corpuscles)
- B. WBC (White Blood Corpuscles)
- C. Plasma
- D. Platelets



Q77 General Science

Match the following:

Ionic compound	Melting point (K)
i. NaCl	a. 2850
ii. CaCl ₂	b. 1074
iii. CaO	c. 1045

A. i-a, ii-b, iii-c

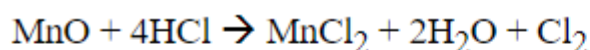
B. i-c, ii-b, iii-a

C. i-c, ii-a, iii-b

D. i-b, ii-c, iii-a



Q78 General Science



According to the given reaction, which of the following statements is INCORRECT?

A. Cl₂ is oxidised to HCl.

B. HCl is oxidised to Cl₂.

C. MnO₂ is reduced to MnCl₂.

D. It is a redox reaction.

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q79 General Science

Which of the following is NOT a part of the female reproductive system?

A. Vas deferens

B. Fallopian tube

C. Ovaries

D. Oviduct



Q80 General Science

Arrange the given non-metals in the increasing order of their electronegativity. Atomic number is given in parentheses.

O (8), Te (52), S (16), Se (34)

- A. $\text{Se} < \text{Te} < \text{S} < \text{O}$
- B. $\text{Te} < \text{Se} < \text{S} < \text{O}$ ✓
- C. $\text{O} < \text{S} < \text{Se} < \text{Te}$
- D. $\text{O} < \text{S} < \text{Te} < \text{Se}$

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

By the 86th Amendment Act, which of the following rights has been included in the list of Fundamental Rights as part of the Right to Freedom by adding Article 21(A) in Constitution of India.

- A. Right to practise any profession, or to carry on any occupation, trade or business
- B. Right to protection against arrest and detention in certain cases
- C. Right to assemble peaceably and without arms
- D. Right to education ✓

Q82 General Awareness and Current Affairs

On 5th July 2021 The Department of School Education and Literacy launched the _____ national mission aiming to achieve universal foundational literacy and numeracy in primary classes in India.

- A. Digital India
- B. NIPUN Bharat ✓
- C. Smart Class
- D. Pradhan Mantri Kaushal Vikas Yojna

Q83 General Awareness and Current Affairs

An indifference map is a collection of indifference curves that represent different levels of _____.

- A. satisfaction ✓
- B. demand
- C. supply
- D. consumption



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Q84 General Awareness and Current Affairs

As per NITI Aayog's Multidimensional Poverty Index (MPI) – 2021, which state has the highest percentage of people who are poor?

- A. Jharkhand
- B. Tamil Nadu
- C. Telangana
- D. Bihar



Q85 General Awareness and Current Affairs

Union Health Minister Mansukh Mandaviya launched the National Polio Immunisation Drive for 2022 by administering polio drops to children below _____ years of age in New Delhi.

- A. 2
- B. 3
- C. 5
- D. 10



Q86 General Awareness and Current Affairs

Which of the following is a famous wildlife spot, that was established in 1981 in Ladakh, and is famous for high population of snow leopards and a wide variety of birds?

- A. Pin Valley National Park
- B. Namdapha National Park
- C. Hemis National Park
- D. Nanda Devi National Park



Q87 General Awareness and Current Affairs

Which of the following statements about the word 'muslin' is true?

- A. It is a type of cotton textile.
- B. It is a style of painting found in Bangladesh.
- C. It is a technique of writing on stones.
- D. It is a deprived community.



Q88 General Awareness and Current Affairs

Which Kalaripayattu exponent received the Padma Shri in 2022 at the age of 93?

- A. Meena Raghavan
- B. Sankaranarayana Menon Chundayil
- C. Vijayan Gurukkal
- D. Kalathil Krishnan Vaidyar

Q89 General Awareness and Current Affairs

The Federation of Indian Chambers of Commerce & Industry (FICCI) was established in _____.

- A. 1925
- B. 1927
- C. 1930
- D. 1932

Q90 General Awareness and Current Affairs

Which of the following is NOT a classical Language of India yet?

- A. Telugu
- B. Tamil
- C. Marathi
- D. Sanskrit

Q91 General Awareness and Current Affairs

The 73rd and 74th Amendments to the Constitution of India ensured the reservation of _____ of total seats for women in all elected offices of local bodies in both, the rural and urban areas.

- A. 25%
- B. 10%
- C. 50%
- D. 33%



Q92 General Awareness and Current Affairs

Which of the following is a famous festival among the people belonging to the Angami tribe in Nagaland?

- A. Sekrenyi
- B. Kambala
- C. Vairamundi
- D. Tula Sankramana

Q93 General Awareness and Current Affairs

For which franchise has Dewald Brevis made his debut in the fifteenth edition of the IPL?

- A. Delhi Capitals
- B. Mumbai Indians
- C. Kolkata Night Riders
- D. Chennai Super Kings

Q94 General Awareness and Current Affairs

As per 'India State of Forest Report 2021' area-wise which state has the largest forest cover in the country?

- A. Uttar Pradesh
- B. Karnataka
- C. Madhya Pradesh
- D. Assam

Q95 General Awareness and Current Affairs

Who is considered as the person responsible for the political integration of India by unifying 562 princely states in the country?

- A. Lal Bahadur Shastri
- B. Vallabhbhai Jhaverbhai Patel
- C. Jawaharlal Nehru
- D. Subhas Chandra Bose



Q96 General Awareness and Current Affairs

The _____ is known as the Great or Inner Himalayas or the Himadri.

- A. range lying to the south of the Himalayas
- B. outermost range of the Himalayas
- C. northern-most range of the Himalayas ✓
- D. longitudinal valley lying between the lesser Himalaya and the Shiwaliks

Q97 General Awareness and Current Affairs

Who is the political head of a Municipal Corporation in India?

- A. District Magistrate
- B. Mayor ✓
- C. Councillor
- D. Municipal Commissioner

Q98 General Awareness and Current Affairs

In January 2022, scientists from IIT Kharagpur revealed a portable, user-friendly and non-invasive device for detecting _____ cancer in resource-constrained clinical settings.

- A. prostate
- B. ovarian
- C. cervical
- D. oral ✓

Q99 General Awareness and Current Affairs

In which country is Mecca located?

- A. Iran
- B. Afghanistan
- C. Saudi Arabia ✓
- D. Yemen



There is/are _____ Deputy Governor(s) of the Reserve Bank of India. (As of the Jun 2022)

A. 1

B. 2

C. 3

D. 4



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Find the third proportional to 60 and 90.

A. 120

B. 75

C. 135



D. 90

Q2 Mathematics

If the sum of the roots of a quadratic equation is -7 and product of the roots of the same equation is -12 , then the quadratic equation is given as _____.

A. $x^2 - 7 = 0$

B. $x^2 + 7x + 12 = 0$

C. $x^2 - 12 = 0$

D. $x^2 + 7x - 12 = 0$



Q3 Mathematics

G is the centroid of $\triangle ABC$. $\overline{AD}$ is a median of $\triangle ABC$ intersecting $\overline{BC}$ at D. What is the ratio of the lengths of $\overline{AG}$ and $\overline{GD}$?

A. 1 : 2

B. 2 : 1



C. 3 : 1

D. 1 : 3

Q4 Mathematics

A number added to its one-third is equal to 12. The number is _____.

A. 4

B. 3

C. 9



D. 6



Q5 Mathematics

Which of the options below is equivalent to $8x^3 + 27y^3 + 36x^2y + 54xy^2$.

A. $(3x + 2y)^3$

B. $(2x + 3y)^3$ ✓

C. $(4x + 3y)^3$

D. $(2x + 5y)^3$

Q6 Mathematics

An equation, whose roots are the reciprocals of the roots of the equation $5x^2 - 3x - 4 = 0$, is:

A. $4x^2 + 3x - 5 = 0$ ✓

B. $4x^2 - 3x - 5 = 0$

C. $4x^2 - 3x + 5 = 0$

D. $4x^2 + 3x + 5 = 0$

Q7 Mathematics

Seema is younger than Reema by 4 years. After 4 years the sum of their ages will be 44 years. What is Reema's present age?

A. 32 years

B. 16 years

C. 20 years ✓

D. 12 years

Q8 Mathematics

Two successive discounts of 15% and $x\%$ on the sale of an item is equivalent to a single discount of 23.5%. What is the value of $x\%$?

A. 11%

B. 10% ✓

C. 9%

D. 12%



Q9 Mathematics

The product of two numbers is 2160 and their HCF is 12. One of the possible pairs of numbers is:

A. (36, 60)



B. (12, 185)

C. (35, 60)

D. (12, 184)

Q10 Mathematics

Babli travelled for 14 hours. If she covered one-fourth of the journey at a speed of 25 km/h and the remaining at 30 km/h, what is the total distance travelled by her?

A. 225 km

B. 140 km

C. 400 km



D. 340 km

Q11 Mathematics

$\left\{ (1690 - 934) \times \frac{5}{6} + 815 \right\} \div 17$ equals:

A. 27

B. 17

C. 85



D. 58

Q12 Mathematics

Anil and Sunil started a business investing equal amounts. Anil left after 9 months. They earned an annual profit of ₹28,000. What is Sunil's share of annual profit?

A. ₹15,000

B. ₹12,000

C. ₹16,000



D. ₹13,000



Q13 Mathematics

Find the mode of a moderately skewed data using empirical relation, given its mean is 222.4 and median is 216.6.

- A. 218
- B. 216
- C. 205
- D. 222

**Q14** Mathematics

Ren and Martin started a company on 1 March 2019. The ratio of their investments was 5 : 4. Martin left the company after 15 months. In what ratio must the profit be divided at the end of 2 years?

- A. 1 : 3
- B. 2 : 1
- C. 29 : 19
- D. 24 : 15

**Q15** Mathematics

What is the net discount, if two successive discounts of 10% and 12% are given?

- A. 20.8%
- B. 22.0%
- C. 21.4%
- D. 23.2%

**Q16** Mathematics

The value of $\frac{\tan A}{1 - \cot A} + \frac{\cot A}{1 - \tan A}$ is:

- A. $\sec A \operatorname{cosec} A - 1$
- B. $\sec A \operatorname{cosec} A + 1$
- C. $\sec A \sin A + 1$
- D. $\operatorname{cosec} A \cos A + 1$



Q17 Mathematics

Shenoy borrowed ₹4,50,000 at 5% per annum compounded annually. What is the amount he has to pay at the end of 2 years?

A. ₹4,82,725

B. ₹4,65,000

C. ₹4,75,000

D. ₹4,96,125 ☒**Q18** Mathematics

If the length of each side of a cube is increased to three times its initial length, then its volume will become _____ times its initial volume.

A. 3

B. 6

C. 9

D. 27 ☒**Q19** Mathematics

Simplify

$$(731)^2 - (269)^2 = ?$$

A. 452000

B. 450000

C. 464000

D. 462000 ☒**Q20** Mathematics

The number of nonoverlapping triangles that can be formed in an 11 – sided polygon by joining the vertices are:

A. 11

B. 10

C. 8

D. 9 ☒

Q21 Mathematics

Simplify the given expression.

$$(x - y)^3 + (x + y)^3 + 3(x - y)(x^2 - y^2) + 3(x + y)(x^2 - y^2)$$

A. $8x^3$



B. x^3

C. $4x^3$

D. $6x^3$

Q22 Mathematics

At what rate per annum would a sum of ₹8,000 amount to ₹9,261 in $1\frac{1}{2}$ years, interest being compounded half-yearly?

A. 5%

B. 10%



C. 15%

D. 20%

Q23 Mathematics

Find the value of $345.08 + 56.02 + 44.44 \times 2.2 - 12.22$.

A. 498.868

B. 468.648

C. 486.684

D. 486.648

**Q24** Mathematics

A cube each of whose side is 5 cm will have a total surface area of _____ cm^2 .

A. 150



B. 60

C. 80

D. 120



Q25 Mathematics

Find the HCF of 1248 and 2456.

A. 8



B. 12

C. 16

D. 14

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Pinto went 12 km to the south from his house, then he turned east and covered 8 km, then he turned north and covered 6 km. Finally turning to the west, he covered 13 km. In which direction is he from his house?

(All turns are 90 degree turns only)

A. South

B. South-east

C. South-west



D. North

Q27 General Intelligence and Reasoning

Each vowel in the word SANITY is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter, thus formed, is arranged in alphabetical order, which letter will be fourth from the left?

A. X

B. J

C. R



D. S

Q28 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

LINE : MHOD

GOAT : HNBS

A. PAIR : QZJQ



B. CLUE : DKVF

C. TRIP : USJO

D. JSQB : IPPA



Q29 General Intelligence and Reasoning

Five boxes A, B, C, D and E are kept one over the other but not necessarily in the same order. D is kept third from the bottom. Only one box is kept between D and C. There are only three boxes between B and C. E is placed immediately above C. How many boxes are placed between A and B?

A. 1

B. 2

C. 0



D. 3

Q30 General Intelligence and Reasoning

How many such pairs of letters are there in the word ABSENT (in both forward and backward directions) which have as many letters between them as there are in the English alphabetical order?

A. None

B. One



C. Two

D. Three

Q31 General Intelligence and Reasoning

If in each of the following words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have NO vowel?

1) BOOK

2) PAPER

3) BOAT

4) PINK

A. One

B. Two



C. Three

D. Four



Q32 General Intelligence and Reasoning

Five people, Zunaid, Riya, Hema, Indu and Jagan, are sitting around a circular table facing the centre (but not necessarily in the same order). Zunaid is sitting second to the left of Indu. Hema is sitting second to the right of Riya. Jagan is not an immediate neighbour of Zunaid.

Who is sitting third to the right of Riya?

A. Indu



B. Jagan

C. Hema

D. Zunaid

Q33 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

10 : 21 :: 11 : 23 :: 12 : ?

A. 23

B. 24

C. 25



D. 26



Q34 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:

All pens are pencils.

No pencil is a cutter.

All cutters are rubbers.

Conclusions:

1. All rubbers are pencils.
2. No pen is a cutter.

A. Only conclusion 1 follows.

B. Only conclusion 2 follows. 

C. Both conclusions 1 and 2 follow.

D. Neither 1 nor 2 is follows.

Q35 General Intelligence and Reasoning

The following table shows the population (in lakhs) of four cities (A, B, C and D) over the past four years. Study the table and answer the question.

City's Name	2018-19 (In lakhs)	2020-21 (In lakhs)
A	78	92
B	61	84
C	71	92
D	72	95

Which city has registered the highest percentage of population growth from 2018-2019 to 2020-2021?

A. A

B. B 

C. C

D. D



Q36 General Intelligence and Reasoning

If '÷' and '-' are interchanged, what will be the value of the given expression?

$$18 - 6 + 14 \times 10 \div 5$$

A. 96

B. 120

C. 138



D. 148

Q37 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$104.96 + 120.96 + 103.16 - 12.89 \times 2.04 + 124.93 \div 5.1 = ?$$

A. 328



B. 330

C. 334

D. 340

Q38 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

78, 32, 68, 64, 58, 128, 48, 256, ?

A. 24

B. 34

C. 38

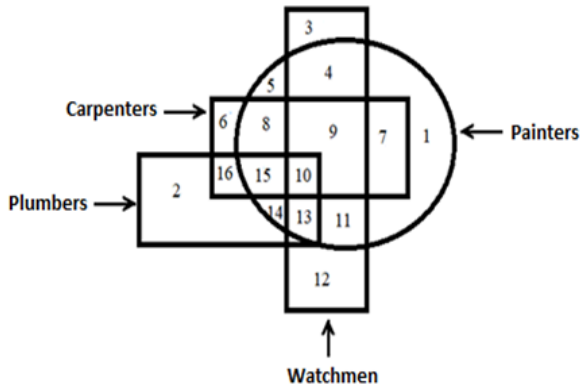


D. 28



Q39 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons. What does region '13' represent?



- A. The number of painters who are only watchmen.
- B. The number of painters who are plumbers and also watchmen but not carpenters. ✓
- c. The number of carpenters who are only watchmen.
- D. The numbers of painters who are only plumbers and neither watchmen nor carpenters.

Q40 General Intelligence and Reasoning

If all the letters in each of the following words are written in reverse order and the newly formed words/clusters are arranged as per the dictionary arrangements, which of the following word/cluster will appear in the middle?

LOST, TALK, WALK, KALM, SHAW

- A. KALM ✓
- B. WALK
- C. SHAW
- D. LOST

Q41 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

20, 20, 22, 66, 70, ?

- A. 74
- B. 350 ✓
- C. 75
- D. 340



Q42 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(63, 72)

(28, 32)

A. (56, 63)

B. (64, 56)

C. (42, 48)



D. (40, 48)

Q43 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the assumptions is/are implicit in the statement.

Statement:

Due to the ongoing roadwork, all traffic on road X is being diverted to the airport road.

Assumptions:

- I. There are huge traffic jams leading to the airport.
- II. Flights are being rescheduled as people cannot make it to the airport on time.

A. Only assumption I is implicit

B. Only assumption II is implicit

C. Neither assumptions I nor II is implicit



D. Both assumptions I and II are implicit

Q44 General Intelligence and Reasoning

From a point O, Mohita started walking and covered a distance of 30 m in the west direction. She then turned to her left and covered a distance of 15 m. She then took a left turn and travelled a distance of 10 m. Finally, she turned to the left and covered a distance of 15 m. How far and in which direction is she now from the starting point O? (All turns are 90 degree turns only)

A. 10 m, East

B. 20 m, North

C. 10 m, South

D. 20 m, West



Q45 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement:

$$A \geq B, C \leq D, B = D > E$$

A. $E < A$

B. $B < C$

C. $D \geq A$

D. $E > B$

Q46 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

S X _ A B S _ Y B B S X Y _ B S X _ D B

A. YXCY

B. XCYC

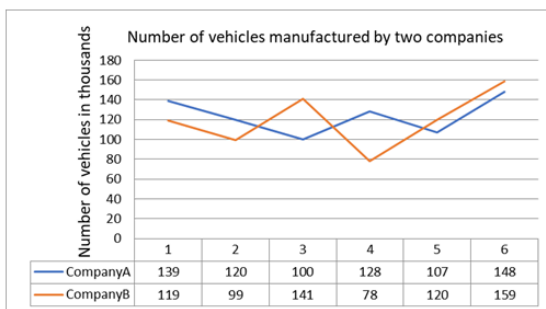
C. XCCY

D. CXYX

Q47 General Intelligence and Reasoning

Study the given chart and answer the question that follows.

The numbers 1 to 6 represent the years from 2001 to 2006.



What is the average number of vehicles (approx.) manufactured by company B over the given period?

A. 1,11,223

B. 1,22,778

C. 1,19,333

D. 1,23,666



Q48 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	6	8	4	+	5	#	%	2	\$	1	^	7	9	*	@
Code	S	U	T	W	N	P	V	D	A	Z	J	M	O	M	Y

Conditions:

- (i) If the first and last elements are numbers, then the last element will be replaced by the symbol @.
- (ii) If the first element is a symbol, then the first element will be coded as ©.
- (iii) If both the first and second elements are numbers, then the third element will be coded as *.

What will be the code for the following?

1 2 ^ % @

A. ZD*VY



B. ZDJVY

C. VYJZD

D. ZDYVJ

Q49 General Intelligence and Reasoning

Each of the six students of class XII, Q, R, U, V, Y and Z, has an online medical entrance exam on a different day of a week, starting from Tuesday and ending on Sunday of the same week, but not necessarily in the same order. None of them have the exam before U. Y has the exam immediately after U. V has the exam on Saturday and Z has the exam immediately before V. Q does not have the exam on Sunday.

Who among the following has the exam on Thursday?

A. Z

B. Q



C. R

D. Y



Q50 General Intelligence and Reasoning

If

'+' means '×',

'−' means '÷',

'×' means '−' and

'÷' means '+',

then which number will replace the question mark (?) in the following expression?

$$11 + 35 - 5 \times 8 \div 3 = ?$$

A. 32.6

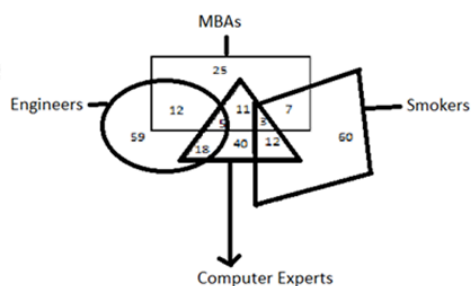
B. 72

C. −72

D. −32.6

Q51 General Intelligence and Reasoning

Study the given diagram carefully and answer the questions. The numbers in different sections indicate the number of employees.



How many employees with MBA degrees are computer experts but are NOT engineers and also don't smoke?

A. 5

B. 3

C. 11

D. 12



Q52 General Intelligence and Reasoning

A statement is followed by two conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$G > A \geq B \geq C > D \leq E \leq F$$

Conclusions:

I. $A > E$

II. $B \leq F$

A. Only conclusion I is true

B. Only conclusion II is true

C. Neither conclusion I nor II is true



D. Both conclusions I and II are true

Q53 General Intelligence and Reasoning

Five students A, B, C, D and E are sitting around a circular table facing the centre (but not necessarily in the same order). A is an immediate neighbour of both B and E. C is sitting to the immediate right of D. B is sitting to the immediate right of C. Who is an immediate neighbour of C and E?

A. E

B. B

C. A

D. D



Q54 General Intelligence and Reasoning

Five laptop boxes marked with Z, X, W, V and U are kept one above the other but not necessarily in the same order. W is kept immediately above V. U is kept third from the top. W is neither the topmost nor the bottom most box. Z is kept immediately below X. Which box is kept immediately below Z?

A. X

B. U



C. W

D. V



Q55 General Intelligence and Reasoning

In a code language, the numbers/symbols are coded using letters as per the table given below and as per the given conditions.

Number/ Symbol	6	^	8	@	4	#	9	\$	1	&	3	*
Code	T	D	C	R	G	B	Y	H	N	J	P	L

Conditions:

1. If the first element is an even number and the last an odd number the codes for these two (the first and the last elements) are to be interchanged.
2. If both the second and third elements are odd numbers, the third element is to be coded as the code for the second element.
3. If the first element is a number and the last a symbol, the first and last elements are to be coded as ©.

What will be the code for 913@#4 ?

A. YNPRBG

B. YPPRBG

C. YPNRBG

D. YNNRBG

**General Science**

25 Questions • Answer Key

Q56 General Science

Consider several electric bulbs designed to be used on a 240 V electric supply line. The bulbs are rated as 10 W. How many bulbs can be connected in parallel with each other across the two wires of the 240 V line if the maximum allowable current is 8 A?

A. 156

B. 174

C. 192



D. 212

Q57 General Science

Which of the following instruments use the principle of refraction?

A. Radio

B. Spectacles



C. Clock

D. Mobile



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Q58 General Science

The magnetic field lines produced by a bar magnet _____.

- A. originate from its north pole and end at its east pole
- B. originate from its south pole and end at its east pole
- C. originate from its north pole and end at its south pole
- D. originate from its south pole and end at its north pole

Q59 General Science

Which element has the hardest natural allotrope?

- A. C
- B. S
- C. Sn
- D. Pb

Q60 General Science

The correct chemical formula of washing soda is:

- A. $\text{Na}_2\text{CO}_3 \cdot 6\text{H}_2\text{O}$
- B. $\text{Na}_2\text{CO}_3 \cdot 8\text{H}_2\text{O}$
- C. $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
- D. $\text{Na}_2\text{CO}_3 \cdot 12\text{H}_2\text{O}$

Q61 General Science

Which of the following products is formed when calcium carbonate is heated?

- A. Limestone
- B. Slaked lime
- C. Marble
- D. Quick lime



Q62 General Science

Which of the following plants is a parasite?

A. Cuscuta



B. Pitcher plant

C. Cactus

D. Mango

Q63 General Science

Which of the following is the correct name of a carbon compound with three-carbon chains and a ketone group?

A. Propanal

B. Propanol

C. Propanone



D. Propene

Q64 General Science

Which of the following aqueous solutions undergoes electrolysis to form sodium hydroxide?

A. Na_2O

B. NaCl



C. NaHCO_3

D. Na_2SO_4

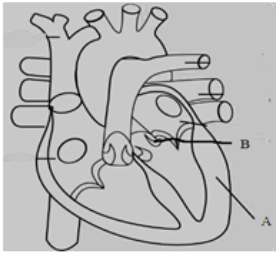


Q65 General Science

Two questions based on the transverse section of human heart are given below. Find the option that gives the correct answers to both the questions.

Q. Why does the part labelled 'A' have thick walls?

Q. What is the function of the part labelled 'B' ?



A. A – Because it pumps blood to different parts of the body
B – Prevents back flow of blood



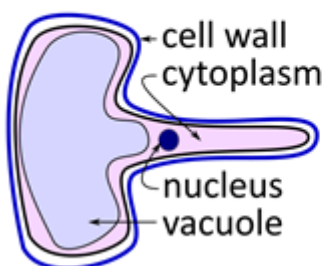
B. A – Because it pumps blood to the left auricle
B – Does not let the blood flow forward

C. A – Because it pumps blood to the pulmonary artery
B – Pumps blood to aorta

D. A – Because it pumps blood to the right auricle
B – Prevents back flow of blood

Q66 General Science

Where in a plant can we find such a cell?



A. Seed (germination)

B. Root



c. Xylem

D. Shoot tip



Q67 General Science

The disease AIDS is caused by:

- A. mycobacterium
- B. fungus
- C. bacterium
- D. virus



Q68 General Science

Suppose Raghu has kept an object in front of a concave mirror of focal length (f) at various distances (u) and he has measured the corresponding image distances (v). From the values of u and v , Raghu is able to plot a graph of magnification m against v . Which of the following options is true?

- A. It is a straight line with slope $+f$, and x intercept -1 and y intercept $1/f$
- B. It is a straight line with slope $+1/f$, and x intercept $+f$ and y intercept -1
- C. It is a straight line with slope $-1/f$, and x intercept -1 and y intercept $+f$
- D. It is a straight line with slope $-f$, and x intercept -1 and y intercept $-f$

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q69 General Science

Which of the following is the best action to increase the thickness of the ozone layer?

- A. Reduce emission of carbon dioxide
- B. Reduce use of fluorine-based refrigerants
- C. Increase the percentage of oxygen in our atmosphere
- D. Release ozone-filled balloons that will burst at high altitude



Q70 General Science

Which of the following continues to grow and develop organs to become a foetus?

- A. Zygote
- B. Egg
- C. Embryo
- D. Placenta



Q71 General Science

Fleming's right hand rule gives us:

- A. the magnitude of the induced EMF
- B. the direction of the magnetic field
- C. the magnitude and the direction of the induced EMF
- D. the direction of the induced current



Q72 General Science

The chemical reaction in which two reactants exchange their ions to form two new compounds is known as:

- A. displacement reaction
- B. double displacement reaction
- C. combination reaction
- D. reduction reaction



Q73 General Science

Which of the following pairs of elements belonging to the same group exhibit similar chemical properties?

- A. N and P
- B. Mg and Mn
- C. C and Cl
- D. Li and Kr



Q74 General Science

What does 'conservation' mean in terms of a natural resource like water?

- A. Stop its use
- B. Leave it in a natural condition
- C. Protect against pollution
- D. Manage it wisely



Q75 General Science

Out of the following choose the conventional source of energy:

- A. Tidal energy
- B. Bio Mass energy
- C. Nuclear energy
- D. Hydroelectric energy

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q76 General Science

Suppose a point source is incident on a system and it produces a parallel beam of light with respect to the principal axis of the system. The system is:

- A. either a convex mirror or a convex lens
- B. either a concave mirror or a convex lens
- C. either a concave mirror or a concave lens
- D. Two plane mirrors perpendicular to each other

Q77 General Science

A student plots three graphs for I against V for three Ohmic conductors A, B and C. He found that the slope of these three graphs are 0.5, 0.1 and 0.2, respectively. If the conductors have the same length and their cross-section areas are in the ratio 1 : 2 : 3, then their resistivity ratios i.e. $\rho_A : \rho_B : \rho_C$ will be:

- A. 1 : 20 : 15
- B. 2 : 20 : 15
- C. 3 : 20 : 15
- D. 4 : 20 : 15

Q78 General Science

Suppose a lamp is connected to a battery of 10 V and current flowing through the lamp is 2 A. The heat energy produced by the lamp in 10 s is:

- A. 50 J
- B. 100 J
- C. 175 J
- D. 200 J



Q79 General Science

Match the columns.

Group-I	Group-B
I. Heart	A. Pumping organ
II. Arteries	B. Carries deoxygenated blood
III. Veins	C. Carries oxygenated blood

A. I-A; II-B; III-C

B. I-C; II-A; III-B

C. I-A; II-C; III-B



D. I-C; II-B; III-A

Q80 General Science

Which of the following statements regarding Dobereiner's triads is NOT correct?

A. Li, Na and K constitute Dobereiner's triads.

B. If three elements are arranged in the increasing sequence of atomic masses, then atomic mass of the middle element is approximately the average of the atomic masses of the other two elements.

C. If three elements are arranged in the decreasing sequence of atomic masses, then atomic mass of the third element is approximately the average of the atomic masses of the other two elements.



D. Cl, Br and I constitute Dobereiner's triads.

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Who received the Arjuna Award 2021 for outstanding performance in the discipline of boxing?

A. Monika

B. Bhavina Patel

C. Simranjit Kaur



D. Arpinder Singh



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Q82 General Awareness and Current Affairs

Where is the headquarters of State Bank of India (SBI)?

- A. New Delhi
- B. Mumbai
- C. Chennai
- D. Kolkata



Q83 General Awareness and Current Affairs

In which year were Bodo, Dogri, Maithili and Santhali were added in the list of languages of the Eighth Schedule of the Constitution of India?

- A. 2002
- B. 2004
- C. 2006
- D. 2010



Q84 General Awareness and Current Affairs

In the Indian monetary system which bank is said to be the lender of last resort?

- A. State Bank of India
- B. Federal Bank
- C. Central Bank of India
- D. Reserve Bank of India



Q85 General Awareness and Current Affairs

Who among the following was also called the 'Lion of Punjab'?

- A. Bal Gangadhar Tilak
- B. Sardar Vallabhbhai Patel
- C. Lala Lajpat Rai
- D. Bhagat Singh



Q86 General Awareness and Current Affairs

El-Nino is a complex weather system that appears once every _____ years, bringing drought, floods, and other weather extremes to different parts of the world including India.

- A. two to four
- B. three to seven
- C. three to eight
- D. four to six



Q87 General Awareness and Current Affairs

_____ is the largest state in India by land area.

- A. Rajasthan
- B. Madhya Pradesh
- C. Maharashtra
- D. Uttar Pradesh



Q88 General Awareness and Current Affairs

Under Article 243 E of the Constitution of India, every Panchayat, unless sooner dissolved under any law for the time being in force, shall continue for _____ years from the date appointed for its first meeting and no longer.

- A. three
- B. four
- C. five
- D. six



Q89 General Awareness and Current Affairs

As of August 2022, under the Naya Savera Scheme, only candidates belonging to the notified Minority Communities, having the total family income from all sources NOT exceeding _____ per annum, will be eligible under the Scheme.

- A. ₹2 lakh
- B. ₹4 lakh
- C. ₹6 lakh
- D. ₹8 lakh



Q90 General Awareness and Current Affairs

Where did Gautam Buddha deliver his first sermon?

- A. Bodh Gaya
- B. Sarnath
- C. Kushinagar
- D. Lumbini



Q91 General Awareness and Current Affairs

A certain percentage of deposits which every bank must keep as 'reserves' is called _____.

- A. Statutory Liquidity Ratio (SLR)
- B. Cash Reserve Ratio (CRR)
- C. Fixed Deposits with RBI
- D. Compulsory Deposit in Central Bank



Q92 General Awareness and Current Affairs

The theme of International Women's Day 2022 issued by the United Nations was _____.

- A. Women in Leadership: Achieving an Equal Future in a COVID-19 World
- B. Gender Equality Today for a Sustainable Tomorrow
- C. An Equal World is an Enabled World
- D. Think Equal, Build Smart, Innovate for Change



Q93 General Awareness and Current Affairs

What do you call profits earned by a business firm over and above the opportunity cost of the factor inputs?

- A. Normal Profit
- B. Abnormal Profit
- C. Regulated Profit
- D. Optimum Profit



Q94 General Awareness and Current Affairs

The Ayurveda dataset on The Clinical Trials Registry- India (CTRI) Portal was launched by the _____ in July 2021.

- A. Ministry of Science and Technology
- B. Ministry of AYUSH
- C. Ministry of Health and Family Welfare
- D. Ministry of Electronics and IT

Q95 General Awareness and Current Affairs

In February 2022, a joint team of scientists from which of the following organisations for the first time in the country successfully demonstrated Quantum Key Distribution link between Prayagraj and Vindhyachal in Uttar Pradesh, a distance of more than 100 kilometres?

- A. Indian Space Research Organisation (ISRO) and Indian Institute of Technology (IIT), Delhi
- B. Defence Research and Development Organisation (DRDO) and Indian Institute of Science, Bengaluru
- C. Defence Electronics Research Laboratory (DERL) and Indian Institute of Technology (IIT), Kharagpur
- D. Defence Research and Development Organisation (DRDO) and Indian Institute of Technology (IIT), Delhi

Q96 General Awareness and Current Affairs

As per one of the provisions of Article 124 of the Indian Constitution, a Supreme Court judge can hold office until he attains the age of _____ years.

- A. 60
- B. 62
- C. 65
- D. 67

Q97 General Awareness and Current Affairs

Which Indian badminton player was the runner-up in the Yonex All England Open Badminton Championships 2022?

- A. Purupalli Kashyap
- B. Kidambi Srikanth
- C. Lakshya Sen
- D. Chirag Sen



Q98 General Awareness and Current Affairs

The Bay of Bengal's islands of Andaman in the north and the Nicobar in the south are separated by a waterbody which is called the _____ channel.

- A. ten degree ☒
- B. twenty degree
- C. thirty degree
- D. forty degree

Q99 General Awareness and Current Affairs

The cultural festival 'Thrissur Pooram' is celebrated in which state?

- A. West Bengal
- B. Telangana
- C. Kerala ☒
- D. Karnataka

Q100 General Awareness and Current Affairs

Which amendment added a chapter IV-A to Indian Constitution which consisted of only one Article 51-A that dealt with Fundamental Duties?

- A. 42nd ☒
- B. 44th
- C. 53rd
- D. 58th



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The marked price of a jacket is ₹1,050. The shopkeeper earns a profit of 25% even after giving a discount of 10%. At what cost did the shopkeeper purchase it?

A. ₹756



B. ₹905

C. ₹856

D. ₹682

Q2 Mathematics

If the length of a diagonal of a square is 18 cm, then its perimeter (in cm) is _____.

A. $24\sqrt{2}$

B. 36

C. $36\sqrt{2}$ 

D. 24

Q3 Mathematics

ABCD is a quadrilateral and E, F, G, and H are the mid-points of $\overline{AB}$, $\overline{BC}$, $\overline{CD}$, and $\overline{DA}$ respectively. The quadrilateral EFGH is necessarily a:

A. rectangle, but not a square

B. square

C. rhombus, but not a square

D. parallelogram



Q4 Mathematics HINDI - no English version saved

एक तार को मोड़कर एक वर्ग बनाया गया है, जिसका क्षेत्रफल 1089 cm^2 है। उसी तार को खोलकर पुनः मोड़कर एक आयत बनाया जाता है, जिसकी लंबाई 40 cm है। इस आयत की चौड़ाई ज्ञात कीजिए।

A. 22 cm

B. 6 cm

C. 11 cm

D. 26 cm ✓

Q5 Mathematics

The diagonal of a rectangle is 26 cm . Its perimeter is 68 cm . Find its area.

A. 120 cm^2

B. 550 cm^2

C. 240 cm^2 ✓

D. 330 cm^2

Q6 Mathematics

The cost of one kg sugar in 2020 was ₹46. If the cost of sugar increased by 2.5% in one year, how much would 5 kg sugar cost in 2021?

A. ₹253.50

B. ₹235.75 ✓

C. ₹47.15

D. ₹48.50

Q7 Mathematics

If 128 is divided into two parts such that one part is three times the other, then the larger part is _____.

A. 92

B. 84

C. 104

D. 96 ✓



Q8 Mathematics

The value of $\tan^6 A + 3 \tan^2 A \sec^2 A + 1$ is:

A. $\sec^4 A$

B. $\sec^5 A$

C. $\sec^6 A$ ✓

D. $\sec^4 A + \tan^4 A$

Q9 Mathematics

If $a + b + c = 0$, then the roots of the equation $ax^2 + bx + c = 0$ are:

A. $-2, \frac{c}{a}$

B. $2, \frac{c}{a}$

C. $-1, \frac{-c}{a}$

D. $1, \frac{c}{a}$ ✓

Q10 Mathematics

The ratio of marks obtained by A and B is 3 : 4 and of those obtained by B and C is 2 : 3. What is ratio of marks obtained by A and C?

A. 1 : 2 ✓

B. 2 : 1

C. 1 : 1

D. 4 : 3



Q11 Mathematics

One-third of a certain journey is covered at a speed of 25 km/h, one-fourth of the journey is covered at a speed of 30 km/h and the rest of the journey is covered at 50 km/h. The average speed (in km/h) of the whole journey is:

A. $33\frac{1}{3}$



B. 33

C. $32\frac{1}{2}$

D. 32

Q12 Mathematics

Simplify

$$\left(\frac{1}{512}\right)^{\frac{-2}{3}} \div \left(\frac{1}{64}\right)^{\frac{-4}{3}} = ?$$

A. $\frac{3}{4}$

B. $\frac{1}{4}$



C. $\frac{2}{3}$

D. $\frac{1}{6}$



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Q13 Mathematics

Express $5.\overline{7}$ in $\frac{p}{q}$ form, where p and q are integers and $q \neq 0$.

A. $\frac{57}{10}$

B. $\frac{52}{7}$

C. $\frac{57}{7}$

D. $\frac{52}{9}$



Q14 Mathematics

For the equation $(x + 4)(x - 4) = 0$, the value of the discriminant is equal to _____.

A. 0

B. -4

C. 16

D. 64



Q15 Mathematics

Find the mean length of a leaf, given the lengths of 10 leaves (in mm) are as follows:

146, 150, 147, 143, 158, 139, 154, 149, 151, 155

A. 149.2 mm

B. 151.9 mm

C. 139.6 mm

D. 148.2 mm



Q16 Mathematics

$(x + y + 2z)(x + y)$ can be expressed as:

A. $(x + y + z)^2 - z^2$ ✓

B. $(x - y + z)^2 - z^2$

C. $(x + y + z)^2 - y^2$

D. $(x + y + z)^2 - x^2$

Q17 Mathematics

68 is divided into three parts. When the first part is increased by 2, the second part is diminished by 2 and the third part is divided by 2, the resultant numbers all become equal. Find the value of the third part.

A. 68

B. 19

C. 15

D. 34 ✓

Q18 Mathematics HINDI - no English version saved

वनराज की आयु, उसके पुत्र की आयु की तीन गुनी है। उसकी पुत्री की आयु, उसके पुत्र की आयु से 3 वर्ष कम है। यदि 3 वर्ष पूर्व, इन तीनों की आयु का योग 63 वर्ष था, तो वनराज की वर्तमान आयु (वर्ष में) ज्ञात कीजिए।

A. 45 ✓

B. 36

C. 30

D. 42

Q19 Mathematics

15 articles are sold at the total cost price of 20 articles. The gain or loss per cent is:

A. $33\frac{1}{3}\%$ gain ✓

B. $33\frac{1}{3}\%$ loss

C. 20% gain

D. 20% loss



Q20 Mathematics

Due to decrease in manpower, the production in a factory decreases by 30%. By what per cent should the working hours be increased to restore the original production?

A. 41%

B. $42\frac{6}{7}\%$ ✓

C. 43%

D. 42%

Q21 Mathematics

Find the smallest natural number which, when divided by 9, 24 and 12, leaves a remainder 4 in each case but when divided by 5 leaves no remainder.

A. 150

B. 148

C. 220 ✓

D. 144

Q22 Mathematics

If the diagonals of a quadrilateral bisect each other at right angles, then the quadrilateral is a:

A. rectangle

B. parallelogram

C. rhombus ✓

D. trapezium

Q23 Mathematics

Find the LCM of 550, 880 and 1320.

A. 10800

B. 12300

C. 13200 ✓

D. 11000



Q24 Mathematics

The ratio of the volumes of two cylinders A and B having the radii of their bases as 2 cm and 3 cm, respectively, and having the same height, is:

A. 4 : 9



B. 9 : 4

C. 2 : 3

D. 3 : 2

Q25 Mathematics

A train 400 m long travelling at a speed of 64 km/h crosses another train 720 m long moving in the opposite direction at a speed of 80 km/h. How much time does the second train take to cross a man sitting in the first train?

A. 12 sec

B. 15 sec

C. 16 sec

D. 18 sec

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. All mirrors are cupboards.
2. Some beds are almirahs.
3. Some almirahs are mirrors.

Conclusions:

- I-Some beds are cupboards.
II-Some cupboards are almirahs.

A. Only conclusion I follows.

B. Only conclusion II follows.



C. Both conclusions I and II follow.

D. Neither conclusion I nor II follows.



Q27 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

13 : 179 :: 19 : 371 :: 26 : ?

A. 726

B. 686



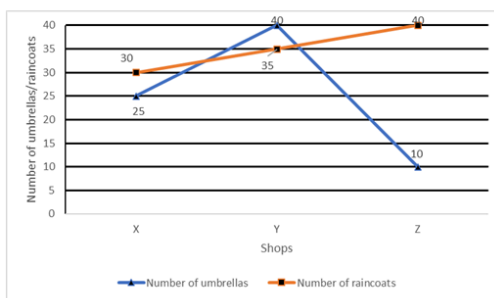
C. 530

D. 734

Q28 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of umbrellas and raincoats sold by shops X, Y and Z.



What is the respective ratio between the number of umbrellas sold by shop X and the total number of raincoats sold by shops Y and Z?

A. 2 : 5

B. 2 : 3

C. 1 : 5

D. 1 : 3

**Q29** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1, 1, 2, 4, 3, 27, 4, 256, 5, ?

A. 125

B. 625

C. 3125



D. 15625



Q30 General Intelligence and Reasoning

Study the given table and answer the question that follows.

The table shows the total income in ₹ and expenditure of five different families under different heads as a percentage of the total income.

Family	Total Income (in ₹)	Daily Usage	Health Care	Medical	Other Expenses
A	50,000	15%	18%	10%	7%
B	65,000	20%	14%	8%	8%
C	33,000	18%	20%	8%	14%
D	55,000	25%	10%	11%	4%
E	90,000	30%	20%	12%	8%

Find the total amount of saving (in ₹) of all the families combined.

Savings = Total Income – Sum of all expenditures

A. 1,00,300

B. 1,25,200



C. 1,19,700

D. 1,76,200

Q31 General Intelligence and Reasoning

Mohit starts from a point X and travels 2 km towards the north and takes a right turn and further travels 1 km. He then turns to the right and travels a distance of 3 km. He then takes a right turn and travels a distance of 1 km, and finally turns to the right again and travels a distance of 1 km. What is the present location of Mohit in respect of his point of initiation of travel, X? (All turns are 90 degree turns only)

A. 1 km south

B. 1 km north

C. Point X itself



D. 1 km east

Q32 General Intelligence and Reasoning

What approximate value should come in place of the question mark (?) in the following equation?

$$15.09 - 8.99 + 26.02 \times 6.99 = ?$$

A. 186

B. 187

C. 188



D. 190



Q33 General Intelligence and Reasoning

Study the given letter, number, symbol series and answer the question that follows.

(Left) A 9 % B @ 6 & L # K 9 @ 7 # 6 K M * 7 & B (Right)

How many such letters are there that are immediately preceded by a symbol and also immediately followed by a number?

A. 1



B. 4

C. 5

D. 2

Q34 General Intelligence and Reasoning

Each vowel in the word PRISON is changed to the letter preceding it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order. Which of the following letters will be fourth from the right in the group of letters thus formed?

A. Q

B. H



C. N

D. T

Q35 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

2 : 7 :: 8 : 13 :: 16 : ?

A. 19

B. 20

C. 21



D. 22



Q36 General Intelligence and Reasoning

If in each of the following words, each letter is changed to the next letter in the English alphabetical order, how many words thus formed will have NO vowel?

- 1) TOGETHER
- 2) BOXES
- 3) SPORTS
- 4) DRINK

A. One



B. Two

C. Three

D. Four

Q37 General Intelligence and Reasoning

Select the option that is related to the fifth term in the same way as the fourth term is related to the third term and the second term is related to the first term.

MOTHER : OMHTRE :: DAUGHTER : ADGUTHRE :: SIBLINGS : ?

A. SGNILBIS

B. BISNILSG

C. LBISSGNI

D. ISLBNISG



Q38 General Intelligence and Reasoning

In a certain code language, 'DTHKM' is written as 'EVKOR' and 'WHITE' is written as 'XJLXJ'. How will 'GREEN' be written in that language?

A. HTHHS

B. HTHIS



C. HTIHS

D. HTHHT



Q39 General Intelligence and Reasoning HINDI - no English version saved

एक कथन और उसके बाद दो निष्कर्ष I और II दिए गए हैं। कथन में दी गई जानकारी को सत्य मानते हुए विचार करें, भले ही वह सामान्यतः ज्ञात तथ्यों से भिन्न प्रतीत होती हो, और बताएं कि दिए गए निष्कर्षों में से कौन से, निसंदेह कथन का तार्किक रूप से पालन करते हैं?

कथन:

सागर ने अपने घर की बिजली की बत्तियां बुझाने हेतु गीले हाथों का उपयोग किया, जिसकी वजह से उसे झटका लगा।

निष्कर्ष:

- I. घर में मौजूद बिजली के सभी तार बदलने की आवश्यकता है।
- II. कभी भी बिजली के किसी भी उपकरण को गीले हाथों से स्पर्श न करें।

- A. केवल निष्कर्ष I पालन करता है
- B. केवल निष्कर्ष II पालन करता है ✓
- C. न तो निष्कर्ष I और न ही II पालन करता है
- D. निष्कर्ष I और II दोनों पालन करते हैं

Q40 General Intelligence and Reasoning

Six national mathematics lectures are planned on the eve of Mathematics Day in six cities - Madurai, Dwaraka, Kakinada, Chandigarh, Lucknow and Bilaspur - on different months between July to December in the same year (but not necessarily in the same order). Only the Dwaraka lecture is planned between the Chandigarh and Bilaspur lectures. The Chandigarh lecture is in October. Only two lectures are planned before the Kakinada lecture. The Madurai lecture is immediately after the Lucknow lecture.

Which city has the last lecture in the year?

- A. Bilaspur ✓
- B. Chandigarh
- C. Kakinada
- D. Madurai



Q41 General Intelligence and Reasoning

In the following question, the statement is followed by two conclusions. Which of the two conclusion(s) is/are true based on the given statement?

Statement: $Q > S < R > T = U \leq V$

Conclusions: I. $T = V$

II. $R > U$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Both conclusions I and II are true
- D. Neither conclusion I nor II is true

Q42 General Intelligence and Reasoning

Study the given letter, number, symbol series and answer the question that follows.

(Left) T 2 L % 4 M 2 # B N @ 8 K # B 6 L * 3 P (Right)

How many such numbers are there that are immediately preceded by a symbol and also immediately followed by a letter?

- A. 4
- B. 2
- C. 1
- D. 3

Q43 General Intelligence and Reasoning

Amongst six people, D, E, F, G, H, and I, each has a different age. They are standing in a line according to their age in an increasing order. F is older than E but younger than D. D is younger than I. E is older than G. G is older than H. Who comes in 4th position in increasing order of age ?

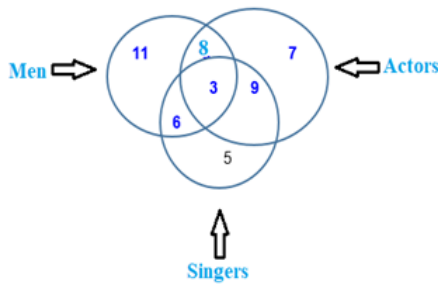
- A. I
- B. E
- C. F
- D. H



Q44 General Intelligence and Reasoning

Study the given diagram carefully and answer the question that follows.

The numbers in different sections indicate the number of people.



How many Men are Actors but NOT Singers?

A. 8



B. 11

C. 3

D. 26

Q45 General Intelligence and Reasoning

Seven students, A, B, C, D, E, F, and G, have exams on different days of a week starting from Monday and ending on Sunday of the same week. The exam of C is on Sunday and that of F is on Monday. The exam of G is on Tuesday. The exam of B is on the immediate next day of the exam of G. The exam of E is immediately after A. The exam of A is on Thursday. On which of the days will D have his exam?

A. Tuesday

B. Friday

C. Saturday



D. Thursday

Q46 General Intelligence and Reasoning

Ram walks 40 m towards east and then turns left and walks 56 m. From that point, he starts walking towards the west and walks 20 m. After taking a left turn, he walks 50 m and then takes a right turn and walks 20 m. How far and in which direction is Ram's current position from his starting point? (All turns are 90 degree turns only.)

A. 50 m, West

B. 56 m, North

C. 4 m, South

D. 6 m, North



Q47 General Intelligence and Reasoning

In a certain code language, 'BULK' is written as 'CWOO' and 'PINK' is written as 'QKQO'. How will 'BLUE' be written in that language?

- A. CMXI
- B. CNWI
- C. CNXJ
- D. CNXI



Q48 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?
10, 21, 38, 62, 94, ?

- A. 72
- B. 104
- C. 155
- D. 135



Q49 General Intelligence and Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$60 - 72 \times 6 + 15 \div 3 = ?$$

- A. 25
- B. 27
- C. 32
- D. 64



Q50 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark(?) in the following equation?

$$15.99 - 4.02 + 19.89 \times 5.19 = ?$$

- A. 112
- B. 75
- C. 222
- D. 50



Q51 General Intelligence and Reasoning

Eight students, P, Q, R, S, T, U, V and W, are sitting around a square table facing the centre of the table (but not necessarily in the same order). Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. S is sitting to the immediate left of U. R is sitting fourth to the right of S. Q is an immediate neighbour of R and V, who is sitting third to the left of T. W is sitting second to the right of T.

Who is an immediate neighbour of T and W?

A. R

B. P



C. Q

D. S

Q52 General Intelligence and Reasoning

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All jewellerys are ornaments.

Some flowers are ornaments.

All plants are flowers.

Conclusions:

I. All plants are jewellerys.

II. Some ornaments are jewellerys.

III. Some flowers are plants.

A. Only conclusions I and II follow

B. Only conclusions I and III follow

C. Only conclusions II and III follow



D. Only conclusion III follows

Q53 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

VZL15, TXJ18, RVH21, PTF24, ?

A. NRD27



B. RND27

C. DRN27

D. LMN27



Q54 General Intelligence and Reasoning

A certain number of anchors are sitting in a row in an audio launching programme, facing north. Archana sits fourth to the left of Chitra and seventh to the left of Bhumika. Bhumika sits fifth to the left of Darani. There is only one anchor between Darani and Esha. No anchor sits to the right of Esha. If no other anchor is sitting in the row, what is the total number of anchors seated?

A. 13

B. 12

C. 11

D. 15 **Q55** General Intelligence and Reasoning

Eight girls, Ponti, Bobby, Anshu, Renu, Mohini, Sujata, Rani and Mohita, are sitting around a square table facing the centre of the table (but not necessarily in the same order). Some of them are sitting at the corners, while some are sitting at the exact centre of the sides. Ponti is sitting sixth to the left of the Bobby, who is sitting third to the right of Sujata. Mohini is sitting second to the left of Sujata. Rani is an immediate neighbour of Ponti and Bobby. Anshu is sitting to the immediate left of Sujata, who is to the immediate left of Renu.

Who is sitting to the immediate right of Rani?

A. Ponti 

B. Bobby

C. Anshu

D. Mohita

General Science

25 Questions • Answer Key

Q56 General Science

In which of the following animals does blood go only once through the heart during one cycle of passage through the body?

A. Birds

B. Fishes 

C. Mammals

D. Reptiles



Q57 General Science

Suppose in a circuit, a silver wire of length L and cross-sectional area A is replaced by a chromium wire of length $L/3$ and cross-sectional area $3A$. The resistance of the circuit will _____.

(Given that $\rho_{\text{silver}} = 1.6 \times 10^{-8} \Omega \text{ m}$ and $\rho_{\text{chromium}} = 12.9 \times 10^{-8} \Omega \text{ m}$)

- A. increase to 1.3 times of itself
- B. increase to 1.05 times of itself
- C. decrease to 0.78 times of itself
- D. decrease to 0.89 times of itself



Q58 General Science HINDI - no English version saved

खतरनाक अपशिष्ट के निपटान की सर्वोत्तम विधि क्या है?

- A. महासागरों सन्निकषण (Ocean dumping)
- B. कंपोस्ट बनाना (Composting)
- C. भराव क्षेत्र (Landfills)
- D. भस्मीकरण/जलाना (Incineration)

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q59 General Science

Which of the following statements regarding the trend of metallic properties in the modern periodic table is correct?

- A. Metallic character remains constant across a period and increases down a group.
- B. Metallic character increases across a period and decreases down a group.
- C. Metallic character decreases across a period and increases down a group.
- D. Metallic character decreases across a period and remains constant down a group.



Q60 General Science

Which of the following terms describes the movement of water molecules across a selectively permeable membrane?

- A. Diffusion
- B. Translocation
- C. Exocytosis
- D. Osmosis



Q61 General Science

A 2KW AC is to be used on a 250 V a.c. mains for which a 3-pin top plug fitted to a cable is required. Which of the following option is **NOT** correct:

- A. The neutral wire is coloured Black
- B. A fuse should be connected in the live wire
- C. The green wire is for earth pin connection
- D. The appropriate value of fuse to be used is 12 A



Q62 General Science

Which of the following types of cells are NOT a part of vascular tissue in plants?

- A. Tracheids
- B. Vessels
- C. Collenchyma
- D. Parenchyma



Q63 General Science HINDI - no English version saved

निम्न में से किस रोग में शरीर उन अनेक छोटे-मोटे संक्रमणों से भी नहीं लड़ पाता है, जिनका हम प्रतिदिन सामना करते हैं?

- A. टाइफॉइड (Typhoid)
- B. निमोनिया (Pneumonia)
- C. एचआईवी-एड्स (HIV-AIDS)
- D. सुजाक (Gonorrhoea)



Q64 General Science

Bleaching powder is represented as:

- A. CaCO_3
- B. Ca(OH)_2
- C. CaCl_2
- D. CaOCl_2



Q65 General Science

When a ray is incident parallel to the principal axis of a convex lens then the refracted ray will pass through:

- A. optical centre
- B. principal axis
- C. centre of curvature
- D. principal focus



Q66 General Science

What is the molecular formula of second member of alkene series?

- A. C_2H_4
- B. C_3H_6
- C. C_4H_8
- D. C_6H_{12}



Q67 General Science

A light ray travels from air into an optical fibre with an index of refraction of 1.45. If the angle of incidence on the end of the fibre is 22° , the angle of refraction inside the fibre is:

- A. 20.99°
- B. 14.99°
- C. 25.69°
- D. 22.69°

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q68 General Science

Why do fats in diet form large globules in the small intestine?

- A. Because fats do not mix well with watery slurry produced in the stomach
- B. Because lipase enzymes in the stomach do not digest fats completely
- C. Because proteins and fats clump together to produce colloidal matter
- D. Because fats get trapped in fibrous carbohydrates during food churning in the stomach



Q69 General Science

A point on the principal axis which is equidistant from the curved surface of a spherical mirror is:

A. principal focus



B. centre of curvature

C. pole

D. infinity

Q70 General Science

Which of the following colloids has solid dispersed phase in a liquid dispersing medium?

A. Emulsion

B. Gel

C. Sol



D. Foam

Q71 General Science

A rainbow is formed by water droplets suspended in the atmosphere after the rain shower. The phenomenon responsible for occurring of rainbow consists of:

A. Reflection only

B. Refraction only

C. A combination of refraction, dispersion and total internal reflection



D. A combination of refraction, scattering and dispersion

Q72 General Science HINDI - no English version saved

एचआईवी (HIV) से संक्रमित होने से बचना क्यों महत्वपूर्ण है?

A. क्योंकि एचआईवी (HIV) का कोई उपचार नहीं है



B. क्योंकि इसके कारण आंशिक पक्षाघात होता है

C. क्योंकि यह माता-पिता से बच्चों में फैलता है

D. क्योंकि इसकी वजह से पूरे परिवार का सामाजिक बहिष्कार होता है

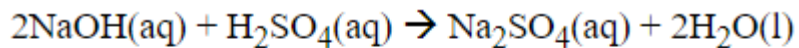


Q73 General Science

According to Henry Moseley, which of the following properties of an element is a more fundamental property than its atomic mass?

- A. Atomic size
- B. Atomic number
- C. Atomic density
- D. Atomic radii

Q74 General Science



The given reaction is an example of:

- A. decomposition reaction
- B. precipitation reaction
- C. redox reaction
- D. neutralisation reaction

Q75 General Science

Burning of magnesium in the presence of air produces magnesium oxide. Select the type of reaction involved.

- A. Reduction reaction
- B. Oxidation reaction
- C. Displacement reaction
- D. Double displacement reaction

Q76 General Science HINDI - no English version saved

प्राकृतिक संसाधनों के सतत उपयोग (sustainable use) की दिशा में बढ़ने के लिए सरकार निम्न में से कौन सा कदम उठा सकती है?

- A. हवाई जहाजों से यात्रा पर प्रतिबंध
- B. त्योहारों पर पटाखों पर प्रतिबंध
- C. मेट्रो और बस सेवाओं का निर्माण
- D. पर्यावरण विज्ञान के अध्ययन को अनिवार्य करना

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



Q77 General Science

The resistivity of the material of wire having resistance $0.7\ \Omega$, length 1 m and diameter 0.2 mm is:

A. $0.22 \times 10^{-8}\ \Omega\text{m}$

B. $22 \times 10^{-8}\ \Omega\text{m}$

C. $220 \times 10^{-8}\ \Omega\text{m}$

D. $2.2 \times 10^{-8}\ \Omega\text{m}$



Q78 General Science

Which of the following is not the property of ionic compounds?

- (i) Ionic compounds have low melting and boiling points.
- (ii) Ionic compounds are generally soluble in water and insoluble in solvent such as kerosene, petrol etc.
- (iii) Ionic compounds are solids and are somewhat hard because of the strong force of attraction between the positive and negative ions.
- (iv) Ionic compounds conduct electricity in the molten state.

A. iv

B. iii

C. ii

D. i



Q79 General Science

The correct relation between the radius of curvature R and focal length f for a spherical mirror is:

A. $R = \frac{f}{2}$

B. $R = f$

C. $\frac{R}{2} = f$



D. $\frac{1}{R} = \frac{2}{f}$



Q80 General Science

Which of the following quantities affects the electrical resistivity of a given metallic wire?

- A. Thickness of the wire
- B. Shape of the wire
- C. Nature of the material of the wire
- D. Number of turns of the wire



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

In which city of India will you find Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha?

- A. Agra
- B. Bengaluru
- C. Mumbai
- D. New Delhi



Q82 General Awareness and Current Affairs

As of January 2022, which enterprise became India's first Unicorn sports Enterprise?

- A. Dabang Delhi
- B. Chennai Super Kings
- C. Patna Pirates
- D. Gujarat Giants



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Q83 General Awareness and Current Affairs

Which of the following rivers flows from east to west?

A. Narmada



B. Godavari

C. Mahanadi

D. Krishna

Q84 General Awareness and Current Affairs

The 56th National Cross Country Championships 2022 was organised at which place?

A. Kohima



B. Panaji

C. Chandigarh

D. Ranchi

Q85 General Awareness and Current Affairs

In macroeconomic analysis, a consumption function describes the relation between total consumption and _____.

A. price of the consumption good

B. gross national income



C. quality of the consumption good

D. behaviour of the consumer

Q86 General Awareness and Current Affairs

When was independent India's first Union Budget presented in the Parliament?

A. 1 October 1947

B. 26 November 1947



C. 2 January 1948

D. 28 February 1948



Q87 General Awareness and Current Affairs

In June 2022, Polyversity, India's largest educational Metaverse with over 100 academic partners was launched by the Union Minister Sri Dharmendra Pradhan in which city?

- A. Chennai
- B. Varanasi
- C. Bhubaneswar
- D. New Delhi



Q88 General Awareness and Current Affairs

Which of the following festivals is NOT celebrated in January every year?

- A. Lohri
- B. Pongal
- C. Bhogali Bihu
- D. Onam



Q89 General Awareness and Current Affairs

In February 2022, which state/UT's police launched two women's squads for ensuring the safety and security of women in its capital city?

- A. West Bengal
- B. Jammu and Kashmir
- C. Maharashtra
- D. Uttar Pradesh



Q90 General Awareness and Current Affairs

Which of the following Constitution Amendment Act of India is related to the urban local bodies?

- A. 72nd
- B. 73rd
- C. 74th
- D. 75th



Q91 General Awareness and Current Affairs

Which of the following measures is considered the most commonly used measure of money supply?

A. M1

B. M2

C. M3



D. M4

Q92 General Awareness and Current Affairs

Chandoli National Park is located in which state?

A. Uttar Pradesh

B. Maharashtra



C. Himachal Pradesh

D. Kerala

Q93 General Awareness and Current Affairs

In which year was the partition of Bengal announced by Lord Curzon, the then Viceroy of India?

A. 1905



B. 1907

C. 1909

D. 1911

Q94 General Awareness and Current Affairs

In the second and latest edition of the India Innovation Index 2020 which state occupies a top position under the 'Major States' category?

A. Maharashtra

B. Karnataka



C. Tamil Nadu

D. Telangana



Q95 General Awareness and Current Affairs

According to the Government Budget 2022, a taxpayer can now file updated income tax return within _____ for correcting errors.

- A. 1 year
- B. 2 years
- C. 3 years
- D. 5 years



Q96 General Awareness and Current Affairs

Who among the following was one of the recipients of Shanti Swarup Bhatnagar Prize for science and technology 2021?

- A. Dr. Amit Singh
- B. Dr. Ashok Gupta
- C. Dr. Sanjay Mathur
- D. Dr. Prakash Varma



Q97 General Awareness and Current Affairs

Which of the following rivers merges in the Arabian Sea?

- A. Krishna
- B. Narmada
- C. Teesta
- D. Kaveri



Q98 General Awareness and Current Affairs

Under the provisions of which Article of the Indian Constitution is the President empowered to constitute a Finance Commission at the expiration of every fifth year or at such earlier time as the President considers necessary?

- A. Article 280
- B. Article 281
- C. Article 282
- D. Article 283



Q99 General Awareness and Current Affairs

Which Articles of the Indian Constitution has provisions about the Fundamental Rights in the Constitution?

- A. Articles 5 to 11
- B. Articles 12 to 35
- C. Articles 36 to 51
- D. Articles 52 to 78



Q100 General Awareness and Current Affairs HINDI - no English version saved

वैदिक ग्रंथों के अनुसार, 'संग्रहित्री' का क्या कार्य था?

- A. कोषाध्यक्ष/खजांची
- B. कर संग्राहक
- C. सारथी
- D. चारण



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Find the value of $5432.5678 + 435.692 + 29.54 + 6.3 + 0.4321$.

A. 5904.5319



B. 6004.5319

C. 5900.5329

D. 5904.5391

Q2 Mathematics

In a classroom, the number of boys and the number of girls are initially equal. 8 girls left to play ring tennis, leaving twice as many boys as girls in the classroom. The total number of girls and boys present initially were _____.

A. 26

B. 24

C. 34

D. 32



Q3 Mathematics

Lines $\vec{l} \parallel \vec{m} \parallel \vec{n}$ and $\vec{p}, \vec{q}$ are transversals of $\vec{l}, \vec{m}$ and $\vec{n}$.

$\vec{p}$ intersects lines $\vec{l}, \vec{m}$ and $\vec{n}$ at the points A, B and C respectively, while

$\vec{q}$ intersects lines $\vec{l}, \vec{m}$ and $\vec{n}$ at the points D, E and F respectively.

If $m(\overline{AB}) = m(\overline{DE})$, then which of the following is correct?

A. $m(\overline{BC}) = m(\overline{EF})$



B. $m(\overline{BD}) = m(\overline{CE})$

C. $m(\overline{CE}) = m(\overline{DF})$

D. $m(\overline{AD}) = m(\overline{DF})$



Q4 Mathematics

A certain sum invested at 12% simple interest per annum after 5 years yields an interest of ₹19,200. What is the sum invested?

A. ₹38,000

B. ₹32,000



C. ₹30,000

D. ₹28,000

Q5 Mathematics

The value of $\left(\frac{1}{\sec^2 \theta - \cos^2 \theta} + \frac{1}{\operatorname{cosec}^2 \theta - \sin^2 \theta}\right) (\sin^2 \theta \cos^2 \theta)$

A. $\frac{1 - \cos^2 \theta \sin^2 \theta}{2 + \cos^2 \theta \sin^2 \theta}$



B. $\frac{1 + \cos^2 \theta \sin^2 \theta}{2 - \cos^2 \theta \sin^2 \theta}$

C. $\frac{1 + \cos^2 \theta \sin^2 \theta}{2 + \cos^2 \theta \sin^2 \theta}$

D. $\frac{1 - \cos^2 \theta \sin^2 \theta}{2 - \cos^2 \theta \sin^2 \theta}$

Q6 Mathematics

If the 15 - digit number 4a5124356789734 is divisible by 9, then the value of “a” is _____.

A. 4



B. 3

C. 1

D. 5



Q7 Mathematics

In triangle ABC, P, Q, and R are the mid points of its sides BC, CA, and AB, respectively. If the area of triangle PQR is 6 cm^2 , then the area of triangle ABC is:

- A. 36 cm^2
- B. 12 cm^2
- C. 18 cm^2
- D. 24 cm^2 ✓

Q8 Mathematics

The number of natural numbers between 18 and 78, both excluded, which are divisible by 6 is _____.

- A. 10
- B. 9 ✓
- C. 11
- D. 12

Q9 Mathematics

Simplify $(7x - 1)^3 + (7x + 1)^3$.

- A. $686x^3 + 42x$ ✓
- B. $686x^3 - 42x$
- C. $-686x^3 + 42x$
- D. $-686x^3 - 42x$

Q10 Mathematics

A sphere and a cube have the same surface area. The ratio of the volume of the sphere to that of the cube is:

- A. $\sqrt{\pi} : \sqrt{6}$
- B. $\sqrt{6} : \sqrt{\pi}$ ✓
- C. $4\sqrt{3} : \sqrt{\pi}$
- D. $\sqrt{\pi} : 4\sqrt{3}$



Q11 Mathematics

Determine the positive value of 'k' for which the equations $x^2 + kx + 64 = 0$ and $x^2 - 8x + k = 0$ will both have real roots.

A. 15

B. 14

C. 16



D. 17

Q12 Mathematics

The ages of a father and his son together add up to 80 years. If the age of the son be doubled, it will exceed the father's age by 10 years. Find the present age of the son.

A. 35 years

B. 40 years

C. 50 years

D. 30 years

**Q13** Mathematics

Find the median of the following distribution.

x	1	2	3	4	5
f	5	7	4	8	2

A. 13

B. 3



C. 4

D. 14



Q14 Mathematics

$$\sqrt{\frac{\sqrt{211600} + \sqrt{400}}{48000}} \text{ equals:}$$

A. $\frac{1}{4}$

B. $\frac{1}{10}$ ✓

C. $\frac{1}{12}$

D. $\frac{1}{48}$

Q15 Mathematics

Simplify the given expression.

$$\frac{140 \times 140 + 280 \times 450 \div 3 + 150 \times 150}{290}$$

A. 280

B. 270

C. 290 ✓

D. 275

Q16 Mathematics

What will ₹80,000 amount to in one year at 12% per annum, if the interest is compounded half-yearly?

A. ₹89,888 ✓

B. ₹1,00,352

C. ₹92,450

D. ₹88,888

Q17 Mathematics

If $2.5 : x :: x : 4.9$, and $x > 0$, find the value of x .

A. 3.5 ✓

B. 3.4

C. 3.3

D. 3.2



Q18 Mathematics

The sum of the roots of the equation $x^2 + 3a^2 = 4ax$ is:

A. $3a$

B. $4a$ ✓

C. $2a$

D. a

Q19 Mathematics

The total cost price of 63 identical articles is equal to the total selling price of 54 of those articles. What is the gain or loss percentage?

A. $16\frac{2}{3}\%$ loss

B. $16\frac{2}{3}\%$ gain ✓

C. $15\frac{1}{3}\%$ loss

D. $15\frac{1}{3}\%$ gain

Q20 Mathematics

A person spends 84% of his income and saves the remaining amount. If he saves ₹8,000 per month, what is his monthly income?

A. ₹54,000

B. ₹45,000

C. ₹48,000

D. ₹50,000 ✓



Q21 Mathematics

The mean weight of 18 jackfruits is 7.2 kg. If the weights of 2 more jackfruits whose weights are equal are added, the mean weight decreases by 20 g. What is the weight of each jackfruit added later?

A. 7.18 kg

B. 7.22 kg

C. 7.00 kg ☒

D. 7.40 kg

Q22 Mathematics

Find the SP of an article whose marked price is ₹4,500 and discount allowed is 4.2%.

A. ₹4,441.00

B. ₹4,311.00 ☒

C. ₹4,111.00

D. ₹4,213.45

Q23 Mathematics

The curved surface area of a sphere is 1386 cm^2 . Find the volume of the sphere. [Use $\pi = \frac{22}{7}$]

A. 2722 cm^3 B. 4158 cm^3 C. 4851 cm^3 ☒D. 5572 cm^3 **Q24** Mathematics

The cost of a keyboard and a mouse is ₹3,600. If the cost of the keyboard is seven times that of the mouse, what is the cost of the keyboard?

A. ₹3,050

B. ₹3,150 ☒

C. ₹450

D. ₹600



Q25 Mathematics

A and B can complete a piece of work in 20 days, B and C can complete the same piece of work in 12 days, while C and A can do it in 15 days. In how many days can A, B, and C together complete the same work?

A. 10



B. 15

C. 5

D. 12

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $S = M > Z > X$, $A > B = M$

A. $X < A$



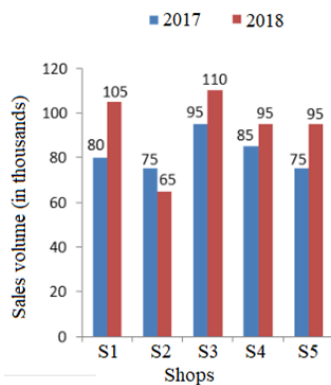
B. $Z > A$

C. $S > A$

D. $B < Z$

Q27 General Intelligence and Reasoning

Study the graph and answer the question that follows. The following bar chart shows the sales volume of Philips bulbs (in thousand) from five different electric shops in a city during two years 2017 and 2018.



What is the average sales volume of Philips bulbs (in numbers) from all the shops for the year 2017?

A. 80000

B. 81000

C. 82000



D. 83000



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Q28 General Intelligence and Reasoning

Refer to the following number and symbol series and answer the question.

Note: The numbers are to be considered as a whole and should not be split into its constituent digits.

+ 25 @ 36 # 29 37 % 14 - 7

How many symbols have a prime number as an immediate neighbour on either of its sides?

A. 1

B. 2

C. 3



D. 4

Q29 General Intelligence and Reasoning

How many such pairs of letters are there in the word DANCER (in both forward and backward directions) which have as many letters between them as there are in the English alphabetical order?

A. None

B. One



C. Two

D. Three

Q30 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

28, 42, 59, 81, 110, ?, 197

A. 148



B. 159

C. 153

D. 163



Q31 General Intelligence and Reasoning

In a certain code language, 'SCOPE' is written as 'JZNMX' and 'GAMUT' is written as 'VBPHI'. How will 'RANGE' be written in that language?

- A. KBOVW
- B. KBOVX
- C. LBOVX
- D. KBPVX

Q32 General Intelligence and Reasoning

Eight friends, Hari, Ganpati, Falak, Ekta, Janak, Rohit, Mangesh and Tony, are sitting around a round table, facing the centre of the table but not necessarily in the same order. Janak is sitting third to the right of Mangesh, who is not an immediate neighbour of either Falak or Tony. Falak is sitting second to the left of Tony, who is sitting third to the left of Hari. Ganpati is sitting fourth to the right of Tony. Ekta is sitting second to the left of Hari.

Who is second to the right of Janak?

- A. Ekta
- B. Falak
- C. Rohit
- D. Tony

Q33 General Intelligence and Reasoning

Eight people live on different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 8. Only 4 people live above Aditya. Anu lives on the sixth floor. Only two people live between Anu and Shubham. Ravi lives immediately above Deep. Diksha lives immediately below Sakshi. Sakshi lives on the topmost floor. On which floor does Deep live?

- A. 1
- B. 5
- C. 2
- D. 3



Q34 General Intelligence and Reasoning

Amongst six people, P, Q, R, S, T and U, each has a different weight. R is heavier than T. U is lighter than P. Q is lighter than T but heavier than S. S is heavier than P. Who is the heaviest amongst them?

A. T

B. Q

C. P

D. R



Q35 General Intelligence and Reasoning

Three statements are given, followed by four conclusions numbered I, II, III and IV. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follow/s from the given statements.

Statements:

Some cisterns are ponds.

All ponds are streets.

Some streets are cisterns.

Conclusions:

I. Some streets are ponds.

II. All cisterns are streets.

III. All ponds are cisterns.

IV. No street is a cistern.

A. Only conclusion I follows.



B. Only conclusions II and III follow.

C. Only conclusions I and IV follow.

D. Only conclusion IV follows.



Q36 General Intelligence and Reasoning

A statement is given followed by two conclusions numbered I and II. You have to assume everything in the statement to be true and decide which of the conclusions logically follow(s) beyond a reasonable doubt from the information given in the statement.

Statement:

Sale up to 70% on all clothing items in the store and online.

Conclusions:

- I. All clothing items are 70% off during the sale period.
- II. There are some clothing items that are not on sale.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow



Q37 General Intelligence and Reasoning

Select the option that is related to the seventh number in the same way as the second number is related to the first number, the fourth number is related to the third number and the sixth number is related to the fifth number.

$56 : 8 :: 84 : 12 :: 42 : 6 :: 14 : ?$

- A. 7
- B. 2
- C. 98
- D. 42



Q38 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

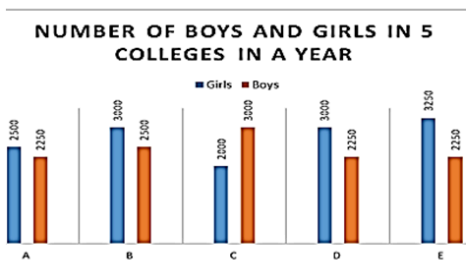
L G _ A L L _ F B L _ G F _ L L G F _ L

- A. FGLCD
- B. FLGDC
- C. FCGLD
- D. FFCCD



Q39 General Intelligence and Reasoning

Below bar graph is the representation of the number of boys and girls studying in 5 different colleges in a given year. Study the bar graph and answer the questions.



The total number of girls studying in colleges D and E is what percentage of the total number of girls studying in colleges A, B and C?

- A. 63.45%
- B. 66.60%
- C. 75 %
- D. 83.33 %



Q40 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

10, 121, 11, 144, 12, 169, 13, 196, 14, ?

- A. 222
- B. 223
- C. 224
- D. 225



Q41 General Intelligence and Reasoning

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 6513742678, how many digits will appear more than once in the new number thus formed?

- A. Two
- B. Four
- C. Five
- D. Six



Q42 General Intelligence and Reasoning

Surya participated in a marathon. From starting point he ran 11 km towards West, turned right and ran for 12 km and turned right again and ran 11 km and then turned right again and ran 9 km. How many kms he has to run now in order to reach the starting point from his present position to complete the marathon?

A. 2 km

B. 3 km



C. 7 km

D. 14 km

Q43 General Intelligence and Reasoning

Each of six teachers, J, K, L, M, N and O, have their classes on six different days of a week starting from Monday and ending on Saturday of the same week, but not necessarily in the same order. Only two teachers have classes before M's class. J has the class on Tuesday, and O has the class on Saturday. Only one teacher has the class after the class of K. N's class is not between the classes of K and M. Who among the following has the class on Monday?

A. K

B. N



C. M

D. L

Q44 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

$2 : 18 :: 4 : 74 :: 9 : ?$

A. 517

B. 1005

C. 739



D. 348



Q45 General Intelligence and Reasoning

Six classmates, Kanti, Manoj, Suman, Divya, Anuj and Mohit, are sitting around a square table facing the centre of the table (but not necessarily in the same order). All classmates are sitting at the sides of the table, nobody is sitting at the corners. Kanti is sitting on a side alone. Manoj and Suman are sitting on the same side of the table. Mohit is sitting alone on the opposite side of Kanti. Divya is sitting to the immediate left of Mohit. Anuj and Divya are sitting on the same side of the table. Suman is sitting second to the right of Divya.

Who is sitting to the immediate right of Kanti?

A. Manoj

B. Mohit

C. Anuj



D. Divya

Q46 General Intelligence and Reasoning

If ' + ' means ' - ', ' - ' means ' × ', ' × ' means ' ÷ ', ' ÷ ' means ' + ', what will come in place of the question mark (?) in the following equation?

$$88 \div 60 \times 15 - 7 + 10 \times 2 = ?$$

A. 98

B. 101

C. 111



D. 99

Q47 General Intelligence and Reasoning

Refer to the following letter-symbol series and answer the question that follows.

(Left) * V ! ^ C F A * B Y S & Y T G S V # Y ! S C ^ A C \$ Y N (Right)

From left how many such symbols are there that are immediately preceded by a symbol and immediately followed by a letter?

A. 1

B. 2



C. 3

D. 5



Q48 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

AOE : FUJ

RKT : WQY

A. JPM : OUS

B. CRU : HXY

C. QEI : VKN



D. DPJ : JUP

Q49 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All gadgets are electronics.

Some electronics are wirelesses.

Some wirelesses are toys.

Conclusions:

I. Some gadgets are toys.

II. Some electronics are gadgets.

A. Only conclusion I follows

B. Only conclusion II follows



C. Both conclusions I and II follow

D. Neither conclusion I nor II follows



Q50 General Intelligence and Reasoning

Three statements are given, followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

Some investors are urbans.

All stores are urbans.

Some cottages are stores.

Conclusions:

I. Some cottages are investors.

II. Some investors are stores.

III. Some cottages are urbans.

A. Only conclusion I follows.

B. Only conclusions II and III follow.

C. Only conclusion III follows.



D. Only conclusions I and II follow.

Q51 General Intelligence and Reasoning

Each vowel in the word LOCKER is changed to the letter preceding it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. D



B. L

C. M

D. S

Q52 General Intelligence and Reasoning

Five friends named Kishore, Jayan, Lahari, Manyaki and Nalini live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor which is numbered 5. Kishore lives on odd numbered floor but not on third floor and Nalini lives on the bottommost floor. Manyaki and Jayan lives on even numbered floors but Manyaki doesn't lives above Jayan. Lahari lives on the floor immediately above Manyaki.

Who lives on the third floor?

A. Kishore

B. Jayan

C. Manyaki

D. Lahari



Q53 General Intelligence and Reasoning

If the signs + and $\times$ are interchanged, and the numbers 3 and 7 are also interchanged, which of the following four equations given as options would be correct?

A. $14 + 3 \times 7 = 35$

B. $3 + 7 \times 9 = 30$ ✓

C. $13 + 7 \times 3 = 47$

D. $16 \times 3 + 7 = 39$

Q54 General Intelligence and Reasoning

In a certain code language, 'MANNER' is written as 'OETVOD' and 'BEHAVE' is written as 'DINIFQ'. How will 'POLITE' be written in the same code language?

A. RSRQDQ ✓

B. RKFADQ

C. RSFQDQ

D. RKRQDQ

Q55 General Intelligence and Reasoning

Jyoti covered a distance of 3 km in a particular direction and then turned to her right. She further travelled 1 km and thereafter she turned to the left and walked 5 km and then finally she turned to right and walked in the north direction. In which direction was she facing when she started her journey? (All turns are 90 degree turns only)

A. East

B. West ✓

C. North

D. South

General Science

25 Questions • Answer Key

Q56 General Science

According to Newlands, how many elements existed in nature?

A. 56 ✓

B. 66

C. 76

D. 86



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Q57 General Science

Suppose a beam of light of average wavelength 600 nm is incident on a glass prism from air, and on entering into the prism, it splits into different colours. One of the colours has wavelength 380 nm. The refractive index of the medium for this particular wavelength is:

- A. 1.33
- B. 1.42
- C. 1.58
- D. 1.73



Q58 General Science

Which of the following is NOT an example of combination reaction?

- A. Heating of calcium carbonate
- B. Burning of coal
- C. Formation of water from hydrogen gas and oxygen gas
- D. Formation of slaked lime



Q59 General Science

In which of the following places is the cellulose of food digested by the action of certain bacteria in animals like horses, rabbit, etc.?

- A. Stomach
- B. Small intestine
- C. Caecum
- D. Oesophagus



Q60 General Science

Which of the following is a major event in plants during day time?

- A. CO₂ release
- B. O₂ release
- C. CO release
- D. O₃ release



Q61 General Science

Consider an equilateral glass prism on which a ray of light incident at an angle θ and passes through the prism in such a way that the refracted ray inside the prism is parallel to its base and emerges at an angle of emergence β . Which of the following is true?

A. $\theta = -\beta$

B. $\theta = \beta$ ✓

C. $\theta = -2\beta$

D. $\theta = 2\beta$

Q62 General Science

What is the nature of washing soda?

A. Mild acidic

B. Basic ✓

C. Neutral

D. Amphoteric

Q63 General Science

The WHO has found that young adolescents (ages 10-14) face a higher risk of complications and death as a result of pregnancy than other women. What is the most likely reason for higher MMR (maternal mortality rate) in young women?

A. They are the group with the highest pregnancy rate

B. Their bodies do not support a foetus formation

C. Their body size is often too small to deliver a baby ✓

D. They are ignorant or negligent about health guidelines

Q64 General Science

The position of the image produced by a concave mirror when an object is placed at a distance such that light rays from the object are parallel to the principal axis is:

A. at the principal focus ✓

B. at a point between the principal focus and pole

C. at a point between the principal focus and the centre of curvature

D. at the position of the object itself



Q65 General Science

What is the role of cilia in the respiratory tract?

- A. They help to mix all the gases in the inhaled and exhaled air.
- B. Dust particles in the inhaled air stick to the cilia.
- C. Cilia sweep mucus from the lungs and airway towards the nose. ✓
- D. Ciliated cells produce secretions to trap bacteria and viruses.

Q66 General Science

The nutrients are supplied to the foetus from the mother through:

- A. cervix
- B. zygote
- C. placenta ✓
- D. endosperm

Q67 General Science

Which of the following metals forms a green colour coating due to corrosion?

- A. Silver
- B. Iron
- C. Zinc
- D. Copper ✓

Q68 General Science

A 12 V battery is connected across a 250 Ω resistance. The heat produced in 5 seconds is:

- A. 2.99 J
- B. 3.0 J
- C. 3.15 J
- D. 2.88 J ✓



Q69 General Science

Breathing is harder at high altitudes compared to the sea level because _____.

- A. colder temperature constricts airways
- B. the concentration of oxygen is very high at high altitudes
- C. the rate of diffusion of gases is decreased at high altitudes
- D. the atmosphere is less dense at high altitudes



Q70 General Science

Suppose a lamp of $25\ \Omega$ is connected across a battery. The heat produced by the lamp per second is 100 J. The potential difference across the lamp is:

- A. 30 V
- B. 40 V
- C. 50 V
- D. 60 V



Q71 General Science

Which of the following is not the use of baking soda?

- A. bleaching action
- B. making of baking powder
- C. in soda-acid fire extinguishers
- D. as an ingredient in antacids



Q72 General Science

Consider two wires of the same resistance, but the ratio of their cross-sectional areas is 1 : 9. Furthermore, the ratio of their lengths is 3 : 2. The ratio of their resistivities will be:

- A. 2 : 9
- B. 2 : 13
- C. 2 : 27
- D. 2 : 33



Q73 General Science

According to Mendeleev's periodic table, just like halogens, hydrogen also exists as a:

- A. monoatomic molecule
- B. diatomic molecule
- C. triatomic molecule
- D. tetra-atomic molecule



Q74 General Science

What type of bonding is present in carbon compounds?

- A. Metallic bonding
- B. Ionic bonding
- C. Hydrogen bonding
- D. Covalent bonding



Q75 General Science

Consider that a mature blue whale is 30.0 m long. On the other hand a baby whale is 10.0 m long. Where should the baby whale be placed in front of a concave mirror of focal length 15.0 m so that one can observe a real image of the baby whale as that of the size of a mature whale?

- A. 10 m
- B. 15 m
- C. 20 m
- D. 25 m



Q76 General Science

In a chemical equation, the notations (aq) represents:

- A. solid
- B. Liquid
- C. Gas
- D. aqueous



Q77 General Science

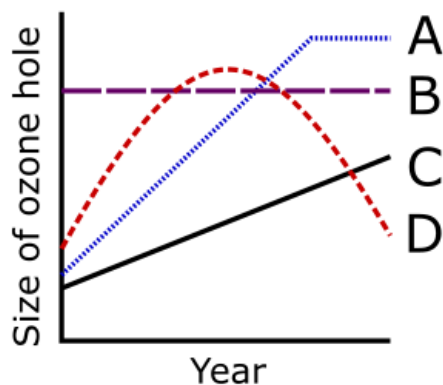
Out of the following which is not a non conventional source of energy:

- A. Geothermal Energy
- B. Solar energy
- C. Nuclear energy
- D. Tidal energy



Q78 General Science

Which line best explains changes in the size of the ozone hole over the years?



- A. Line A – it was growing but now it is not growing
- B. Line B – the size has not changed
- C. Line C – it is growing steadily
- D. Line D – it was growing but now it is shrinking



Q79 General Science

Which of the following statements is INCORRECT?

- A. Sustainable management of natural resources is an easy task.
- B. We need to accept that people will act with their own best interests as the priority.
- C. The fossil fuels, coal and petroleum will ultimately be exhausted.
- D. Combustion of fossil fuels pollute our environment; we need to use these resources judiciously.



Q80 General Science

Suppose Rammohan has kept a cylindrical bar magnet along the axis of a circular solenoid. Now, he is rotating the magnet about the axis of the solenoid. The induced electric current in the coil will be:

- A. proportional to the number of turns in the solenoid
- B. inversely proportional to the resistance of the solenoid
- C. proportional to the length of the solenoid
- D. zero



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

When was the Regulating Act passed by the British Parliament to regulate the activities of the East India Company?

- A. 1773
- B. 1793
- C. 1861
- D. 1875



Q82 General Awareness and Current Affairs

Which of the given options would result in an increase in gross fiscal deficit?

- A. Increase in revenue receipts
- B. Decrease in borrowings from abroad
- C. Decrease in revenue receipts
- D. Decrease in borrowings from RBI



Q83 General Awareness and Current Affairs

In January 2022, which of the following states has decided to increase the age of retirement from 60 to 62 years?

- A. Andhra Pradesh
- B. Rajasthan
- C. Himachal Pradesh
- D. Delhi



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Q84 General Awareness and Current Affairs

Who propounded the theory of 'Advaita' in Hinduism?

A. Adi Sankaracharya



B. Ramanuj

C. Ramanand

D. Vallabhacharya

Q85 General Awareness and Current Affairs

India has been a WTO member since

A. 1995



B. 1996

C. 1997

D. 1998

Q86 General Awareness and Current Affairs

Which programme or allocation head has emerged as the biggest beneficiary in the Union sports budget for the financial year 2022-23?

A. Khelo India



B. National Service Scheme

C. National Sports Federations

D. National Sports Development Fund

Q87 General Awareness and Current Affairs

The Twelfth Schedule of the Indian Constitution is related to powers, authority and responsibilities of _____.

A. Panchayats

B. urban local bodies



C. States

D. the Centre



Q88 General Awareness and Current Affairs

Which of the following Parts and Articles of the Constitution of India is related to Fundamental Duties?

A. Part IV A (Article 51 A)



B. Part V A (Article 52 A)

C. Part VI A (Article 51 A)

D. Part VI A (Article 53 A)

Q89 General Awareness and Current Affairs

On 24th March 2022 the Government of India Department of Biotechnology has launched Data-Driven Research to Eradicate which of the following disease?

A. Tuberculosis



B. Malaria

C. Hepatitis B

D. HIV-AIDS

Q90 General Awareness and Current Affairs

Who is the head of the Union Executive of the Government of India?

A. The President

B. The Vice President

C. The Prime Minister



D. The Chief Justice of India

Q91 General Awareness and Current Affairs

Which of the following companies has developed India's first mRNA-based vaccine against COVID-19, which was found to be safe and got the approval for phase II and III trials in the year 2021?

A. Wockhardt Ltd

B. Bharat Biotech

C. Gennova Biopharmaceuticals Ltd



D. Serum Institute of India



Q92 General Awareness and Current Affairs

_____ buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately.

- A. Monotonic
- B. Satisfactory
- C. Impulse
- D. Disruptive



Q93 General Awareness and Current Affairs

On 23 December 2021, Maharashtra passed which of the following Criminal Law Acts to approve death penalty for heinous offences against women and children?

- A. Disha
- B. Shakti
- C. Aasha
- D. Kiran



Q94 General Awareness and Current Affairs

The outermost range of the Himalayas is the Shivalik, which ranges between 900 and 1100 metres in height, and lies in width between _____.

- A. 10 and 50 km
- B. 15 and 25 km
- C. 25 and 40 km
- D. 30 and 55 km



Q95 General Awareness and Current Affairs

Which of the following is the westernmost of the Himalayan rivers in India?

- A. Luni
- B. Indus
- C. Bhagirathi
- D. Alaknanda



Q96 General Awareness and Current Affairs

Who among the following is one of the awardees of Major Dhyan Chand Khel Ratna Award 2021 in the discipline of wrestling?

A. Lovlina Borgohain

B. Ravi Kumar



C. Sumit Antil

D. Krishna Nagar

Q97 General Awareness and Current Affairs

As per one of the criteria evolved by Government to determine declaration of a language as a Classical language, the language must have high antiquity of its early texts/recorded history over a period of _____ years.

A. 500-1000

B. 1500-2000



C. 2500-3000

D. 3500-4000

Q98 General Awareness and Current Affairs

The Criminal Procedure (Identification) Bill was passed by the Parliament of India in which of the following years?

A. 2018

B. 2019

C. 2021

D. 2022



Q99 General Awareness and Current Affairs

India lies entirely in the northern hemisphere, the mainland extends between latitudes _____ and $37^{\circ} 6'$ north.

A. $8^{\circ} 4'$



B. $9^{\circ} 4'$

C. $10^{\circ} 4'$

D. $11^{\circ} 4'$



Which of the following festivals is NOT related to agriculture?

A. Pongal

B. Lohri

C. Baisakhi

D. Deepawali



Mathematics

25 Questions • Answer Key

Q1 Mathematics

In quadrilateral ABCD, we have $AD = 9$ cm, $BC = 8$ cm and $CD = 17$ cm, $AD \perp AB$ and diagonal $BD \perp BC$. Find the area of the quadrilateral ABCD.

A. 110 cm^2 B. 114 cm^2 ✓C. 112 cm^2 D. 111 cm^2

Q2 Mathematics

Find the median of the following data.

12, 16, 26, 15, 17, 18, 73, 74, 25, 24

A. 17

B. 18

C. 19

D. 21 ✓

Q3 Mathematics

If -2 is a root of the equation $3x^2 + px + 2 = 0$, and $7x^2 + px + k = 0$ has equal roots, then what is the value of k ?

A. $\frac{7}{2}$ B. $\frac{7}{4}$ ✓C. $\frac{2}{3}$ D. $\frac{4}{3}$ 

Q4 Mathematics

A sum of ₹2500 is invested in a bank at 6% interest per annum compounded annually. On maturity, the amount payable becomes ₹2809. Find the time period of the investment.

- A. 1 year
- B. 2.5 years
- C. 2 years
- D. 1.5 years

**Q5 Mathematics**

Ravi spends 20% of his income on petrol, one-third of the remaining income on household expenditure, and the balance is his savings. If he spends ₹7,500 on petrol, find his household expenditure.

- A. ₹8,500
- B. ₹8,566.70
- C. ₹8,666.70
- D. ₹10,000

**Q6 Mathematics**

Which of the numbers given below is a prime number?

- A. 983
- B. 986
- C. 153
- D. 319

**Q7 Mathematics**

Riya has a total of 60 pens and pencils. If she has 25 more pens and 5 less pencils, then the number of pens becomes three times the number of pencils. What is the difference between the number of pens and pencils that she had originally?

- A. 10
- B. 25
- C. 30
- D. 5



Q8 Mathematics

If 60% of $A = 1.2$ of $B = \frac{2}{5}$ of C , then find $A : B : C$.

A. 3 : 2 : 1

B. 3 : 1 : 2

C. 2 : 1 : 3



D. 1 : 2 : 3

Q9 Mathematics

Find the median of the data whose mean is 46 and mode is 45, using empirical relation (Round the answer off to one decimal place).

A. 45.5

B. 45.7



C. 45.9

D. 45.1

Q10 Mathematics

A house and a garden together cost ₹51 lakh and the cost of the garden is $\frac{5}{12}$ of the cost of the house. Find the cost of the garden (in ₹).

A. 30 lakh

B. 16 lakh

C. 15 lakh



D. 36 lakh

Q11 Mathematics

Three angles of $\triangle ABC$ are in the ratio 3 : 4 : 5, taken in order. If side AB is extended to X, what is the measure of exterior angle $\angle CBX$?

A. 120°



B. 100°

C. 80°

D. 60°



Q12 Mathematics

Given $a \sin q = b \cos q$ and $a \sin^3 q + b \cos^3 q = \sin q \cos q$, for $0 < q < 90^\circ$, find the value of $a^2 + b^2$.

A. 1



B. 2

C. 0

D. 3

Q13 Mathematics

3 right circular cylinders having the same base radius (r cm) and the same height (h cm) are placed one upon the other, to form another right cylinder whose radius of base is also r cm. The total surface area (in cm^2) of this new right cylindrical solid so formed is:

A. $6\pi rh + 2\pi r^2$ B. $6\pi rh + 6\pi r^2$ C. $4\pi rh + 4\pi r^2$ D. $6\pi rh + 4\pi r^2$ **Q14** Mathematics

If $7(x) + 5$, $7(x) + 4$, $5(x) + 5$ and y are in proportion when $x = 5$, find the value of y .

A. 29

B. 29.25



C. 29.5

D. 29.75

Q15 Mathematics

If the roots of the quadratic equation $x^2 - kx + 169 = 0$ are equal, find the value of k .

A. ± 13 B. ± 26 C. ± 17 D. ± 14 

Q16 Mathematics

$$\frac{9^4 \times 10^3 \times 4^{-4} \times 16^{\frac{1}{2}}}{5^6 \times 3^6} \text{ equals:}$$

A. $\frac{1}{9000}$

B. $\frac{1}{4000}$

C. $\frac{4}{9000}$

D. $\frac{9}{1000}$ ✓

Q17 Mathematics

If $0.3\overline{72} = \frac{x}{y}$, where x and y are coprime, then what is the value of $(x + y)$?

A. 134

B. 143

C. 151 ✓

D. 186

Q18 Mathematics

Three bells A, B and C toll every 15 seconds, 24 seconds, and 42 seconds, respectively. If all of them toll together at 8 a.m., then between 8 a.m. and 10 a.m. on the same day, how many times will they all toll together, including the one at 8 a.m.?

A. 6

B. 7

C. 8

D. 9 ✓



Q19 Mathematics

Expand $\left(\frac{1}{2}x + 3y - \frac{1}{3}z\right)^2$.

A. $\frac{1}{4}x^2 + 9y^2 + \frac{1}{9}z^2 + 3xy - 2yz - \frac{xz}{3}$ ✓

B. $\frac{1}{4}x^2 + 9y^2 - \frac{1}{9}z^2 + 3xy - 2yz - \frac{xz}{3}$

C. $\frac{1}{4}x^2 + 9y^2 + \frac{1}{9}z^2 - 3xy + 2yz + \frac{xz}{3}$

D. $\frac{1}{4}x^2 + 9y^2 - \frac{1}{9}z^2 - 3xy - 2yz - \frac{xz}{3}$

Q20 Mathematics

If $\triangle XYZ \cong \triangle ABC$, which of the following is necessarily correct?

A. $m(\overline{XY}) = m(\overline{AC})$

B. $m(\overline{XZ}) = m(\overline{BC})$

C. $m(\overline{YZ}) = m(\overline{AB})$

D. $m(\overline{XZ}) = m(\overline{AC})$ ✓

Q21 Mathematics

A, B and C can complete a piece of work in 18 days, 24 days and 60 days, respectively. In how many days will the work be completed, if A works on all days, and is assisted by B and C on alternate days, starting with B assisting A on the first day?

A. $11\frac{5}{13}$

B. $11\frac{10}{13}$ ✓

C. $12\frac{1}{9}$

D. $11\frac{11}{42}$



Q22 Mathematics

X sells a washing machine to Y at a profit of 20%. Y sells it to Z at a loss of 12% and later Z sells it to T at a profit of 30%. If Z earns ₹87.60 more than X as profit, then at what price (in ₹) did Y buy the washing machine?

A. 1,020

B. 980

C. 960

D. 900 ☒**Q23** Mathematics

The value of $\frac{[(34.45)]^2 - (11.75)^2 \times 5.15}{[(25.75)^2 + (25.75 \times 20.45)] \times 22.7}$ is:

A. $\frac{1}{10}$ B. $\frac{1}{5}$ ☒C. $\frac{2}{3}$ D. $\frac{1}{2}$ **Q24** Mathematics

Namita completes $33\frac{1}{3}\%$ of a piece of work alone in 16 days and the remaining work is completed by Bobby alone. The entire work is completed in a total of 28 days. Working together, Namita and Bobby can complete $\frac{11}{16}$ part of the original work in:

A. 6 days

B. 8 days

C. 9 days ☒

D. 12 days



Q25 Mathematics

The sum of the ages of three persons is 44 years and the numerical product of their ages is 1950. Also, the difference in the ages of the second and the third person, when subtracted from the difference in the ages of the first and the second person, is 5 years. Find the present age of the second person.

- A. 25 years
- B. 6 years
- C. 13 years
- D. 10 years

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Study the given arrangement of numbers and answer the question that follows:

(LEFT) 2 8 3 6 0 8 1 5 3 7 3 4 9 6 2 4 3 2 5 6 4 0 7 (RIGHT)

Based on the arrangement given, Three of the following four groups of numbers (given in options) are alike in a certain way and so form a group. Which option does NOT belong to that group?

- A. 462
- B. 230
- C. 746
- D. 013

**Q27** General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

Q _ T _ T _ B T _ T Q B _ R T

- A. BRQRT
- B. BQRRT
- C. BRRQT
- D. BRTRQ



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Q28 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$?^2 + 53.99 = 206.01 \div 1.99$$

A. 7



B. 5

C. 3

D. 13

Q29 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. Only one person is shorter than E. Only two people are taller than D. A is shorter than F but taller than C. F is not the tallest. Who is the shortest among all the friends?

A. C



B. E

C. A

D. D

Q30 General Intelligence and Reasoning

If the position of the digit '2' is interchanged with the position of the digit '4', and the position of the digit '5' is interchanged with the position of the digit '3', then what is the value of the given expression?

$$47 + 56 \div 6 - 2 \times 3$$

A. 3

B. 13



C. 7

D. 21

Q31 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

2, 3, 6, 12, ?, 37, 58

A. 22



B. 24

C. 26

D. 20



Q32 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

QJD : TMG

GMS : JPV

A. MYO : PQJ

B. RPH : USK



C. AWL : ZDT

D. NIH : SXB

Q33 General Intelligence and Reasoning

Each vowel in the word KINDLE is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. J



B. F

C. M

D. K

Q34 General Intelligence and Reasoning

Eight friends are sitting around a square table facing the centre. Four of them are sitting at the corners and remaining four are sitting at the exact middle of the four sides. Aman is sitting fourth to the left of Priya. Lakshay is an immediate neighbour of both Priya and Sakshi. Utkarsh is sitting fourth to the left of Sakshi. Riddhi is sitting to the immediate right of Utkarsh. Priya is sitting to the immediate left of Vidhi. Vidhi is sitting fourth to the right of Tejaswi. Who is sitting to the immediate right of Aman?

A. Riddhi

B. Lakshay

C. Vidhi

D. Tejaswi



Q35 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

43 41 37 31 ? 23

A. 25

B. 27

C. 29



D. 21

Q36 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Picnics are Grasses.

All Grasses Are Rains.

Some Rains are Clouds.

Conclusions:

(I) Some Grasses are Clouds.

(II) All Picnics are Rains.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.

C. Both conclusions (I) and (II) follow.

D. Neither conclusion (I) nor (II) follows.



Q37 General Intelligence and Reasoning

Seven boxes, L, M, N, O, P, Q and E, are kept one above the other but not necessarily in the same order. L is fifth from the bottom in the stack. M is immediately above L. Only three boxes are there between O and L. Only two boxes are there between P and N. N is immediately above Q. P is at one of the positions above N. Which box is kept at the sixth position from bottom?

A. K

B. L

C. M



D. N



Q38 General Intelligence and Reasoning

In a certain code language, 'ARMOR' is written as 'CVOST' and 'GLAND' is written as 'IPCRF'. How will 'FARMS' be written in that language?

A. HDTPU

B. HEQTU

C. HETQU



D. HFTRU

Q39 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor, which is numbered 6. Only two people live between A and F. Only three people live between B and C. C lives below B. E does not live below D. Only two people live below F. Who lives immediately above F?

A. A

B. D

C. E



D. B

Q40 General Intelligence and Reasoning

Madhav starts from Point A and drives 16 km towards the east. He then takes a right turn, drives 4 km, turns right and drives 12 km. He then takes a right turn and drives 11 km, takes a left turn and drives 4 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 7 km towards the south



B. 12 km towards the west

C. 6 km towards the east

D. 8 km towards the south



Q41 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) 2 & # 4 @ 3 Z 6 A # 5 % 3 * 6 # 9 (Right)

How many letters are there between the second element from the right end and the fifth element from the left end of the given series?

A. 2



B. 6

C. 4

D. 3

Q42 General Intelligence and Reasoning

M, N, O, P, Q and R live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6.

M lives two floors above R, on an odd-numbered floor. Q lives immediately below M. There are only two people living between O and Q. O is not living on the lowermost floor. If N lives immediately above M, then how many people live exactly between Q and P?

A. Two

B. One

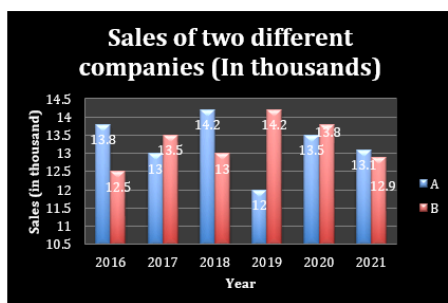
C. Four

D. Three



Q43 General Intelligence and Reasoning

The given bar graph shows the sales of bikes of two different companies in 6 different years. Study the graph and answer the question that follows.



The total bikes sold by company A in 2016 and 2020 together is approximately what percentage of the total bikes sold by both the companies in 2018?

A. 95%

B. 100%



C. 105%

D. 110%



Q44 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Buses are Vans.

All Vans are Trucks.

Some Buses are Cars.

Conclusions:

(I) Some Trucks are Buses.

(II) Some Cars are Trucks.

- A. Only conclusion (I) follows. ☒
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

Q45 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement?

Statement: $P = Q \geq R \leq S > T < U$

Conclusions:

I. $Q > U$

II. $R \leq P$

- A. Only conclusion I is true
- B. Only conclusion II is true ☒
- C. Both conclusions I and II are true
- D. Neither conclusion I nor II is true



Q46 General Intelligence and Reasoning

Five friends A, B, C, D and E are seated around a round table facing the centre. B is an immediate neighbour of both D and E. A is an immediate neighbour of D. Which position of E is NOT possible?

A. Immediate neighbour of A



B. 3rd to the left of D

C. 3rd to the right of A

D. To the immediate left of C

Q47 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(7, 19, 40)

(12, 11, 47)

A. (9, 27, 72)

B. (15, 31, 48)

C. (14, 23, 74)

D. (16, 5, 53)



Q48 General Intelligence and Reasoning

Select the option in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(85,198,52)

(77,270,32)

A. (62,90,45)

B. (62,94,47)

C. (62,90,47)



D. (61,90,47)



Q49 General Intelligence and Reasoning

Town P is west of town Q. Town P is south-west of town S. Town S is north of town Q. If town R is south-east of town Q and town M is east of town R, then what is the position of town P with respect to town M?

- A. West
- B. South-west
- C. North-west
- D. South



Q50 General Intelligence and Reasoning

This question consists of a statement followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement –

Segregation of garbage into wet and dry waste will help in recycling it

- I. Wet waste can be converted to organic compost or biogas when managed the right
- II. Recycled plastic can be remanufactured for a wide array of products including carpet, upcycled polyester for clothing, recycled plastic building materials

- A. I weakens while II strengthens the statement
- B. II weakens while I strengthens the statement
- C. Both I and II weaken the statement
- D. Both I and II strengthen the statement



Q51 General Intelligence and Reasoning

The given table shows the expenditure (in millions) on different things of families living in 5 different cities. Study the table and answer the question that follows.

City	Type of expenditure				
	Food	Education	Loan	Travel	Entertainment
A	10	20	17	9	15
B	12	18	10	7	17
C	18	23	23	11	20
D	13	27	14	5	23
E	21	13	25	20	14

The percentage of expenditure on travel with respect to that on food is the maximum in which city?

A. City A

B. City C

c. City D

D. City E

**Q52** General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

All Tables are Dinners.

Some Dinners are Plates.

All Plates are Bowls.

Conclusions:

(I) Some Tables are Plates.

(II) All Dinners are Bowls.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.

c. Both conclusions (I) and (II) follow.

D. Neither conclusion (I) nor (II) follows.



Q53 General Intelligence and Reasoning

Each of the digits in the number 36275918 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. 1

B. 2

C. 3

D. None



Q54 General Intelligence and Reasoning

If each of the letter of the letter cluster 'DEHRAZUN' is arranged in alphabetical order, how many vowels will be immediately preceded by a consonant in the newly formed letter cluster?

A. 3

B. 1

C. 0

D. 2



Q55 General Intelligence and Reasoning

In a certain code language, 'SPACE' is written as 'QNDAH' and 'CRAFT' is written as 'APDDR'. How will 'SPEED' be written in the same code language?

A. QNCCB

B. QSHHB

C. QSHHG

D. QNHBB



General Science

25 Questions • Answer Key

Q56 General Science

The distance between the pole and centre of curvature of a concave mirror of radius of curvature 100 cm is:

A. 100 cm

B. 50 cm

C. 200 cm

D. 25 cm

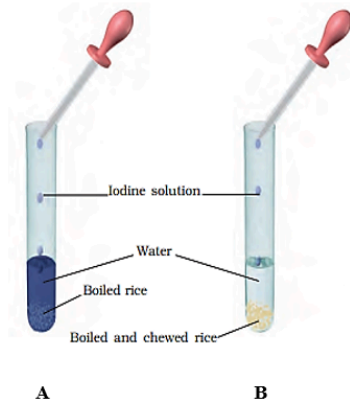


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Q57 General Science

Study the figure given below carefully. Which option is correct regarding the non-appearance of blue colour in test tube B?



A. Starch was digested by salivary amylase in the saliva



B. Starch was digested by pepsin in the saliva

C. Starch was digested by lipase in the saliva

D. Starch was digested by trypsin in the saliva

Q58 General Science

Fleming's Right Hand Rule can be applied only if the directions of the applied magnetic field, the motion of conductor and the induced current are mutually at _____ with respect to each other.

A. 30°

B. 60°

C. 90°



D. 45°

Q59 General Science

An object of height 3 cm is placed at a distance $1.5f$ in front of a convex lens of focal length f . The magnification will be:

A. 1.5

B. 2.0



C. 2.5

D. 3.0



Q60 General Science

A stalactite of size 10.0 m is found in Brazil. If this stalactite is placed at a distance of 20.0 m from a concave mirror and a real image of size 30.0 m is formed, then the principal focus of the mirror is at:

- A. -30.0 m
- B. +30.0 m
- C. -15.0 m
- D. +15.0 m



Q61 General Science

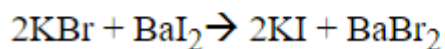
Which of the following components of xylem do NOT function in the transport of water?

- A. Xylem tracheids
- B. Xylem vessels
- C. Xylem fibres
- D. Xylem parenchyma



Q62 General Science

In the given reaction, which substance is insoluble?



- A. 2KBr
- B. 2KI
- C. BaBr₂
- D. BaI₂



Q63 General Science

The energy lost in the form of heat in an electrical circuit is,

- A. directly proportional to the resistance
- B. Inversely proportional to time for which current flows through the circuit
- C. Inversely proportional to the current flowing through the circuit
- D. Inversely proportional to the potential difference applied in the circuit



Q64 General Science

Sulphide ion is formed from Sulphur due to _____.

- A. Reduction
- B. Oxidation
- C. Dehydrogenation
- D. Combination

Q65 General Science

_____ is Calcium sulphate hemihydrate.

- A. Gypsum
- B. Limestone
- C. Quicklime
- D. Plaster of Paris

Q66 General Science

Why are carbon compounds bad conductors of electricity?

- A. Because they don't form any ions
- B. Because they are ionic in nature
- C. Because they have high melting and boiling point
- D. Because carbon compounds are solid in nature

Q67 General Science

The device which converts mechanical energy into electrical energy is _____.

- A. electric dynamo
- B. electric motor
- C. compass needle
- D. dry cell



Q68 General Science

Which of the following carbon compounds is a major component of biogas and compressed natural gas?

A. Methane



B. Ethane

C. Propane

D. Butane

Q69 General Science

Where can we find a plumule in a plant?

A. In a leaf

B. In a flower

C. In a seed



D. In the root tips

Q70 General Science

Which of the following statements is correct with respect to modern periodic law?

A. In a neutral atom, the atomic number is equal to the number of electrons or protons.



B. In a neutral atom, the atomic number of an atom is equal to only number of electrons.

C. The atomic number is equal to the only number of protons in a neutral atom.

D. The atomic number is neither equal to the number of electrons nor protons in a neutral atom.

Q71 General Science

What does 'segregation at source' mean in terms of non-biodegradable wastes?

A. Factories producing non-biodegradable consumer items should not mix them with biodegradable material.

B. People using non-biodegradable items should not add biodegradable items to these items.

C. Households should separate non-biodegradable items from biodegradable items in the trash.

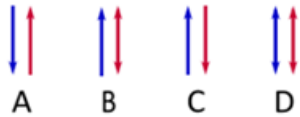


D. Municipalities should have separate disposal sites for non-biodegradable and biodegradable waste.



Q72 General Science

In the following diagrams, the blue arrows represent transport through the xylem vessels and the red arrows represent transport through the phloem vessels. Which diagram shows the correct direction of transport in the plant stem?



A. Diagram A

B. Diagram B



C. Diagram C

D. Diagram D

Q73 General Science

The enzymes responsible for final conversion of Proteins into amino acids, complex carbohydrates into glucose and fats into fatty acids and glycerol is present in the:

A. intestinal juice



B. pancreatic juice

C. gastric juice

D. bile juice

Q74 General Science

Plaster of Paris is prepared by heating _____.

A. gypsum at 373 K



B. limestone at 373 K

C. limestone at 273 K

D. gypsum at 273 K

Q75 General Science

The shape of the voltage-current graph for a conductor is _____.

A. linear



B. exponential

C. Parabolic

D. zig-zag



Q76 General Science

A needle of height 6 cm is placed at a distance of 20 cm in front of a lens with a power of -2.5 D. The height of the image of the needle will be:

A. 4 cm



B. 5 cm

C. 6 cm

D. 7 cm

Q77 General Science

According to Dobereiner's Triads, which of the following elements could be placed between Calcium and Barium? (Atomic mass of Ca = 40.1 and atomic mass of Ba = 137.3)

A. Chlorine (atomic mass = 35.5)

B. Strontium (atomic mass = 87.62)



C. Phosphorous (atomic mass = 30.97)

D. Nitrogen (atomic mass = 14.00)

Q78 General Science

What was the effect of controlled seasonal grazing by sheep in the alpine meadows of the Himalayan National Park?

A. It destroyed the ground cover and led to soil erosion.

B. It removed older grass and allowed new grass to grow.



C. The National Park provided income and livelihood to the local shepherds.

D. It had no effect because sheep were few and the Park is vast.

Q79 General Science

Recently the Government of India has raised the age of marriage for girls to 21. What is the benefit of following this law?

A. It will slow down population growth.

B. It will discourage teen pregnancies.



C. It will ensure girls have reached puberty.

D. It will help couples to be financially independent.



Q80 General Science

The magnitude of the magnetic field of a current carrying conductor increases with increase in _____.

- A. current
- B. distance
- C. resistance
- D. Resistivity



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The 'United Nations' theme for observance of Women's Day 2022 was _____.

- A. An Equal World is an Enabled World
- B. Think Equal, Build Smart, Innovate for Change
- C. Gender Equality Today for a Sustainable Tomorrow
- D. Women in Leadership: Achieving an Equal Future in a Covid-19 World



Q82 General Awareness and Current Affairs

Which of the following keywords best defines the existence of more than one level of government in the country?

- A. Federalism
- B. Deliberative democracy
- C. Dictatorship
- D. Totalitarianism



Q83 General Awareness and Current Affairs

Who is the head of the Nyaya Panchayat?

- A. Chairman
- B. Sarpanch
- C. BDO
- D. Block Pramukh



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Q84 General Awareness and Current Affairs

According to the National Commission for Protection of Child Rights draft regulatory guidelines 2022, employment of children in the entertainment industry requires producers to obtain permission from which district authority while engaging a child actor?

- A. District Welfare Officer
- B. Superintendent of Police
- C. District Magistrate
- D. District Judge



Q85 General Awareness and Current Affairs

The Delhi Durbar _____ marked the succession of King George V and in this Durbar, the King declared that Capital of India will be transferred from Calcutta to Delhi.

- A. 1877
- B. 1903
- C. 1910
- D. 1911



Q86 General Awareness and Current Affairs

India with its area of 3.28 million km² accounts for 2.4 per cent of the world's land surface area and stands as the _____ largest country in the world.

- A. fifth
- B. sixth
- C. seventh
- D. eighth



Q87 General Awareness and Current Affairs

The western coastal plains are an example of _____ coastal plains.

- A. narrow
- B. wide
- C. dry
- D. submerged



Q88 General Awareness and Current Affairs

Which of the following historical places is associated with the birth of Jesus Christ?

- A. Byzantium
- B. Bethlehem
- C. Vatican City
- D. Mount Tabor



Q89 General Awareness and Current Affairs

Which of the following bills presented along with the Annual Financial Statement provides details on the imposition, abolition, remission, alteration or regulation of taxes proposed in the Budget in India?

- A. Ordinary Bill
- B. Finance Bill
- C. Money Bill
- D. Ordinance Replacing Bill



Q90 General Awareness and Current Affairs

‘Beating the Retreat’ officially denotes the end of which National Festival of India?

- A. Independence Day
- B. Republic Day
- C. Gandhi Jayanti
- D. Constitution Day



Q91 General Awareness and Current Affairs

Excess of government's revenue expenditure over revenue receipts is termed as _____.

- A. revenue deficit
- B. income tax
- C. capital receipt
- D. capital expenditure



Q92 General Awareness and Current Affairs

The word 'secular' was added to the preamble of the Constitution of India in the _____ Amendment Act.

- A. First
- B. Seventh
- C. Forty-Second
- D. Forty-Fourth



Q93 General Awareness and Current Affairs

Towards the close of the summer season, pre-monsoon showers are common, especially in Kerala and Karnataka. These showers are referred to as _____.

- A. Grape showers
- B. Mango showers
- C. Papaya showers
- D. Orange showers



Q94 General Awareness and Current Affairs

Who was India's first Minister of Labour?

- A. Jagjivan Ram
- B. Cooverji Hormusji Bhabha
- C. Rafi Ahmed Kidwai
- D. Amrit Kaur



Q95 General Awareness and Current Affairs

In which year did ISRO launch EOS-04, INS-2TD and INSPIRESat-1 satellites?

- A. 2022
- B. 2021
- C. 2020
- D. 2019



Q96 General Awareness and Current Affairs

Which of the following is a COVID-19 Omicron hybrid strain, which was found in April 2022?

A. XE



B. ZE

C. XX

D. FE

Q97 General Awareness and Current Affairs

In which year was India's first National Air Sports Policy (NASP) released by the Ministry of Civil Aviation?

A. 2022



B. 2021

C. 2019

D. 2017

Q98 General Awareness and Current Affairs

As of July 2022, who is the highest wicket-taker in the history of the ICC Women's Cricket World Cup?

A. Mithali Raj

B. Jhulan Goswami



C. Shafali Verma

D. Harmanpreet Kaur

Q99 General Awareness and Current Affairs

Which is the first Indian language that was given the status of 'classical language' by the Ministry of Culture, Government of India?

A. Tamil



B. Malayalam

C. Odia

D. Kannada



Q100 General Awareness and Current Affairs

Which Ministry of the Government of India announced the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) in the year 2014?

- A. Ministry of Micro, Small and Medium Enterprises
- B. Ministry of Finance
- C. Ministry of Home Affairs
- D. Ministry of Rural Development



Mathematics

25 Questions • Answer Key

Q1 Mathematics

In a seminar, the number of participants in subjects A, B and C are 96, 160 and 224, respectively. Find the minimum number of rooms required, if in each room the same number of participants are seated and all participants in a room are from the same subject.

A. 12

B. 15



C. 24

D. 32

Q2 Mathematics

The sum of the interior angles of a quadrilateral is equal to:

A. 180° B. 360° C. 270° D. 390°

Q3 Mathematics

If the cost price of an article is ₹800 and if a 15% loss is incurred on selling the article, find the selling price.

A. ₹760

B. ₹780

C. ₹680



D. ₹860

Q4 Mathematics

2250 m of wire is used to fence a rectangular plot in three rounds. The length of the plot exceeds the breadth by 5 m. What is the length of the plot?

A. 215 m

B. 210 m

C. 185 m

D. 190 m



Q5 Mathematics

A boat goes 30 km upstream and 44 km downstream in a total of 10 hours. It also goes 40 km upstream and 55 km downstream in a total of 13 hours. The speed of the stream is:

A. 3 km/h



B. 5 km/h

C. 2 km/h

D. 4 km/h

Q6 Mathematics

$\left[\{(54.36 \times 0.4) + 0.256\} \div \sqrt{121} \right]$ equals:

A. 22

B. 11

C. 2



D. 1

Q7 Mathematics

A sells an article to B at a gain of 16%. B sells it to C at a loss of 15% and C sells it to D at a gain of 20%. If the difference between the profits earned by C and A is ₹248, then the loss (in ₹) incurred by B is:

A. 1,040

B. 1,150

C. 1,160



D. 1,200

Q8 Mathematics

AD and BC are two poles, that are respectively 30 metres and 15 metres tall, and both stand upright in a playground. A and B, respectively the feet of the two poles AD and BC, are 36 metres apart and $\overline{CE} \perp \overline{BA}$, intersecting $\overline{AD}$ at E. Find the ratio of the area of $\triangle DEC$ to the area of the rectangle ABCE.

A. 2 : 1

B. 1 : 2



C. 3 : 1

D. 1 : 3



Q9 Mathematics

The given table shows the number of people of various age groups visiting a park in a locality. Find the modal age (in years) of the visitors (rounded off to one decimal place).

Age (years)	Number of persons
0 - 10	4
10 - 20	14
20 - 30	18
30 - 40	23
40 - 50	27
50 - 60	16
60 - 70	8

A. 43.7

B. 47.2

C. 42.7



D. 42.1

Q10 Mathematics

$9(x)$, $x + 6$, $7(x) - 3$ and y are in proportion when $x = 3$. Find the value of y .

A. 54

B. 45

C. 6



D. 63

Q11 Mathematics

John has a cuboidal box whose length, breadth and height are in the ratio 2 : 3 : 5. If the length, the breadth and the height of this box are each increased by 100% to make a new box, then the volume of the new box is how many times the volume of the old box?

A. 8 times



B. 7 times

C. 9 times

D. 6 times



Q12 Mathematics

44, 96 and 184, when divided by a number x , leaves the same remainder in each case. The largest value of x is:

A. 3

B. 4

C. 6

D. 8

Q13 Mathematics

Ram's salary increased by 12% and then decreased by 8%. Find the overall percentage change in his salary.

A. 3.04% increase

B. 3.04% decrease

C. 3.4% decrease

D. 3.4% increase

Q14 Mathematics

Simplify $(x + 2)(2x + 5)(x - 4) + x^2 + 5x - 12$.

A. $x^3 + 2x^2 - 21x - 52$ B. $2x^3 + 2x^2 - 21x - 52$ C. $2x^3 + x^2 - 21x - 52$ D. $2x^3 + 2x^2 - 21x - 12$ **Q15** Mathematics

If a sum of ₹80,000 is invested for a year at 4% per annum compounded half yearly, then find the compound interest.

A. ₹3,232

B. ₹2,323

C. ₹5,252

D. ₹2,525



Q16 Mathematics

The value of $(1 + \cot^2 \theta)(1 + \cos \theta)(1 - \cos \theta) + (1 - \sin \theta)(1 + \sin \theta)(1 + \tan^2 \theta)$ is:

A. 4

B. 1

C. 0

D. 2

**Q17** Mathematics

A man travelled the first 200 km at a speed of 50 km/h, the next 300 km at a speed of x km/h and the final 280 km at a speed of 80 km/h. If his average speed for the whole journey is 52 km/h, then the value of x is:

A. 36

B. 40

C. 42

D. 45

**Q18** Mathematics

The data below gives the number of wickets taken by a bowler in 10 different matches. Find the mode of the data.

3, 4, 6, 3, 1, 3, 5, 4, 2, 2.

A. 2

B. 3

C. 4

D. 6

**Q19** Mathematics

Find the roots of the quadratic equation $x^2 + 30x + 104 = 0$

A. 14, 16

B. 12, 18

C. 4, 26

D. -4, -26



Q20 Mathematics

Express $4.\overline{142}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{4136}{999}$

B. $\frac{4138}{999}$ ✓

C. $\frac{4140}{999}$

D. $\frac{4142}{999}$

Q21 Mathematics

The sum of three consecutive numbers is 177. The mean of these three numbers is:

A. 58

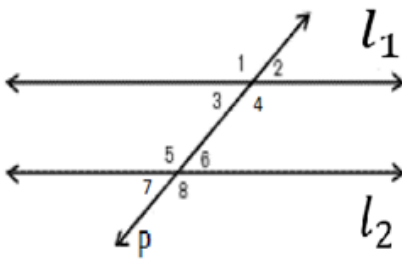
B. 59 ✓

C. 60

D. 57

Q22 Mathematics

In the given figure, $l_1 \parallel l_2$ and p is their transversal with angle $4 = 5x+35$ and angle $7 = 45^\circ$. Find the value of x.



A. 10°

B. 20° ✓

C. 40°

D. 45°



Q23 Mathematics

If $0.72\overline{45} = \frac{a}{b}$, where the HCF of a and b is 1, then what is the value of $(b - a)$?

A. 113

B. 313

C. 303



D. 606

Q24 Mathematics

An electric pump can fill a tank in 5 hours. Due to a leakage in the tank, it takes $7\frac{1}{2}$ hours to fill the tank. How much time will this leak take to empty the full tank if water does not get in or out of the tank through any other point during this period?

A. 30 hours

B. 25 hours

C. 20 hours

D. 15 hours

**Q25** Mathematics

If α and β are the roots of the equation $2x^2 - 3x - 5 = 0$, then the quadratic equation whose roots are $\frac{\alpha}{\beta}$ and $\frac{\beta}{\alpha}$ is:

A. $10x^2 - 29x - 10 = 0$

B. $10x^2 - 29x + 10 = 0$

C. $10x^2 + 29x - 10 = 0$

D. $10x^2 + 29x + 10 = 0$



Q26 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Trees are Bushes.

All Bushes are Leaves.

Some Leaves are Green.

Conclusions:

(I) Some Bushes are Green.

(II) Some Trees are Leaves.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows. ✓
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

Q27 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(10, 150, 3)

(8, 80, 2)

- A. (10, 401, 9)
- B. (12, 197, 4)
- C. (18, 270, 3) ✓
- D. (11, 188, 6)

Q28 General Intelligence and Reasoning

In a certain code language, 'TONE' is written as 'VPMC' and 'FIRE' is written as 'HJQC'. How will 'CITY' be written in that language?

- A. EGRX
- B. EJSW ✓
- C. EIUZ
- D. EHPU



Q29 General Intelligence and Reasoning

K, L, M, N, O and P are six people sitting around a circular table facing the centre of the table at a wedding. K is the immediate neighbour of P and is seated second to the right of O. O is seated to the immediate left of M. N is an immediate neighbour of both P and L. Who is seated second to the right of L?

A. N

B. M



C. P

D. O

Q30 General Intelligence and Reasoning

If in each of the following words, each letter is changed to the previous letter in the English alphabetical order, how many words thus formed will have a vowel?

JUST, RIME, BEST, FAST, LOST, TIME

A. 1

B. 2

C. 3



D. 4

Q31 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

5, 6, 14, 41, ?

A. 169

B. 105



C. 188

D. 95

Q32 General Intelligence and Reasoning

G, H, I, J, K and L live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 6. Only one person lives above G. Only two people live between G and K. Neither J nor H live on the lowermost floor. I does not live on an odd-numbered floor. J lives immediately above K and immediately below H. Who lives on floor number 4?

A. H



B. J

C. K

D. L



Q33 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Few calciums are aldehydes
All aldehydes are rubidiums
All rubidiums are hydrogens

Conclusions:

(I) Some hydrogens are aldehydes
(II) Some rubidiums are aldehydes
(III) All aldehydes are hydrogens

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Either conclusion I or III follows
- D. All conclusions I, II and III follow

**Q34** General Intelligence and Reasoning

Six friends M, N, O, P, Q and R have their tests on a different day of week starting from Monday and ending on Saturday of the same week. Only two friends are having their tests before M's test. Only four friends are having their tests after Q's test. Only O has the test between the tests of P and N. Who amongst the following has the test on Monday?

- A. R
- B. O
- C. P
- D. N

**Q35** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

50 42 34 26 ?

- A. 16
- B. 18
- C. 14
- D. 17



Q36 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Beaches are Sands.

Some Sands are Deserts.

All Beaches are Oceans.

Conclusions:

(I) Some Deserts are Beaches.

(II) Some Sands are Oceans.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows. ✓
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

Q37 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement : $P \geq T = W > L < S \leq B$

- A. $T > L$
- B. $P \leq W$ ✓
- C. $L < B$
- D. $P > L$

Q38 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(13, 16, 21)

(28, 34, 45)

- A. (37, 18, 46) ✓
- B. (35, 12, 59)
- C. (64, 26, 90)
- D. (72, 45, 27)



Q39 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. C is taller than only two other friends. D is shorter than only one friend. B is shorter than C but taller than E. A is shorter than F. Who is the second shortest among all the friends?

A. E

B. B



C. A

D. F

Q40 General Intelligence and Reasoning

Eight friends, A, B, C, D, E, F, G and H, are sitting around a circular table facing the centre (but not necessarily in the same order). Only D is sitting between A and E. E is sitting second to the right of F. Only B is sitting between C and G. Only F is sitting between G and H.

What is F's position with respect to D?

A. Third to the right

B. Third to the left



C. To the immediate left

D. To the immediate right

Q41 General Intelligence and Reasoning

If '×' means '−', '÷' means '+', '−' means '+', and '+' means '×', what will be the value of the following expression?

$$[(12 - 2) \times (3 \div 2)] + (12 \times 4)$$

A. 1



B. 2

C. 3

D. 4

Q42 General Intelligence and Reasoning

In a particular language, AC is written as 13 and FG is written as 67. How will HI be written in that language?

A. 73

B. 75

C. 81

D. 89



Q43 General Intelligence and Reasoning

If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 2149763, which of the following digits will appear the most in the new number thus formed?

A. 3

B. 1



C. 9

D. 5

Q44 General Intelligence and Reasoning

In a certain code language, 'HOTEL' is coded as 'DQPGH' and 'BANKS' is coded as 'XCJMO'. How will 'LOGIC' be coded in that language?

A. PMKGG

B. HQCKY



C. PQKKG

D. HMCGY

Q45 General Intelligence and Reasoning

In which year can the calendar of the year 2024 be used again?

A. 2052



B. 2050

C. 2048

D. 2051



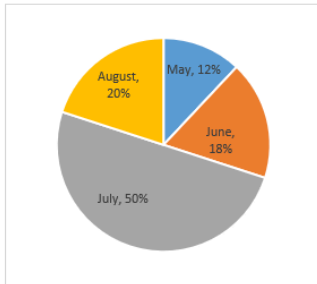
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Q46 General Intelligence and Reasoning

Study the given pie-chart and answer the question that follows.

The pie-chart depicts the percentage of passes issued in 4 months, out of the total number of passes issued (which is 50) in these 4 months together.



The number of passes issued to females in May and June was 3 and 5, respectively. What was the total number of passes issued to males in May and June together?

A. 7



B. 5

C. 6

D. 8

Q47 General Intelligence and Reasoning

Suraj starts walking 9 m towards the east, then turns left. He walks 5 m, turns right and again walks 5 m. Then he turns right and walks 8 m. He then again turns right and walks 5 m. Again, he turns right and walks 3 m. Which direction is he facing now? (All turns are 90 degree turns only)

A. South

B. West

C. East

D. North

**Q48** General Intelligence and Reasoning

A certain number of people are sitting in a straight line facing north. T is sitting to the immediate left of S. Only two people are sitting to the left of P. Only two people are sitting between P and S. T is third to the left of the person sitting at the extreme right end. How many people are sitting in the row?

A. 6

B. 5

C. 7

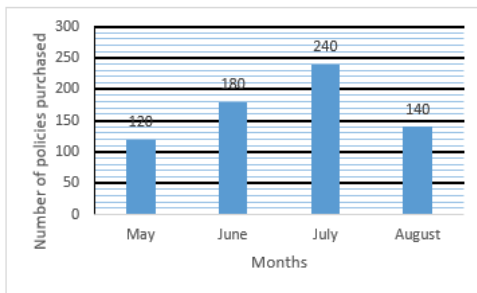
D. 8



Q49 General Intelligence and Reasoning

Study the given bar-graph and answer question that follows.

The bar-graph depicts the number of policies purchased in May, June, July and August.



The number of policies purchased in July increased by approximately what per cent as compared to June?

A. 66%

B. 33%

C. 75%

D. 40%

Q50 General Intelligence and Reasoning HINDI - no English version saved

निम्न संख्या और प्रतीक श्रृंखला के आधार पर पूछे गए प्रश्न का उत्तर दीजिए।

(बाएं) $4 * 2 \% 3 + = 3 2 \% 5 9 \& 4 \$ 7 5 \& \# * 8 5 @ 3$ (दाएं)

ऐसे कितने प्रतीक हैं, जिनके ठीक पहले एक संख्या है और ठीक बाद एक संख्या भी है?

A. 5

B. 6

C. 7

D. 8



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Q51 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions numbered I and II. You have to assume everything in the statement to be true and decide which of them logically follow(s) beyond a reasonable doubt from the information given in the statement.

Statement:

Before leaving for college, Sita is learning to cook basic meals from her mother.

Conclusions:

I. Sita didn't know how to cook.

II. Sita wants to throw a party for her friends before leaving for college.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow



Q52 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'EQUIVOCAL' is arranged in alphabetical order?

- A. One
- B. Two
- C. Three
- D. Four



Q53 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

L 16, M 20, O 24, R 28, V 32, ?

- A. A 34
- B. Z 36
- C. A 36
- D. Z 34



Q54 General Intelligence and Reasoning

Sohan is facing north-west. He turns 90° clockwise, then 360° anticlockwise and then 90° clockwise. In which direction is Sohan facing now?

- A. North-east
- B. South-east
- C. North-west
- D. South-west

Q55 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$12.01 \div 5.99 + 13.89 - 3.002 = ?$$

- A. 13
- B. 9
- C. 18
- D. 24

General Science

25 Questions • Answer Key

Q56 General Science

The current I flowing through an electric circuit of resistance 10 ohm is 5 amp. What is the heat generated per second?

- A. 250 joule
- B. 50 joule
- C. 250 calorie
- D. 50 calorie

Q57 General Science

Every germ cell will take one chromosome from each pair and these may be of either maternal or paternal origin. When two germ cells combine, they will restore the normal number of chromosomes in the progeny, ensuring

the stability of the DNA of the species. Such a mechanism of inheritance is explained in:

- A. mutation in species
- B. variation in chromosomal number
- C. speciation of organisms
- D. the results of the Mendel's experiments



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Q58 General Science

The hearts muscles contract and relax rhythmically, this rhythmic contraction followed by its relaxation constitute a heartbeat. Which instrument is used to measure heartbeats?

A. Stethoscope



B. Sphygmomanometer

C. Oximeter

D. Potometer

Q59 General Science

Which of the following gases is evolved when limestone undergoes thermal decomposition?

A. Oxygen

B. Hydrogen

C. Carbon monoxide

D. Carbon dioxide



Q60 General Science

Dobereiner tried to arrange the elements with similar properties into groups. For this he identified some groups having how many elements?

A. 2

B. 8

C. 3



D. 4

Q61 General Science

What is the net resistance of two resistors 10 ohm and 40 ohm connected in parallel?

A. 60 ohm

B. $1/60$ ohm

C. 8 ohm



D. $1/8$ ohm



Q62 General Science

In Flemming's left hand rule; the thumb, fore finger and centre finger respectively represent,

- A. Direction of force experienced, magnetic field and current
- B. Direction of magnetic field, force experienced and current
- C. Direction of current, magnetic field and force experienced
- D. Direction of magnetic field, current and force experienced

Q63 General Science

Which of the following materials are NOT biodegradable?

- A. A cardboard box and a paper bag
- B. A woollen blanket and a jute rope
- C. A leather belt and a canvas shoe
- D. Glass dish and plastic covers

Q64 General Science

In plants during the spring season, food material stored in the roots usually moves into the _____.

- A. leaves
- B. fruits
- C. flowers
- D. buds

Q65 General Science

Compounds of carbon containing carbon-carbon double bond are known as:

- A. saturated compounds
- B. alkanes
- C. unsaturated compounds
- D. alkynes



Q66 General Science

To get rid of pain in the stomach during indigestion, people use:

- A. gastric juice
- B. lemon juice
- C. milk of magnesia
- D. tomato juice



Q67 General Science

The radius of curvature of a spherical mirror is 40 cm. Its focal length is _____ cm.

- A. 20
- B. 40
- C. 30
- D. 10



Q68 General Science

The power input to the circuit when charge of Q coulomb is flowing for t seconds for a potential difference of V volt is _____.

- A. $P = VQt$
- B. $P = Qt/V$
- C. $P = VQ/t$
- D. $P = Vt/Q$



Q69 General Science

What type of forest underwent a remarkable recovery with the active and willing participation of the local community in the Arabari forest range of Midnapore district?

- A. Teak forests
- B. Neem forests
- C. Sal forests
- D. Sandalwood forests



Q70 General Science

Newlands law of Octaves was applicable only up to element _____.

A. Ca



B. K

C. Na

D. Mg

Q71 General Science

Blood coagulation occurs with the help of:

A. red blood cells

B. blood plasma

C. white blood cells

D. platelet cells



Q72 General Science

Suppose you are given three mediums, A, B, and C, with refractive indexes 1.47, 1.33, and 1.44 respectively. If the velocity of light in A, B, and C are V_A , V_B , and V_C respectively, then which of the following is true?

A. $V_A > V_B > V_C$

B. $V_C > V_B > V_A$

C. $V_B > V_C > V_A$



D. $V_A > V_C > V_B$

Q73 General Science

Which of the following solutions has the lowest pH value?

A. Tomato juice



B. Coffee

C. Saliva (before a meal)

D. Saliva (after a meal)



Q74 General Science

Sieve plates are found in the _____.

- A. phloem parenchyma cells
- B. phloem fiber cells
- C. phloem tube cells**
- D. phloem companion cells

Q75 General Science

Match the columns.

Group-I	Group-II
I. Mouth	A. Chewing of food
II. Teeth	B. Rolling of food
III. Tongue	C. Intake of whole food
IV. Saliva	D. Swallowing of food

- A. I-A; II-B; III-C; IV-D
- B. I-C; II-A; III-B; IV-D**
- C. I-B; II-C; III-D; IV-C
- D. I-A; II-D; III-A; IV-A

Q76 General Science

The colour of the clear sky is blue due to _____ of light by particles in the atmosphere of size _____ than the wavelength of visible light.

- A. refraction, larger
- B. scattering, larger
- C. refraction, smaller
- D. scattering, smaller**



Q77 General Science

When lead nitrate is mixed with potassium iodine, the precipitate formed is _____.

- A. yellow colour potassium nitrate
- B. yellow colour lead iodide
- C. colourless lead iodide
- D. black colour potassium nitrate

Q78 General Science

In the Fleming's left hand rule index finger indicates the direction of the:

- A. magnetic force
- B. electric current
- C. magnetic field
- D. motion of conductor

Q79 General Science HINDI - no English version saved

कार्बन के इनमें से किस यौगिक की पिंजरे-जैसी संलयित-वलय संरचना होती है, जो सॉकर बॉल के सदृश होती है?

- A. हीरा
- B. ग्रेफाइट
- C. C-60 फुलरीन
- D. ग्रेफीन

Q80 General Science

An imaginary line passing through principal focus, centre of curvature and pole of a Spherical Mirror is known as _____.

- A. radius of curvature
- B. focal length
- C. principal axis
- D. focal plane



Q81 General Awareness and Current Affairs

Which Act provided constitutional status to the Panchayati Raj institutions?

- A. 73rd Constitutional Amendment Act 1991
- B. 73rd Constitutional Amendment Act 1990
- C. 73rd Constitutional Amendment Act 1993
- D. 73rd Constitutional Amendment Act 1992



Q82 General Awareness and Current Affairs

Under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), which is being implemented by the National Health Authority (NHA) in partnership with state governments, a health cover of up to what amount per family per year for secondary and tertiary care hospitalisation is being provided, as on August 2022?

- A. ₹2 lakhs
- B. ₹4 lakhs
- C. ₹5 lakhs
- D. ₹6 lakhs



Q83 General Awareness and Current Affairs

Which state government in 2022 has proposed to offer identity cards to six religious minority communities, which they can submit to avail benefits of the schemes meant for the minorities?

- A. Assam
- B. Nagaland
- C. Haryana
- D. Odisha



Q84 General Awareness and Current Affairs

The Santosh Trophy is related to which of the following sports in India?

- A. Cricket
- B. Chess
- C. Football
- D. Badminton



Q85 General Awareness and Current Affairs

Which of the following classical languages is known as the 'Italian of the East' as all words in this language end with vowel sound?

- A. Marathi
- B. Telugu
- C. Malayalam
- D. Kannada



Q86 General Awareness and Current Affairs

Who among the following won her maiden Commonwealth Games gold medal in 62 kg Wrestling at the Commonwealth Games 2022?

- A. Sakshi Malik
- B. Vinesh Phogat
- C. Babita Kumari
- D. Kavita Devi



Q87 General Awareness and Current Affairs

According to _____, the Parliament amended the Constitution (42nd Constitutional Amendment) and inserted 'Secular', 'Socialist', and 'Integrity' in the Preamble of the Constitution.

- A. Article 358
- B. Article 368
- C. Article 359
- D. Article 366



Q88 General Awareness and Current Affairs

The Steel Authority of India Limited was earlier known as _____.

- A. National Steel Limited (NSL)
- B. Indian Steel Limited (ISL)
- C. Hindustan Steel Limited (HSL)
- D. Bharat Steel Limited (BSL)



Q89 General Awareness and Current Affairs

The Reserve Bank of India was nationalised with effect from 1st January, _____.

A. 1949



B. 1950

C. 1952

D. 1954

Q90 General Awareness and Current Affairs

What is the term used for an assessment of an individual's past credit history, which is usually shown as a number between 300 and 900?

A. Status Rating

B. Trust Rating

C. Credit Rating



D. Accept Rating

Q91 General Awareness and Current Affairs

The Kamet peak of Himalaya is located in which state of India?

A. Arunachal Pradesh

B. Sikkim

C. Uttarakhand



D. Himachal Pradesh

Q92 General Awareness and Current Affairs

Select the correct sequence of states according to the given sequence of cultural festivals celebrated in the respected states.

Hampi Dance Utsav, Mamallapuram Dance Utsav, Nishagandhi Festival, Taj Mahotsav

A. Tamil Nadu, Karnataka, Kerala, Uttar Pradesh

B. Kerala, Tamil Nadu, Karnataka, Uttar Pradesh

C. Uttar Pradesh, Tamil Nadu, Kerala, Karnataka

D. Karnataka, Tamil Nadu, Kerala, Uttar Pradesh



Q93 General Awareness and Current Affairs

Where was Swami Mahavir born?

- A. Lumbini
- B. Pataliputra
- C. Kundagram ☒
- D. Pavapuri

Q94 General Awareness and Current Affairs

Under Abdul Kalam Technology Innovation National Fellowship funded by the Science and Engineering Research Board (SERB), the fellowship amount is _____ per month in addition to regular income research grant of ₹15 lakh per annum and an overhead of ₹1 lakh per annum.

- A. ₹25,000 ☒
- B. ₹30,000
- C. ₹40,000
- D. ₹50,000

Q95 General Awareness and Current Affairs

Who received the CSIR Young Scientist Award in 2021 (a scheme of Awards for Young Scientists in the CSIR system to promote excellence in various fields of science and technology)?

- A. Venkateswarlu M
- B. Dr. Jeemon Panniyammakal
- C. Dr. K Giribabu ☒
- D. Debabrata Mandal

Q96 General Awareness and Current Affairs

Which Indian state is made up of soft unconsolidated deposits and also known as the 'Molassis basin'?

- A. Arunachala Pradesh
- B. Assam
- C. Sikkim
- D. Mizoram ☒



Q97 General Awareness and Current Affairs

India's services exports achieved above _____ billion for the first time during April-March 2021-22.

- A. \$110
- B. \$500
- C. \$250
- D. \$1,000



Q98 General Awareness and Current Affairs

The Western Ghats are locally known by which name in Maharashtra?

- A. Nilgiri
- B. Sahyadri
- C. Anaimalai
- D. Cardamom



Q99 General Awareness and Current Affairs

During the British rule in India, when did transfer of capital from Calcutta to Delhi take place?

- A. 1905
- B. 1911
- C. 1917
- D. 1919



Q100 General Awareness and Current Affairs

How many sessions of the Lok Sabha take place in a year?

- A. 2
- B. 3
- C. 4
- D. 5



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Simplify $(3x + 4)^2 + (3x - 4)^2 + (3x + 4)(3x - 4)$.

A. $27x^2 + 48x + 32$

B. $27x^2 - 24x + 16$

C. $27x^2 + 16$ ✓

D. $27x^2 - 16$

Q2 Mathematics

Find the median of the given frequency distribution.

Class Interval	0-10	10-20	20-30	30-40	40-50
f	8	7	9	12	11

A. $\frac{215}{9}$

B. $\frac{265}{9}$ ✓

C. $\frac{85}{3}$

D. $\frac{88}{3}$

Q3 Mathematics

A can complete a piece of work alone in 10 days and B can complete the same piece of work alone in 15 days. Working together, A, B and C can complete this work in $4\frac{1}{2}$ days. If B does not work, while A and C work on alternate days, starting with C, then in how many days will the work be completed?

A. $13\frac{1}{9}$ ✓

B. 13

C. $13\frac{1}{5}$

D. $12\frac{2}{3}$



Q4 Mathematics

The selling price of a sewing machine is ₹19,440. If it was sold at 8% profit, find its cost price.

A. ₹18,000.00



B. ₹16,000.00

C. ₹17,595.20

D. ₹20,559.20

Q5 Mathematics

A solid right cylinder having a base of diameter 10 cm and height 2 cm is melted and recast into right cylindrical coins with a base diameter of 1 cm and a 0.2 cm thickness. Find the number of coins that can be made.

A. 1000



B. 100

C. 10,000

D. 1001

Q6 Mathematics

Find the single percentage discount equivalent to three successive discounts of 30%, 20% and 10% respectively.

A. 50.4%

B. 49.6%



C. 46.4%

D. 64.6%

Q7 Mathematics

Rani is elder to Rosy by 1 year, and Rosy is elder to Rimmy by 1 year. The sum of their ages is 48 years. What is Rosy's age?

A. 15 years

B. 16 years



C. 17 years

D. 21 years



Q8 Mathematics

The diameter of a wheel is 63 cm. What is the distance covered by the wheel by making 100 revolutions? [Use $\pi = \frac{22}{7}$]

A. 99 m

B. 198 m



C. 28 m

D. 396 m

Q9 Mathematics

If the median and the mode of a set of data are 12 and 15, respectively, then find the value of thrice the mean of the same data set.

A. $\frac{35}{2}$ B. $\frac{63}{2}$ C. $\frac{33}{2}$ D. $\frac{23}{2}$ **Q10** Mathematics

In a triangle ABC, which of the following statements is correct?

A. Side AB + Side BC > Side AC



B. Side AB + Side BC = Side AC

C. Side AB + Side BC < Side AC

D. Side AB + Side BC $\geq$ Side AC

Q11 Mathematics

The value of $\frac{[(0.68)^2 + (0.32)^2 + 16 \times 0.0136]}{[(0.68)^3 - (0.32)^3] \div (0.3)^2}$ is:

A. $\frac{1}{4}$



B. $\frac{1}{2}$

C. $\frac{3}{8}$

D. $\frac{3}{5}$

Q12 Mathematics

A sum of ₹10,000 amounts to ₹11,025 in 2 years at a certain rate of interest per annum, compounded annually. The rate of interest per annum is:

A. 6%

B. 4%

C. 3%

D. 5%

**Q13** Mathematics

If $0.0\overline{216}$ is written as a fraction in lowest terms, then what is the difference between the denominator and the numerator of the fraction?

A. 179

B. 181



C. 183

D. 187

Q14 Mathematics

$\left[\left\{ (9261)^{\frac{1}{3}} \div 81^{\frac{1}{4}} \right\}^2 \times \sqrt[4]{1296} \right]$ equals:

A. 249

B. 147

C. 294

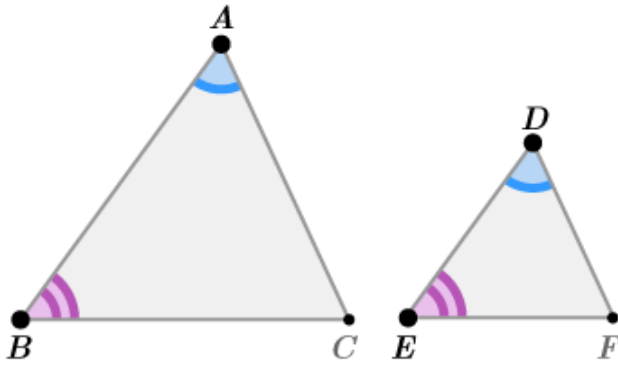


D. 174



Q15 Mathematics

In the given figure, $\triangle ABC$ is similar to $\triangle DEF$; if $AB = 6.5$ cm, $DE = 3.9$ cm, and $BC = 5.15$ cm, find EF .



A. 3.09 cm



B. 3.00 cm

C. 3.90 cm

D. 4.12 cm

Q16 Mathematics

The LCM and the HCF of two numbers are 5005 and 77, respectively. When one of the two numbers is divided by 55, the quotient is 18 and the remainder is 11. The other number is:

A. 330

B. 385



C. 418

D. 440

Q17 Mathematics

Find the sum of the roots of the quadratic equation $x^2 + 19x + 60 = 0$.

A. $1/19$

B. -19



C. 19

D. $-19/60$



Q18 Mathematics

Initially Ram had ₹4 with him and Shyam had ₹7 with him. Jatin gave each of Ram and Shyam an equal amount of money and after that the amounts Ram and Shyam had were in the ratio 7 : 9. How much money (in ₹) did Jatin give to each of Ram and Shyam?

A. 5.50

B. 6.00

C. 6.50 ✓

D. 7.00

Q19 Mathematics

A can complete $33\frac{1}{3}\%$ of a piece of work in 10 days and B can complete one-fourth of the same work in 30 days. A, B and C together can complete the same work in 12 days. In how many days will the work be completed if A works on all days, and is assisted by B and C on alternate days, starting with B assisting A on the first day?

A. $18\frac{2}{3}$ B. $18\frac{4}{13}$ C. $17\frac{1}{3}$ ✓D. $17\frac{3}{13}$ **Q20** Mathematics

Which of the following represents a quadratic equation?

A. $(x + 3)(x - 4) = x^2 + 2x + 12$ B. $(x + 2)(x + 2)(x - 1) = x^3 + 5x^2 + 6x + 4$ ✓C. $(3x + 4)x = 3x^2 + 16$ D. $(x - 7)(x + 2) = (x - 2)(x)$ **Q21** Mathematics

$\sin^6 \theta + \cos^6 \theta$ can be simplified as:

A. $1 - \sin^2 \theta \cos^2 \theta$ B. $1 + 3 \sin^2 \theta \cos^2 \theta$ C. $1 + \sin^2 \theta \cos^2 \theta$ D. $1 - 3 \sin^2 \theta \cos^2 \theta$ ✓

Q22 Mathematics

Which of the options below gives a pair of co-prime numbers?

A. (196, 343)

B. (156, 234)

C. (228, 247)

D. (161, 192)

**Q23** Mathematics

Ten years later, Ramesh will be twice as old as Rajiv and five years ago Ramesh was three times as old as Rajiv. Find the present age (in years) of Ramesh.

A. 50



B. 20

C. 40

D. 60

Q24 Mathematics

If $\left(\frac{32}{243}\right)^k = \frac{8}{27}$, then $k =$ _____.

A. $\frac{2}{3}$

B. $\frac{3}{5}$



C. $\frac{5}{3}$

D. $\frac{3}{2}$

Q25 Mathematics

The ratio of A's salary to B's salary is 4 : 5. The ratio of B's salary to C's salary is 3 : 4. Find the ratio of A's salary to C's salary.

A. 4 : 3

B. 5 : 4

C. 3 : 5



D. 4 : 5



Q26 General Intelligence and Reasoning

In a class test, a certain number of students got different ranks based on their marks. Anshu is ranked 19th from the top. 6 students are ranked after Anshu. How many total students gave the test?

A. 25



B. 37

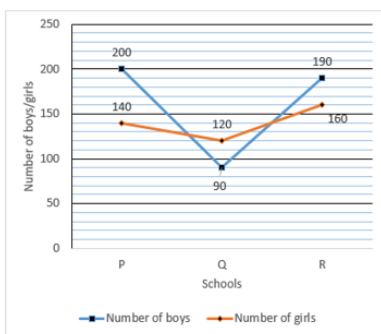
C. 26

D. 31

Q27 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of boys and girls in three schools (P, Q and R).



What is the average number of boys in the given three schools?

A. 170

B. 160



C. 150

D. 140

Q28 General Intelligence and Reasoning

Study the given letter series and answer the question that follows.

(Left) H A D W V Q T S P E R S T K E L M T (Right)

How many such vowels are there each of which is immediately preceded by a consonant and also immediately followed by a consonant?

A. 4

B. 3



C. 2

D. 5



Q29 General Intelligence and Reasoning

In a certain code language, 'SOLVE' is coded as 'QRJYC' and 'FENCE' is coded as 'DHLFC'. How will 'TASTE' be coded in that language?

- A. VXUQG
- B. RXQQC
- C. VDUWG
- D. RDQWC

**Q30** General Intelligence and Reasoning

Vaishnavi starts walking towards the south. She walks 10 m, turns right and walks 5 m. She then turns right and walks for 3 m. Next, she again turns right and walks 10 m. Again, she takes a right and walks 8 m. Finally, she again turns right and walks 6 m. In which direction is she facing now? (All turns are 90 degree turns only)

- A. South
- B. West
- C. East
- D. North

**Q31** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/ Symbol	6	8	4	+	5	#	%	2	\$	1	^	7	9	*	@
Code	S	U	T	W	N	P	V	D	A	Z	J	M	O	M	Y

Conditions:

- (i) If the first and last elements are numbers, then the last element will be replaced by the symbol @.
- (ii) If the first element is a symbol, then the first element will be coded as ©.
- (iii) If both the first and second elements are numbers, then the third element will be coded as *.

What will be the code for the following?

5 6 * @ %

- A. NS*YV
- B. YVMNS
- C. NSMVY
- D. VYSNM



Q32 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Rings are Ears.
Some Rings are Fingers.
All Ears are Noses.

Conclusions:

(I) All Rings are Noses.
(II) Some Fingers are Ears.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows. ☒

Q33 General Intelligence and Reasoning

If '−' means '×', '×' means '+', '+' means '÷', '÷' means '−', what will come in place of the question mark (?) in the following equation?

$$5 - 5 \div 6 \times 6 + 3 = ?$$

- A. 21 ☒
- B. 22
- C. 32
- D. 35

Q34 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement:

Statement: $K \geq U = N > Q < R = T \leq P$

- A. $K > Q$ ☒
- B. $K = N$
- C. $T < R$
- D. $Q > U$



Q35 General Intelligence and Reasoning

How many 7s are there in the following sequence which is immediately followed by 1 and immediately preceded by 5 ?

2 7 3 5 7 1 5 7 3 5 7 1 9 7 3 5 7 1 7 3 6 5 7 1 8 1 4 7 3 5

A. Five

B. Four



C. Three

D. Two

Q36 General Intelligence and Reasoning

If '+' means '÷', '-' means '×', '×' means '+', and '÷' means '-', what will come in place of the question mark (?) in the following equation?

$$45 + 9 - 4 \times 15 \div 2 = ?$$

A. 30

B. 31

C. 32

D. 33



Q37 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

NALAYAK : KAYALAN :: BEAUTY : YTUAEB :: POWERTY : ?

A. TPWEROY

B. YRTEWOP

C. YTREWOP



D. WOPREYT



Q38 General Intelligence and Reasoning

A statement is followed by two conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$L > M \geq N > O = P \leq Q < R$$

Conclusions:

I. $O < R$

II. $M > Q$

A. Only conclusion I is true



B. Only conclusion II is true

C. Both conclusions I and II are true

D. Either conclusion I or II is true

Q39 General Intelligence and Reasoning

G, H, I, J, K and L are six friends sitting around a circular table facing the centre of the table discussing the outcome of a cricket match. I is an immediate neighbour of both L and J. K is not the immediate neighbour of J. H is seated second to the left of L. Which of the following options represents I's position from G?

A. Second to the right.

B. Second to the left.



C. Immediate right.

D. Third to the left.

Q40 General Intelligence and Reasoning

Five boxes numbered 36, 74, 27, 51 and 92 are kept one above the other, not necessarily in the same order. Box 51 is on the topmost position. Only box 92 is between box 74 and box 36. Only one box is above box 27. Box 36 is not at the bottom most position. Which box is kept in the exact middle position?

A. Box 36



B. Box 74

C. Box 92

D. Box 27



Q41 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if ‘+’ and ‘-’ are interchanged and also ‘×’ and ‘÷’ are interchanged?

$$15 \div 3 - 10 \times 2 \div 18 \times 6 - 4 = ?$$

A. 60

B. 61

C. 62

D. 64

**Q42** General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(13, 84, 8)

(21, 136, 13)

A. (27, 140, 8)



B. (16, 23, 156)

C. (8, 71, 19)

D. (14, 56, 8)

Q43 General Intelligence and Reasoning

Mani starts from Point A and drives 5 km towards the west. He then takes a right turn, drives 8 km, turns right and drives 13 km. He then takes a right turn and drives 19 km, takes a left turn and drives 4 km. He then takes left turn and drives 11 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 9 km towards the south

B. 12 km towards the west



C. 6 km towards the east

D. 8 km towards the south



Q44 General Intelligence and Reasoning

Five girls, A, B, C, D, and E are sitting around a circular table facing the centre. E is the immediate neighbour of A and B. D is second to the right of E. C is an immediate neighbour of D and B. Where is A seated?

- A. To the immediate left of E
- B. Third to the right of D
- C. Second to the right of B**
- D. To the immediate left of C

Q45 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

All Pages are Books.
All Books are Catalogues.
Some Catalogues are Designs.

Conclusions:

- (I) Some Books are Designs.
- (II) All Pages are Catalogues.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.**
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.



Q46 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Waters are Stagnant.
Some Waters are Rivers.
All Stagnant are Mosquitos

Conclusions:

(I) Some Waters are Mosquitos.
(II) Some Rivers are Stagnant.

- A. Only conclusion (I) follows. ☒
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

Q47 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

SKC33, OGY39, KCU45, GYQ51, ?

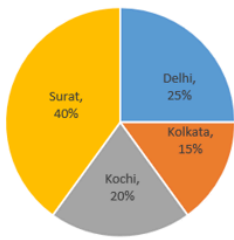
- A. MCN57
- B. CUM59
- C. MCN55
- D. CUM57 ☒



Q48 General Intelligence and Reasoning

Study the given pie-chart and answer the following question.

The given pie chart depicts the number of cars sold in four cities. The total number of cars sold in the given four cities together is 80.



In Delhi, the respective ratio between the number of cars sold to female and male customers is 2 : 3. What is the number of cars sold to female customers in Delhi?

A. 8



B. 12

C. 6

D. 4

Q49 General Intelligence and Reasoning

A statement is given followed by two possible conclusions numbered I and II. You have to assume everything in the statement to be true and on the basis of it, decide which of the conclusions logically follow(s).

Statement: "I want to start my own business of exporting cashews and hazelnuts to Turkey and America because I have many friends in these countries with similar business interests, which I think will be helpful." — A told B.

Conclusions:

I. It's always beneficial to have good contacts in the domains of work.

II. B is not interested in doing business with A.

A. Only conclusion I follows



B. Only conclusion II follows

C. Both the conclusions follow

D. Neither conclusion follows



Q50 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

231 : 334 :: 289 : ? :: 319 : 422

A. 393

B. 392



C. 395

D. 394

Q51 General Intelligence and Reasoning

At what time between 2:30 p.m. and 3:30 p.m. will the hands of a clock be together?

A. $14 + \frac{6}{11}$

B. $11 + \frac{4}{16}$

C. $16 + \frac{4}{11}$



D. $14 + \frac{16}{11}$

Q52 General Intelligence and Reasoning

R, S, T, U, V and W live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 6. Only two people between T and W. T does not live on the topmost floor. Neither U nor V lives on the lowermost floor. Only one person lives above S. U lives immediately below T and immediately above V. Who lives on floor number 2?

A. V



B. U

C. T

D. S



Q53 General Intelligence and Reasoning

Study the given number series and answer the question that follows.

(Left) 5 3 4 7 2 8 6 5 3 9 4 2 6 8 9 5 (Right)

How many such odd numbers are there each of which is immediately preceded by an even number and also immediately followed by an even number?

A. 4

B. 3

C. 2

D. 1



Q54 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

4, 9.6, 23.04, ?, 132.7104, 318.50496

A. 60.913

B. 55.296



C. 58.269

D. 51.865

Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

2, 3, 4, 9, 6, 27, 8, 81, 10, ?

A. 111

B. 183

C. 243



D. 333



Q56 General Science

Double displacement reaction takes place with:

- i) Precipitates are formed.
- ii) Evolution of a gas
- iii) Change in colour.

A. Only i and ii

B. Only iii

C. Only iii and i



D. i, ii and iii

Q57 General Science

The element 'x' in the modern periodic table has an electronic configuration 2, 8, 8. The element 'x' is placed in the _____.

A. 18th group



B. 10th group

C. 6th group

D. 8th group

Q58 General Science

The value of resistance gets doubled if its length is _____ (keeping other parameters constant).

A. doubled



B. halved

C. squared

D. unaltered



Q59 General Science

In the following table, where would a broken plastic bucket be placed?

	Safely combustible	Not safely combustible
Recyclable	A	B
Non-recyclable	C	D

A. Cell A or C

B. Cell A or B

C. Cell B or D



D. Cell C or D

Q60 General Science

Which of the following transports products of photosynthesis from the leaves to the other parts of the plant?

A. Xylem

B. Phloem



C. Sclerenchyma

D. Collenchyma

Q61 General Science

Select the correct property/properties from among the following, with respect to the reflection of light by a concave mirror.

(a) Light does not obey the laws of reflection as the concave surface is a curved surface.

(b) A light ray directed on to the pole of a concave mirror retraces the path of incidence in the opposite direction.

A. Only (a) is correct

B. Only (b) is correct

C. Both (a) and (b) are correct

D. Both (a) and (b) are incorrect



Q62 General Science

If light enters from air to some medium A having a refractive index of 1.33, then what is the speed of light in the medium A?

- A. $2.67 \times 10^8 \frac{\text{m}}{\text{s}}$
- B. $1.67 \times 10^8 \frac{\text{m}}{\text{s}}$
- C. $2.26 \times 10^8 \frac{\text{m}}{\text{s}}$ ✓
- D. $1.97 \times 10^8 \frac{\text{m}}{\text{s}}$

Q63 General Science

Which of the following elements is NOT present as a diatomic molecule in nature?

- A. Chlorine
- B. Hydrogen
- C. Helium ✓
- D. Nitrogen

Q64 General Science

Which of the following solutions will turn pH paper blue?

- A. Gastric juice
- B. Hydrochloric acid
- C. Sodium hydroxide ✓
- D. Lemon juice

Q65 General Science

Which of the following is primarily responsible for the movement of the human body?

- A. Combination of nervous and epithelial tissues
- B. Combination of muscular and connective tissues
- C. Combination of nervous and muscular tissues ✓
- D. Combination of nervous and connective tissues



Q66 General Science

Which of the following statements is FALSE?

- A. Genes are located on chromosomes.
- B. Each gene controls one character.
- C. The two alleles are brought together at the time of gamete formation ☒
- D. Every germ cell will take one chromosome from each pair.

Q67 General Science

A light ray is travelling from air medium to water medium (refractive index = 1.3) such that angle of incidence is x degree and angle of refraction is y degree. The value of ratio $(\sin y)/(\sin x)$ is:

- A. $1/1.3$ ☒
- B. 1.3
- C. 1
- D. 0.3

Q68 General Science

Naphthalene balls used to repel moths and other insects are obtained from:

- A. coal tar ☒
- B. coke
- C. coal
- D. coal gas

Q69 General Science

Which elements show similar valency as that of silicon?

- A. Mg and K
- B. C and Ge ☒
- C. Cl and Br
- D. Na and H



Q70 General Science

A student takes a ribbon and burns it in the presence of oxygen. It changes into magnesium oxide. Which process has occurred?

- A. Oxidation
- B. Reduction
- C. Hydrogenation
- D. Decomposition

Q71 General Science

Resistors of $0.2\ \Omega$, $0.4\ \Omega$, $0.6\ \Omega$, $0.8\ \Omega$ are connected in series across a voltage of 20 V. What is the net power of the electric circuit?

- A. 200 Watt
- B. 20 J/s
- C. 800 Watt
- D. 80 J/s

Q72 General Science

The induced current is _____ when the direction of the motion of the coil is at right angles to the magnetic field.

- A. Maximum
- B. Minimum
- C. Zero
- D. Infinity

Q73 General Science

Girls should take special care with respect to health and hygiene during the time of menstrual flow to avoid infections and ill health. Which of the following statements in this regard is FALSE?

- A. Girls should keep track of their menstrual cycle and be prepared for the onset of menstruation.
- B. Girls should use sanitary napkins or clean homemade pads.
- C. Girls should change pads after every 4–5 hours or as per the requirement.
- D. Girls should consume chips and packed or tinned snacks to meet nutritional needs.

Q74 General Science

What is the number of water of crystallisation molecules present in plaster of Paris?

A. $\frac{1}{2}$



B. 1

C. 10

D. 2

Q75 General Science

A battery of 12V supplies a current of 3 A to a lamp connected to it. The energy supplied to it in 15 minutes will be:

A. 32000 J

B. 32150 J

C. 540 J

D. 32400 J



Q76 General Science

Plant root cells also need oxygen to generate energy. So roots take up air from:

A. cytoplasm

B. water

C. air spaces between soil particles



D. stomata

Q77 General Science

How many times on an average does an adult human being at rest breathe in and out in a minute?

A. 15–18 times



B. 18–21 times

C. 20–23 times

D. 12–15 times



Q78 General Science

Study the given chemical reaction and find the values of x, y and z, respectively.



A. 3, 4, 4



B. 4, 3, 4

C. 4, 4, 3

D. 2, 4, 3

Q79 General Science

If a copper wire is moving through a uniform magnetic field, then the direction of the induced current can be found using the:

A. Fleming's left hand rule

B. Fleming's right hand rule



C. Maxwell's right hand screw rule

D. Maxwell's left hand screw rule

Q80 General Science

Magnification produced by a spherical mirror is equal to:

A. height of an object – height of an image

B. height of an image – height of an object

C. $\frac{\text{height of an object}}{\text{height of an image}}$

D. $\frac{\text{height of an image}}{\text{height of an object}}$



Q81 General Awareness and Current Affairs

In 1938, Congress President Subhash Chandra Bose set up a National Planning Committee. Who was its Chairman?

- A. Jawaharlal Nehru
- B. Sardar Vallabhbhai Patel
- C. Maulana Abul Kalam Azad
- D. Lal Bahadur Shastri

**Q82** General Awareness and Current Affairs

As per Reserve Bank of India (Regulatory Framework for Microfinance Loans) Directions, 2022, a microfinance loan is defined as a collateral-free loan given to a household having annual household income up to _____. For this purpose, the household shall mean an individual family unit, i.e., husband, wife, and their unmarried children.

- A. ₹1,25,000
- B. ₹2,00,000
- C. ₹3,00,000
- D. ₹5,00,000

**Q83** General Awareness and Current Affairs

In February 2022, which of the following became the 1st state in the country to launch night navigation mobile app in rivers?

- A. Haryana
- B. Himachal Pradesh
- C. Jharkhand
- D. Assam



Q84 General Awareness and Current Affairs

'The official language of the Union shall be Hindi in Devanagari script' is prescribed in which Article of the Indian Constitution?

A. Article 342

B. Article 343



C. Article 344

D. Article 345

Q85 General Awareness and Current Affairs

Which of the following options is NOT a function of Gram Panchayats?

A. Management of local public resources

B. Development of village facilities

C. Collection of local taxes

D. Scrutinises and approves budgets of the Block Samities



Q86 General Awareness and Current Affairs

In Economics, 'multiplier' is defined as the ratio of increase in income to increase in _____.

A. debt

B. investment



C. credit

D. liability

Q87 General Awareness and Current Affairs

Identify the institute from the given description.

'The institute was founded on 1 June 1945 with support from the Sir Dorabji Tata Trust. The institute first began functioning within the Cosmic Ray Research Unit on the campus of the Indian Institute of Science, Bangalore and moved to Bombay in October that year.'

A. Shavak Nanavati Technical Institute (SNTI)

B. Tata Institute of Social Science (TISS)

C. Tata Institute of Fundamental Research (TIFR)



D. National Institute of Advance Sciences (NIAS)



Q88 General Awareness and Current Affairs

Energy Swaraj Yatra Bus has been designed and developed by Dr. Chetan Singh Solanki, who is a professor of _____, which plans to combine synergies of climate change mitigation efforts.

- A. IIT Kharagpur
- B. IIT Madras
- C. IIT Delhi
- D. IIT Bombay



Q89 General Awareness and Current Affairs

Which one of the following is NOT one of the objectives of 'Beti Bachao Beti Padhao' initiative?

- A. Prevention of gender biased sex selective elimination
- B. Ensuring survival & protection of the girl child
- C. Ensuring education and participation of the girl child
- D. Cash transfer through DBT at the time of marriage of beneficiary girl



Q90 General Awareness and Current Affairs

_____ is an Islamic finance term referring to the obligation that an individual has to donate a certain proportion of wealth each year to charitable causes.

- A. Zakat
- B. Mudarabah
- C. Musharakah
- D. Ijarah



Q91 General Awareness and Current Affairs

Which of the following states first receives the rain from the southwest monsoon?

- A. Kerala
- B. West Bengal
- C. Himachal Pradesh
- D. Rajasthan



Q92 General Awareness and Current Affairs

Which of the following is NOT a key feature of the Constitution of India?

- A. Establishment of federalism
- B. Parliamentary form of government
- C. Promotion of feudalism
- D. Fundamental rights



Q93 General Awareness and Current Affairs

Who is the first captain in cricketing history to wins 13 consecutive T20I matches?

- A. Rohit Sharma
- B. Mahendra Singh Dhoni
- C. Babar Azam
- D. Virat Kohli



Q94 General Awareness and Current Affairs

Gandhi Jayanti is an event held in India to commemorate Mahatma Gandhi's birthday in the month of _____.

- A. December
- B. November
- C. October
- D. September



Q95 General Awareness and Current Affairs

The _____ assesses the prospects of the economy with respect to the GDP growth rate, fiscal balance of the central government and external balance.

- A. Medium-term Fiscal Policy Statement
- B. Macroeconomic Framework Statement
- C. Fiscal Policy Strategy Statement
- D. Revenue Expenditure



Q96 General Awareness and Current Affairs

Which of the following is a Leadership Development Programme for Minority Women in India?

A. Nai Roshni



B. Naya Ujala

C. Naya Savera

D. Nai Manzil

Q97 General Awareness and Current Affairs

In which of the following years, Uttarakhand had received an unusual amount of rainfall, which led to the melting of the Chorabari glacier and the eruption of the Mandakini river?

A. 2012

B. 2013



C. 2014

D. 2015

Q98 General Awareness and Current Affairs

Girish Chandra Murmu held the post of _____ as on 31 March 2022.

A. Comptroller and Auditor General of India



B. Solicitor General of India

C. Attorney General of India

D. Chief Election Commissioner of India

Q99 General Awareness and Current Affairs

Which football club clinched the I-League title in 2022?

A. Mohammedan Sporting

B. Gokulam Kerala FC



C. Rajasthan FC

D. RoundGlass Punjab



The Sone river belongs to which river system?

A. Godavari

B. Mahanadi

C. Narmada

D. Ganga



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Shalini's age is four times the sum of the ages of her two sons. Six years hence, her age will be double the sum of their ages. What is Shalini's present age?

A. 36 years



B. 26 years

C. 32 years

D. 40 years

Q2 Mathematics

A quadratic equation whose roots are $\frac{5}{3}$ and $-\frac{3}{4}$ is:

A. $6x^2 - 11x - 15 = 0$ B. $6x^2 + 11x - 15 = 0$ C. $12x^2 - 11x - 15 = 0$ D. $12x^2 + 22x - 15 = 0$

Q3 Mathematics

If $p \sin^2 \beta + q \cos^2 \beta = r$, then the value of $\cot^2 \beta$ is:

A. $\frac{r - p}{r - q}$ B. $\frac{p - r}{r - q}$ C. $\frac{r - q}{p - r}$ D. $\frac{r - q}{r - p}$ 

Q4 Mathematics

The value of $\frac{(0.42)^2 + 36(0.05)^2}{9(0.21)^2 + (0.45)^2}$ is:

A. $\frac{2}{9}$

B. $\frac{2}{3}$

C. $\frac{4}{9}$ ✓

D. $\frac{5}{18}$

Q5 Mathematics

Aditya can complete a piece of work alone in 8 days and Bhagawan can complete the same piece of work alone in 12 days. They started the work together, but Aditya had to leave 3 days before the completion of the work. In how many days will the work complete?

A. $6\frac{2}{5}$ days

B. $6\frac{4}{5}$ days

C. $6\frac{3}{5}$ days ✓

D. $6\frac{1}{5}$ days

Q6 Mathematics

If $x = (\sqrt{2352} \div \sqrt{1200}) \div \sqrt{0.04}$, then the value of $\frac{x+1}{x-1}$ is:

A. $\frac{3}{2}$

B. $\frac{3}{4}$

C. $\frac{2}{3}$

D. $\frac{4}{3}$ ✓



Q7 Mathematics

The ratio of boys and girls in a school that has 480 students is 7 : 9. What will be the ratio of boys and girls if 3 more girls are admitted to the school?

A. 10 : 13



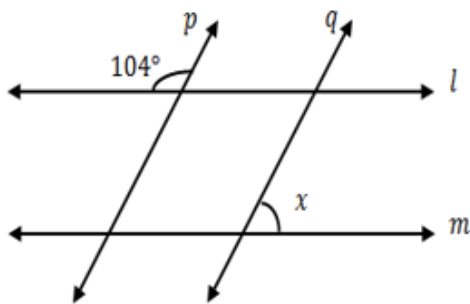
B. 13 : 10

C. 7 : 9

D. 9 : 7

Q8 Mathematics

In the given figure, $l \parallel m$ and $p \parallel q$. The value of x is:



A. 76°



B. 82°

C. 96°

D. 104°

Q9 Mathematics

After two successive discounts, a tie with a list price of ₹120 is available at ₹90. If the second discount is 9%, what is the first discount percentage? [Give your answer correct to 2 places of decimal.]

A. 84.42%

B. 17.58%



C. 63.33%

D. 71.58%



Q10 Mathematics

If $100 : 250 :: 250 : x$, then what is the value of x ?

A. 625



B. 6.25

C. 250

D. 25

Q11 Mathematics

Find the single percentage discount equivalent to three successive discounts of 30%, 20% and 10%.

A. 49.6%



B. 50.4%

C. 60%

D. 46.9%

Q12 Mathematics

Find the average of 12, 15, 16, 17, 23 and 19.

A. 13

B. 15

C. 17



D. 18

Q13 Mathematics

If a sum of ₹2,000 amounts to ₹2,360 in 3 years at a certain rate of simple interest per annum, then what will the same sum amount to in 5 years, if the rate of simple interest per annum remains the same?

A. ₹2,500

B. ₹2,600



C. ₹2,650

D. ₹2,605



Q14 Mathematics

If $0.25a = 0.05b$, then which of the options below gives the best approximation of the value of $\frac{b-a}{b+a}$?

A. 0.16

B. 1.6

C. 0.67



D. 6.6

Q15 Mathematics

Find the missing value of weight (x) assigned if the weighted average of the data set provided below is 24.5.

Object	A	B	C	D
Value of object	15	2	30	43
Assigned weight	3	2	x	1

A. 4

B. 10



C. 5

D. 12

Q16 Mathematics

The 6-digit number 473 xy 5 is divisible by 125. How many such 6-digit numbers are there?

A. 1

B. 2

C. 3

D. 4

**Q17** Mathematics

Rashmika had to travel 612 km in a car travelling at a certain speed. If she reached her destination in 9 hours, find the speed of the car.

A. 60 km/h

B. 65 km/h

C. 68 km/h



D. 70 km/h



Q18 Mathematics

Three numbers are in the ratio 3 : 5 : 7 and their LCM is 5250. What is the middle number?

- A. 200
- B. 150
- C. 350
- D. 250



Q19 Mathematics

If 2 is a root of the equation $x^2 - px + 6 = 0$ and the quadratic equation $x^2 + 2px + q = 0$ has equal roots, then the value of q is:

- A. 12
- B. 16
- C. 25
- D. 36



Q20 Mathematics

If one-third of a number is 6 more than the number itself, then find the number.

- A. -7
- B. -9
- C. -6
- D. -5



Q21 Mathematics

The surface area of a 12 cm × 6 cm × 4 cm brick is:

- A. 274 cm²
- B. 288 cm²
- C. 296 cm²
- D. 312 cm²



Q22 Mathematics

What is the area of a regular hexagon the length of each of whose sides is 4 cm?

A. $24\sqrt{3} \text{ cm}^2$



B. $25\sqrt{3} \text{ cm}^2$

C. $26\sqrt{3} \text{ cm}^2$

D. $27\sqrt{3} \text{ cm}^2$

Q23 Mathematics

The measure of $\angle OQR = 48^\circ$. Point V lies on OQ, $VT \parallel QR$ and S is a point in the interior of $\angle OQR$ such that V, S and T are collinear and S lies in between V and T. P is also a point on OQ, such that P lies in between O and V, and $m\angle PST = 120^\circ$. What is the measure of the complement of $\angle QPS$?

A. 18°



B. 22°

C. 28°

D. 32°

Q24 Mathematics

Simplify the given expression.

$$4\left(\frac{3}{2}x^2 - 4x + 3\right) - \frac{1}{2}(4x^2 + 8x - 18)$$

A. $4x^2 - 20x + 21$



B. $4x^2 - 20x - 21$

C. $4x^2 + 20x - 21$

D. $4x^2 + 20x + 21$



Q25 Mathematics

Simplify the given expression.

$$(x^2 + xy + y^2)^2 - (x^2 - xy + y^2)^2$$

A. $4xy(x^2 + y^2)$



B. $2xy(x^2 + y^2)$

C. $4xy(x^2 - y^2)$

D. $2xy(x^2 - y^2)$

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$28 \div 12 + 18 \times 6 + 4 = ?$$

A. 229

B. 329



C. 429

D. 529

Q27 General Intelligence and Reasoning

In a certain code language, 'DUCAT' is written as 'GYHGA' and 'INDIA' is written as 'LRIOH'. How will 'CHAIR' be written in that language?

A. FLFOY



B. GMGPZ

C. GNGPZ

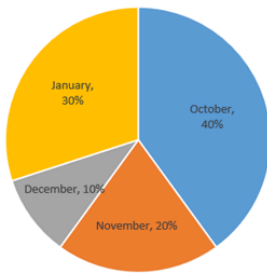
D. FLFPY

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Q28 General Intelligence and Reasoning

Study the given pie-chart and answer the following question.

The given pie chart depicts the number of orders placed in four months. The total number of orders placed in the given four months together is 90.



The number of orders placed in February is 24 more than the number of orders placed in November. What is the number of orders placed in February?

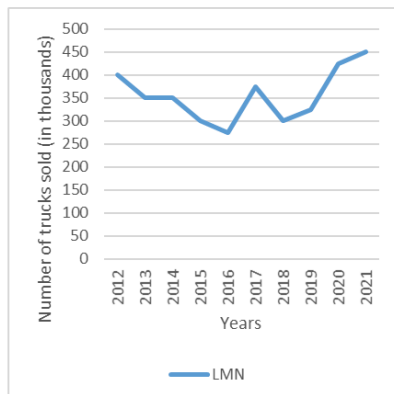
- A. 40
- B. 41
- C. 42
- D. 44



Q29 General Intelligence and Reasoning

Study the given line-graph and answer the question that follows.

The line-graph shows the number of trucks sold (in thousands) by company LMN over the years.



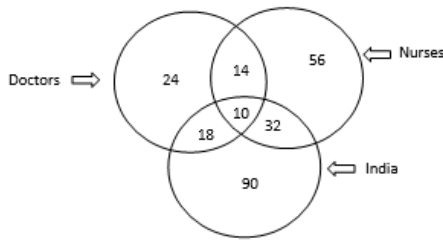
What is the ratio of total trucks sold in 2012, 2013, 2014 and 2015 to the trucks sold in 2016, 2017, 2018 and 2020?

- A. 56 : 55
- B. 50 : 51
- C. 55 : 56
- D. 51 : 50



Q30 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such nurses are there who are from India but are NOT doctors?

A. 32



B. 24

C. 42

D. 28

Q31 General Intelligence and Reasoning

In the word 'CLIPBOARD', if each vowel is changed to the letter immediately following it and each consonant is changed to the letter immediately preceding it in the English alphabetical order, then how many vowels will be there in the group of letters thus formed?

A. Two



B. Three

C. One

D. Four

Q32 General Intelligence and Reasoning

Study the given letter series and answer the question that follows.

(Left) K L A P A P S T U D A Q R T S X B Y (Right)

How many such consonants are there each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A. 4

B. 3

C. 2



D. 6



Q33 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

144 ? 196 225 256

A. 169



B. 121

C. 196

D. 179

Q34 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

7 : 56 :: 5 : 30 :: 9 : ?

A. 81

B. 86

C. 90



D. 101

Q35 General Intelligence and Reasoning

Select the number that will replace the question mark (?) in the given series.

64 343 36 125 16 ?

A. 9

B. 27



C. 243

D. 8

Q36 General Intelligence and Reasoning

In a row of people, all facing north, Anil is 5th from the right end. Mona is 13th from the right end. Mona is exactly between Anil and Ritu. If Ritu is 5th from the left end of the row, how many people are there in the row?

A. 25



B. 22

C. 24

D. 21



Q37 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

E12JZ, M16RH, U20ZP, C24HX, ?

A. K28PF



B. K29FP

C. P28KF

D. P31FK

Q38 General Intelligence and Reasoning

Refer to the given number, symbol series and answer the question that follows.

(Left) $5 \wedge 3 * 4 2 S 7 5 \% 9 @ \& \# 8 3 = 9 3 + 2 \% 8$ (Right)

How many such symbols are there which are immediately preceded by a symbol and also immediately followed by a symbol?

A. 0

B. 1



C. 2

D. 3

Q39 General Intelligence and Reasoning

Seven students, A, B, C, D, E, F and G, are sitting around a circular table facing the centre (but not necessarily in the same order). D is sitting second to the left of C. D is sitting to the immediate right of G. B is sitting third to the left of F. E is sitting to the immediate left of B.

Who among the following is an immediate neighbour of B and D?

A. F

B. G



C. C

D. E



Q40 General Intelligence and Reasoning

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide

which of the conclusions logically follow(s) from the statements.

Statements:

All bridges are roads.

Some footpaths are roads.

Some footpaths are bricks.

Conclusions:

I. Some bridges are bricks.

II. Some roads are bridges.

III. Some footpaths are bridges.

- A. Only conclusions I and II follow
- B. Only conclusions I and III follow
- C. Only conclusions II and III follow
- D. Only conclusion II follows



Q41 General Intelligence and Reasoning

In a certain code language, 'HOUSE' is written as 'FOSUC' and 'RAHUL' is written as 'PAUHJ'. How will 'ABOVE' be written in that language?

- A. ZCMXC
- B. XCNMB
- C. CDMXC
- D. YBVOC



Q42 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

ZCD : XAB :: MDV : KBT :: RNT : ?

- A. PLR
- B. POT
- C. QRU
- D. PMR



Q43 General Intelligence and Reasoning

Sonal was returning from her coaching class one evening just before sunset. She was waiting for the bus at a square, where she met her friend Shalini coming from the front. At that time, Shalini's shadow was directly falling on Sonal. In which direction was Shalini facing towards?

A. North

B. South

C. East



D. West

Q44 General Intelligence and Reasoning

Aarush starts walking 9 m towards the north, then turns left and walks 17 m. He again turns left to walk 9 m. In which direction is he facing now? (All turns are 90 degree turns only)

A. West

B. East

C. South



D. North

Q45 General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

L J + K - Y % T # U P

How many symbols are there which are immediately preceded by a letter and also immediately followed by a letter?

A. 1

B. 2

C. 3

D. 4



Q46 General Intelligence and Reasoning

In a queue, Rajul is 16th from the front end and Rekha is 4th from the rear end, and there are 5 people between them. How many people are there in the queue?

A. 18

B. 19

C. 25



D. 21



Q47 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. B is taller than E but shorter than F. Only one person is shorter than C. Only three people are taller than A. E is not the shortest. Who is the tallest among all the friends?

A. A

B. F



C. D

D. B

Q48 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

All Locks are Blocks.

Some Blocks are Toys.

Some Toys are Dolls.

Conclusions:

(I) Some Locks are Toys.

(II) Some Blocks are Dolls.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.

C. Both conclusions (I) and (II) follow.

D. Neither conclusion (I) nor (II) follows.



Q49 General Intelligence and Reasoning

Two statement are given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statements.

Statement: $T < P < Q$, $N < M < S < T$

A. $P < M$

B. $Q < S$

C. $P < N$

D. $N < Q$



Q50 General Intelligence and Reasoning

Select the option in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(289,192,95)

(375,278,181)

A. (420,324,227)

B. (421,324,227)



C. (421,322,227)

D. (421,324,225)

Q51 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing south. Neha sits fourth to the right of Shilu. Only four people sit between Neha and Kirti. Ram sits to the immediate right of Kirti. Only two persons sit between Kirti and Kunti. Alam sits third to the right of Kunti. If no other person is sitting in the row, what is the total number of persons seated?

A. 12

B. 14

C. 16



D. 18

Q52 General Intelligence and Reasoning

Five friends, Q,R,S,T, and U are sitting around a circular table facing the centre. U is the immediate neighbour of Q and S. T is second to the left of U and an immediate neighbour of both R and S. Where is R seated?

A. To the immediate right of T

B. Second to the left of U

C. Third to the left of S

D. Third to the left of U



Q53 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement.

Statement:

Prices of pulses have doubled in the last 15 days due to shortages artificially created by large-scale hoarding by a few traders.

Conclusions:

- I. Hoarding is the only factor that leads to an increase in the price of pulses
- II. Fifteen days ago, there was no shortage in availability of pulses

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follows



D. Both conclusions I and II follow

Q54 General Intelligence and Reasoning

If 3 is added to each odd digit and 2 is subtracted from each even digit in the number 6452851, what will be difference between the largest and smallest digits thus formed?

A. 6

B. 2

C. 4

D. 8



Q55 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$75.02 \div 16.89 \times 13.47 + 749.98 - 79.29 = ?$$

A. 622

B. 532

C. 727



D. 795



Q56 General Science

A concave lens of focal length 30 cm forms an image of an object placed at 60 cm from it. The position and nature of the image formed will be :

- A. 20 cm, real and Inverted
- B. -20 cm, real and inverted
- C. -20 cm, virtual and erect
- D. 20 cm, virtual and erect



Q57 General Science

The heat generated H due to Joule's heating effect is directly proportional to _____.

- A. cube of the current
- B. square root of the current
- C. cube root of the current
- D. square of the current



Q58 General Science

The correct increasing order of metallic character is:

- A. $\text{Ge} < \text{Ga} < \text{Sc} < \text{Ca}$
- B. $\text{Ge} < \text{As} < \text{Ga} < \text{Ca}$
- C. $\text{Ge} < \text{Zn} < \text{Cu} < \text{As}$
- D. $\text{Ga} < \text{Ge} < \text{Ca} < \text{Sc}$



Q59 General Science

Some plants produce a sticky substance in the stem which is used to prepare gum adhesives. What is the use of this gum to the plant?

- A. It attracts insect pollinators.
- B. It is a waste product of metabolism.
- C. It has medicinal value.
- D. It helps in the transport of water.



Q60 General Science

When iron nails come in contact with copper sulphate solution their colour changes to _____.

- A. brown
- B. yellow
- C. red
- D. blue

Q61 General Science

In which cell organelle, the first step of cellular respiration, which is the breakdown of glucose, a six-carbon molecule, into a three-carbon molecule called pyruvate takes place?

- A. Mitochondria
- B. Cytoplasm
- C. Lysosomes
- D. Nucleus

Q62 General Science

After fertilization, what will be the future of these parts of a flower- stamens, style, stigma, petal and sepal?

- A. They shed off except sepal which may be persistent in some plants
- B. Persistent except sepal shed off in mostly plants
- C. Stigma, style, stamen shed off except petal and sepal in some plants
- D. Stigma, style shed off except stamen, petal and sepal

Q63 General Science

Which of the following acts as the deciding factor in the determination of the valency of an atom?

- A. Number of electrons in the K shell
- B. Number of electrons in the L shell
- C. Number of electrons in the innermost shell
- D. Number of electrons in the outermost shell



Q64 General Science

If an image formed after reflection from a mirror is virtual and highly diminished, then the position of the object and type of mirror is:

- A. infinity and concave mirror
- B. infinity and convex mirror
- C. centre of curvature and concave mirror
- D. Between C and F and concave mirror

Q65 General Science

Which of the following is used to study the direction of rotation of a coil in a magnetic field in an electric motor?

- A. Right hand thumb rule
- B. Left hand thumb rule
- C. Fleming's left hand rule
- D. Fleming's right hand rule

Q66 General Science

If the current flowing through a resistance of 5 ohm is 6 amp, then the current flowing through another resistance of 10 ohm connected in series to it is _____.

- A. 12 amp
- B. 3 amp
- C. 6 amp
- D. 0 amp

Q67 General Science

Which of the following is NOT a goal of sustainable agriculture?

- A. Maximising economic value
- B. Maximising environmental health
- C. Minimising input of chemicals
- D. Minimising labour and effort



Q68 General Science

A coin of diameter 10 cm is placed at a distance $3.5f$ from the pole of a concave mirror of focal length f . The linear magnification and the diameter of the image are:

- A. $\frac{1}{5}$ and 2 cm, respectively
- B. $\frac{2}{5}$ and 4 cm, respectively
- C. $\frac{3}{5}$ and 5 cm, respectively
- D. $\frac{4}{5}$ and 8 cm, respectively

Q69 General Science

The number of double bonds present in Benzene is _____.

- A. two
- B. three
- C. four
- D. six

Q70 General Science

Carbon compounds that are linked by only a single bond are known as _____.

- A. saturated compounds
- B. unsaturated compounds
- C. both saturated and unsaturated compounds
- D. neither saturated nor unsaturated compounds

Q71 General Science

An aqueous solution of sodium chloride is known as?

- A. lime
- B. brine
- C. Caustic soda
- D. Lime stone



Q72 General Science

Which of the following is an example of double displacement reaction?

- A. $\text{CaO (s)} + \text{H}_2\text{O (l)} \longrightarrow \text{Ca(OH)}_2 \text{ (aq)} + \text{Heat}$
- B. $2\text{FeSO}_4 \text{ (s)} \longrightarrow \text{Fe}_2\text{O}_3 \text{ (s)} + \text{SO}_2 \text{ (g)} + \text{SO}_3 \text{ (g)}$
- C. $\text{CaO (s)} + \text{H}_2\text{O (l)} \longrightarrow \text{Ca(OH)}_2 \text{ (aq)} + \text{Heat}$
- D. $\text{Na}_2\text{SO}_4 \text{ (aq)} + \text{BaCl}_2 \text{ (aq)} \longrightarrow \text{BaSO}_4 \text{ (s)} + 2\text{NaCl (s)}$ ✓

Q73 General Science

_____ is a device used for varying the resistance of an electrical circuit.

- A. Voltmeter
- B. Ammeter
- C. Rheostat ✓
- D. Galvanometer

Q74 General Science

Oxides of which of the following elements CANNOT be reduced by H_2 , CO and C?

- A. Ca ✓
- B. Fe
- C. Pb
- D. Cu

Q75 General Science

Which of the following ensures that the air passage does NOT collapse during respiration?

- A. Diaphragm
- B. Rings of cartilage ✓
- C. Mucus
- D. Cilia



Q76 General Science

Many unicellular algae like *Chlamydomonas* live in water. How do they take in oxygen for respiration?

- A. They absorb dissolved oxygen via diffusion like *Amoeba*. ✓
- B. They have tiny openings (spiracles) to take in gases.
- C. They store oxygen evolved via photosynthesis in their vacuoles.
- D. They live via anaerobic respiration.

Q77 General Science

In an electric motor, the direction of flow of current is reversed using:

- A. a motor brush
- B. a split ring ✓
- C. armature winding
- D. a carbon brush

Q78 General Science

The appearance of a stick at the interface when immersed in water is an example of _____.

- A. reflection of light
- B. refraction of light ✓
- C. transmission of light
- D. displacement of light

Q79 General Science

Which continent will suffer the most from global warming in terms of the number of people affected?

- A. Asia; oceans will rise ✓
- B. North America; Arctic ice melt
- C. Europe; urban flooding
- D. Antarctica; ocean warming



Q80 General Science

Is there a visible difference between sperms which contain X chromosomes and sperms which contain Y chromosomes?

- A. Yes, the X-containing sperms are larger.
- B. Yes, the Y-containing sperms are more motile.
- C. No, there is no difference in size but there is difference in motility
- D. No, there is no difference in size or motility. ✓

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Solung celebrated on September 1 every year is the most popular festival of Adi Tribe of which state?

- A. Meghalaya
- B. Arunachal Pradesh ✓
- C. Sikkim
- D. Tripura

Q82 General Awareness and Current Affairs

Under which Article of the Constitution of India is the President of India empowered to issue a “Proclamation of Emergency”?

- A. Article 315
- B. Article 370
- C. Article 356
- D. Article 352 ✓

Q83 General Awareness and Current Affairs

What is the name of the Light Combat Aircraft, which is designed and manufactured in India?

- A. Virat
- B. Tejas ✓
- C. Pushpak
- D. Pawan



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Q84 General Awareness and Current Affairs

Brahma Kamal is the state flower of which state?

- A. Himachal Pradesh
- B. Sikkim
- C. Uttarakhand
- D. Tripura



Q85 General Awareness and Current Affairs

In June 2022 researchers at the _____ have announced to have developed a robot to clean septic tanks without human intervention named HomoSEP.

- A. Indian Institute of Technology (IIT), Bombay
- B. Indian Institute of Technology (IIT), Delhi
- C. Indian Institute of Technology (IIT), Madras
- D. Indian Institute of Technology (IIT), Guwahati



Q86 General Awareness and Current Affairs

The famous Majuli island is located on which river?

- A. Godavari
- B. Indus
- C. Ganga
- D. Brahmaputra



Q87 General Awareness and Current Affairs

Which Five-Year Plan is also called 'Gadgil Yojna', after the Deputy Chairman of the Planning Commission DR Gadgil?

- A. Third
- B. Fourth
- C. Fifth
- D. Sixth



Q88 General Awareness and Current Affairs

Under which Article of the Indian Constitution is there provision that “the Governor of a State shall at the expiration of every fifth year, constitute a Finance Commission to review the financial position of the Panchayats and to make recommendations to him”?

A. 243 H

B. 243 I



C. 243 X

D. 243 Y

Q89 General Awareness and Current Affairs

Which is the second official language of Telangana?

A. Hindi

B. Tulu

C. Urdu



D. English

Q90 General Awareness and Current Affairs

In which country did the Buddhist teachings of Nichiren Daishonin begin?

A. Japan



B. Vietnam

C. Philippines

D. South Korea



Q91 General Awareness and Current Affairs

Which set of statements is true about the river Ganga?

1. The Ganga rises in the Gangotri glacier near Gaumukh. Here, it is known as the Bhagirathi.
2. At Devprayag, the Bhagirathi meets the Alaknanda; hereafter, it is known as the Ganga.
3. The Alaknanda has its source in the Satopanth glacier above Kedarnath.
4. The Ganga enters the plains at Haridwar

A. 1, 2 and 3

B. 1, 2 and 4



C. 2, 3 and 4

D. 1, 3 and 4

Q92 General Awareness and Current Affairs

Who among the following won a gold at the IWF Junior World Championships in May 2022?

A. Harshada Sharad



B. Mirabai Chanu

C. Archita Serali

D. Anjali Patel

Q93 General Awareness and Current Affairs

What is non-tax revenue?

A. Recurring income earned by the government from sources other than taxes



B. Income earned by the government through the public sector units only

C. Any liabilities for the government

D. Financial help in the form of grants, gifts from foreign governments and international organisations



Q94 General Awareness and Current Affairs

The Pradhan Mantri Shram Yogi Maandhan Yojana (PM-SYM) is aimed at providing:

- A. loans for small farmers
- B. education subsidies to students in professional education
- C. protection for girls against dowry exploitation
- D. protection for old age unorganized workers



Q95 General Awareness and Current Affairs

Who inaugurated the University Grants Commission (UGC)?

- A. Dr. S Radhakrishnan
- B. Maulana Abul Kalam Azad
- C. Pandit Jawaharlal Nehru
- D. Dr. BR Ambedkar



Q96 General Awareness and Current Affairs

As on 30th June 2022, how many Schedules are there in the Indian Constitution?

- A. 8
- B. 12
- C. 22
- D. 395



Q97 General Awareness and Current Affairs

The Nehru Rozgar Yojana (NRY) was launched in which Five-Year Plan in India?

- A. Second
- B. Fifth
- C. Ninth
- D. Seventh



Q98 General Awareness and Current Affairs

What is the minimum monthly assured pension for a person after attaining the age of 60 years in the Pradhan Mantri Shram Yogi Maan-Dhan Yojana? (As of July 2022)

A. ₹5,000

B. ₹4,000

C. ₹3,000



D. ₹1,500

Q99 General Awareness and Current Affairs

As per National Mineral Inventory data 2015, which state of India has the highest reserves of gold ore (primary)?

A. Andhra Pradesh

B. Bihar



C. Karnataka

D. Maharashtra

Q100 General Awareness and Current Affairs

Who was the captain of the Lucknow Super Giants in the fifteenth edition of the Indian Premier League (IPL)?

A. Hardik Pandya

B. Kane Williamson

C. KL Rahul



D. Rishabh Pant



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Simplify the following.

$$0.\overline{06} \times 8.\overline{3}$$

A. $0.0\overline{50}$

B. $0.0\overline{50}$

C. $0.5\overline{0}$ ✓

D. $0.1\overline{50}$

Q2 Mathematics

The nominal marks obtained by students who appeared in a test are given below. Find the median marks of the students.

Marks	11	20	8	16	29	22
No. of students	14	5	11	9	3	8

A. 8

B. 10.5

C. 13.5 ✓

D. 13

Q3 Mathematics

The value of $(\sin \theta + \operatorname{cosec} \theta)^2 + (\cos \theta + \sec \theta)^2$ is:

A. $5 - \cot^2 \theta + \tan^2 \theta$

B. $5 + \cot^2 \theta + \tan^2 \theta$

C. $7 - \cot^2 \theta + \tan^2 \theta$

D. $7 + \cot^2 \theta + \tan^2 \theta$ ✓



Q4 Mathematics

Simplify $\frac{(5p-q)^3 - (3p-2q)^3 - (q+2p)^3}{13pq - 15p^2 - 2q^2}$.

- A. $6p+3q$
- B. $-6p-3q$ ✓
- C. $6p-3q$
- D. $-6p+3q$

Q5 Mathematics

Simplify the given expression.

$$\frac{5}{2}x^2 + 4x + \frac{3}{2} + \frac{x^2}{2} - 6x + \frac{5}{2}$$

- A. $3x^2 + 2x - 4$
- B. $3x^2 - 2x + 4$ ✓
- C. $3x^2 + 2x + 4$
- D. $3x^2 - 2x - 4$

Q6 Mathematics

Six equal cubes, each of side 7 cm, are placed adjacent to each other. The volume of the new solid formed will be:

- A. 2058 cm^3 ✓
- B. 2124 cm^3
- C. 2206 cm^3
- D. 2312 cm^3

Q7 Mathematics

In what time will a sum of ₹6,400 amount to ₹7,168 at 6% simple interest per annum?

- A. 2.5 years
- B. 3 years
- C. 4 years
- D. 2 years ✓



Q8 Mathematics

Which of the following are exactly divisible by 44?

(a) 155232

(b) 155248

(c) 156944

(d) 156992

A. Only (a) and (c)

B. Only (b) and (c)

C. Only (b) and (d)

D. Only (a) and (d)



Q9 Mathematics

Simplify the given expression.

$$(\sqrt{1008} \div \sqrt{448}) \times \sqrt{0.16}$$

A. 0.6

B. 0.8

C. 0.3

D. 0.9



Q10 Mathematics

A dishonest shopkeeper promises to sell his goods at cost price. However, he uses a weight that actually weighs 40% less than what is written on it. Find his profit percentage.

A. $62\frac{2}{3}\%$

B. $65\frac{2}{3}\%$

C. $66\frac{2}{3}\%$

D. $66\frac{1}{3}\%$



Q11 Mathematics

Consider two numbers whose $\text{LCM} + \text{HCF} = 504$, and $\text{LCM} - \text{HCF} = 456$. If one of these two numbers is 96, find the other number.

A. 126

B. 130

C. 100

D. 120

**Q12** Mathematics

Ravi's age is 5 years more than Gowri's age. The sum of their ages is 31 years. What is Gowri's age?

A. 13 years

B. 18 years

C. 15 years

D. 16 years

**Q13** Mathematics

Express $0.\overline{12}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{4}{33}$ B. $\frac{5}{33}$ C. $\frac{6}{33}$ D. $\frac{7}{33}$ **Q14** Mathematics

Chakravarty drives a car at a speed of 52 km/h. How much time will he take to cover a distance of 364 km?

A. 4 hours

B. 5 hours

C. 6 hours

D. 7 hours



Q15 Mathematics

Which of the following equations is NOT a quadratic equation?

A. $(2x + 1)(3x - 4) = 2x^2 + 3$

B. $x^2 + 2\sqrt{x} - 5 = 0$ ✓

C. $\sqrt{3} x^2 - 2x + \frac{1}{\sqrt{2}} = 0$

D. $(x + 2)^3 = x^3 - 5$

Q16 Mathematics

Two trains are running in opposite directions on parallel tracks. If their speeds are 50 km/h and 58 km/h, find their relative speed.

A. 20 m/s

B. 30 m/s ✓

C. 40 m/s

D. 50 m/s

Q17 Mathematics

From the salary of Hari, 15% is deducted as house rent, 20% of the remaining amount is spent on children's education, and 10% of the remaining balance is his medical expenses. Finally, he is left with ₹42,840. Find his total salary.

A. ₹65,000

B. ₹70,000 ✓

C. ₹75,000

D. ₹72,500

Q18 Mathematics

If the marked price of an article is ₹2,850 and the discount is 21%, then find the selling price.

A. ₹2,251.50 ✓

B. ₹2,521.50

C. ₹2,215.50

D. ₹2,259.50



Q19 Mathematics

Giri and Kamal invested their capitals in a business in the ratio 5 : 7, respectively. If ₹1,728 was the total money invested in the business, what is Giri's share in the business?

A. ₹1,008

B. ₹720

C. ₹702

D. ₹1,080

Q20 Mathematics

If the median of a set of data is 12 and its mean is 10, then find the mode of this data set, using the empirical formula.

A. 14

B. 16

C. 15

D. 17

Q21 Mathematics

If r and s are the roots of $x^2 - 3x + 2 = 0$, then the quadratic equation in x whose roots are $r^2 + s^2$ and $(rs)^2$ is:

A. $x^2 + 9x - 20 = 0$ B. $x^2 + 9x + 20 = 0$ C. $x^2 - 9x - 20 = 0$ D. $x^2 - 9x + 20 = 0$ **Q22** Mathematics

If the perimeter of a square is 44 cm, then find the perimeter of a circle whose radius is equal to the length of a side of the given square.

A. 22π B. 12π C. 21π D. 11π 

Q23 Mathematics

The length of a rectangular plot is 60% more than its breadth. If the difference between the length and the breadth of that rectangle is 30 cm, what is the perimeter of that rectangle?

- A. 330 cm
- B. 300 cm
- C. 270 cm
- D. 260 cm

**Q24** Mathematics

A regular polygon in which each interior angle is 140° is a/an:

- A. heptagon
- B. octagon
- C. nonagon
- D. decagon

**Q25** Mathematics

The quadrilateral formed by joining the mid-points of the sides of a quadrilateral PQRS, taken in order, is a rhombus, if

- A. PQRS is a rhombus
- B. PQRS is a trapezium
- C. Diagonals of PQRS are equal
- D. Diagonals of PQRS are perpendicular

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Q is second to the right of P. Only three people sit between Q and S. T is fourth to the right of S. If no other person is sitting in the row, what is the total number of people seated in the row?

- A. 10
- B. 11
- C. 8
- D. 12



Q27 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

YSL 22, WQJ 25, UOH 28, SMF 31, ?

A. QLD 34

B. RKD 32

C. QKD 34



D. SLE 35

Q28 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

15 : 230 :: 13 : 174 :: 11 : ?

A. 149

B. 121

C. 144

D. 126



Q29 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3 7 23 59 ? 223

A. 113

B. 123



C. 133

D. 143

Q30 General Intelligence and Reasoning

Five boxes X, Y, Z, A and B are kept one above the other but not necessarily in the same order. Only X is kept between Y and B. Z is not kept immediately above or immediately below A. A is not kept on the top most position. Which box is kept at the bottom most position?

A. A



B. B

C. Y

D. Z



Q31 General Intelligence and Reasoning

R, S, T, U, V and W live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 6. V lives on floor number 5. S does not live on an even numbered floor. U lives immediately below T. Neither R nor S lives on the topmost floor. Only two people live between V and T. Who lives immediately below R?

A. S



B. T

C. U

D. V

Q32 General Intelligence and Reasoning

If 2 is multiplied to each even digit and 2 is added to each odd digit in the number 2434251, what will be the sum of the digits which will appear more than once in the new number thus formed?

A. 13

B. 15

C. 14

D. 12



Q33 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) S 7 & D M # Z 6 % 3 T 2 * H G = C ? 4 Y B (Right)

How many such symbols are there which are immediately preceded by a number and also immediately followed by a letter?

A. One

B. Two



C. Three

D. Four

Q34 General Intelligence and Reasoning

One evening, Ram and Shyam are talking face-to-face with each other. If Shyam's shadow was exactly to the right of Ram, in which direction was Shyam facing?

A. West

B. South



C. East

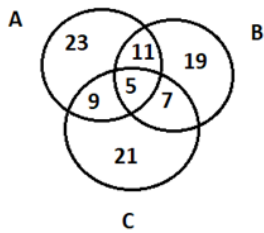
D. North



Q35 General Intelligence and Reasoning

Study the given Venn diagram carefully and answer the question that follows. The numbers in different sections indicate the number of gardeners assigned with the following tasks.

A = Watering the plants; B = Growing new plants; C = Beautification of the park



How many such gardeners are there who are assigned with the task of only growing new plants?

A. 11

B. 12

C. 19



D. 21

Q36 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(11, 24, 57)

(7, 39, 60)

A. (17, 58, 91)

B. (12, 55, 19)

C. (14, 25, 43)

D. (15, 41, 86)



Q37 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some markers are pens.

Some pens are colours.

Some colours are wax.

Conclusions:

(I) Some colours are markers.

(II) Some pens are wax.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusion (I) and conclusion (II) follow.
- D. Both conclusion (I) and conclusion (II) do not follow. ✓

Q38 General Intelligence and Reasoning

In a certain code language, 'PURPLE' is written as 'VQQSFM' and 'YELLOW' is written as 'FZMMXP'. How will 'VIOLET' be written in the same code language?

- A. AMFUPW
- B. JWMPUF ✓
- C. XMPWUF
- D. JMWPFU

Q39 General Intelligence and Reasoning

Select the option that is related to the fifth term in the same way as the fourth term is related to the third term and the second term is related to the first term.

DOLPHIN : ALIMEFK :: GROUP : DOLRM :: SHARK : ?

- A. PFXOH
- B. PEYOH
- C. VKDUN
- D. PEXOH ✓



Q40 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. Only two people are taller than A. F is not the tallest. E is shorter than B but taller than D. Only one person is shorter than E. B is not taller than F. Who is the second tallest among all the friends?

A. A

B. C

C. F

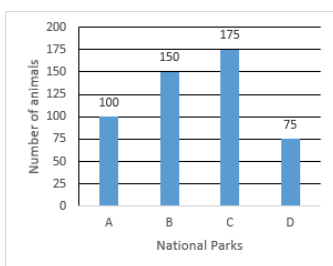


D. B

Q41 General Intelligence and Reasoning

Study the given bar graph and answer the following question.

The given bar graph depicts the number of animals in four national parks.



Out of the total number of animals in National Parks A and C together, the respective ratio between the number of herbivores and carnivores was 11 : 14. What was the total number of herbivores in National Parks A and C together? (All national parks mentioned above contain herbivore and carnivore animals only)

A. 99

B. 132

C. 110

D. 121

**Q42** General Intelligence and Reasoning HINDI - no English version saved

दर्शन पूर्व की ओर 10 km पैदल चलना शुरू करता है। वह दाईं ओर मुड़ता है 6 km चलता है, फिर दाईं ओर मुड़ता है। वह 5 m चलता है, और फिर दाईं ओर मुड़ता है। वह 4 km चलने के बाद बाईं ओर मुड़ता है। फिर वह 2 km चलता है, फिर बाईं ओर मुड़ता है, और फिर 5 km चलता है। अंत में, वह दाईं ओर मुड़ता है, और 2 km चलता है। अब उसका मुख किस दिशा की ओर है? (सभी मोड़ केवल 90 डिग्री वाले मोड़ हैं)

A. पश्चिम



B. उत्तर

C. पूर्व

D. दक्षिण



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Q43 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$(325 \div 17.99 - 8.99)^2 = ?$$

A. 25

B. 121

C. 81



D. 196

Q44 General Intelligence and Reasoning

A, B, C, D, E and F are sitting around a circular table facing the centre. A is sitting second to the right of C. B is sitting to the immediate left of F. C is an immediate neighbour of both D and F. Who is sitting second to the left of B?

A. C

B. E

C. A



D. F

Q45 General Intelligence and Reasoning

Study the given table and answer the following question.

	Number of pages read in	
	Book 1	Book 2
Aayush	485	392
Bhakti	642	198

If the total number of pages that can be read in Book 1 was 750, how many pages were left unread by Bhakti in Book 1?

A. 120

B. 96

C. 108



D. 98



Q46 General Intelligence and Reasoning

In the number 482818259, if 1 is added to all the digits placed at the even places starting from left and 1 is subtracted from the digits placed at the odd places starting from left, what will be the sum of the last 4 digits ?

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

NOTE - All operations to be done from left to right.

A. 24



B. 22

C. 20

D. 32

Q47 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

171, 140, 110, 81, 53, ?

A. 20

B. 25

C. 26



D. 32

Q48 General Intelligence and Reasoning

Refer to the following letter, number and symbol series and answer the question.

(Left) F D 3 & S* 9 J 5 @ 6 A & 2 R U # 3 E 7 E % Z (Right)

If all the numbers are dropped from the series, how many such symbols will be there which are immediately preceded by a vowel and also immediately followed by a consonant?

A. One

B. Two



C. Three

D. Four



Q49 General Intelligence and Reasoning

In a certain code language, 'WORTH' is coded as 'SRNWD' and 'MODEL' is coded as 'IRZHH'. How will 'COAST' be coded in that language?

- A. FKDOV
- B. YKWOP
- C. FRDVV
- D. YRWVP

**Q50** General Intelligence and Reasoning HINDI - no English version saved

दिए गए कथनों और निष्कर्षों को ध्यानपूर्वक पढ़ें। कथनों में दी गई जानकारी को सत्य मानते हुए विचार करें, भले ही वह सामान्यतः ज्ञात तथ्यों से भिन्न प्रतीत होती हो, और बताएं कि दिए गए निष्कर्षों में से कौन से कथन का तार्किक रूप से पालन करते हैं?

कथन:

कक्षा 9वीं के छात्र 20 हॉकी मैचों में से 14 हार गए, लेकिन इस वर्ष खेले गए 10 फुटबॉल मैचों में से उन्होंने 8 में जीत हासिल की।

निष्कर्ष:

- I. 9वीं कक्षा के छात्रों को हॉकी से अधिक फुटबॉल पसंद है
- II. 9वीं कक्षा के छात्रों को हॉकी से अधिक फुटबॉल खेलना चाहिए

- A. केवल निष्कर्ष I पालन करता है
- B. केवल निष्कर्ष II पालन करता है
- C. न तो निष्कर्ष I और न ही II पालन करता है।
- D. निष्कर्ष I और II दोनों पालन करते हैं।

**Q51** General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement:

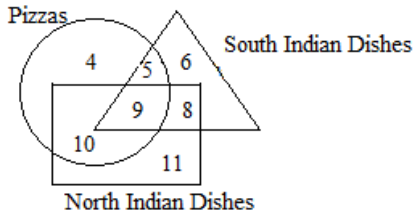
Statement: $X \geq W > U \leq Y = V > Z$

- A. $Z = Y$
- B. $V < U$
- C. $W < V$
- D. $U < X$



Q52 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of restaurants famous for various dishes.



How many restaurants are famous for their South Indian dishes and North India Dishes but NOT for pizzas?

A. 8



B. 17

C. 13

D. 22

Q53 General Intelligence and Reasoning

Six persons (L, M, N, O, P and Q) are sitting around a circular table facing the centre. Q is sitting second to the right of N. P is sitting second to the left of M. Q is an immediate neighbour of L and P. L is sitting second to the right of M. Who is sitting third to the left of O?

A. L



B. N

C. Q

D. P

Q54 General Intelligence and Reasoning

If today is Thursday, what will be the day after 560 days from today?

A. Wednesday

B. Friday

C. Thursday



D. Sunday



Q55 General Intelligence and Reasoning

Refer to the following number series and answer the question.

(Left) 6 1 4 6 2 7 5 3 8 6 9 1 3 9 5 3 (Right)

Find the sum of all the even numbers in the above number series.

A. 54

B. 44

C. 32



D. 24

General Science

25 Questions • Answer Key

Q56 General Science

Which of the following statements is correct with regard to the reflection of light by a spherical mirror?

(a) A convex mirror converges the light rays incident parallel to its principal axis.

(b) A concave mirror converges the light rays incident parallel to its principal axis.

(c) Convex mirror can form both, real and virtual images.

(d) Concave mirror can form both, real and virtual images.

A. Only (a) and (c)

B. Only (b) and (d)



C. Only (a) and (d)

D. Only (b) and (c)

Q57 General Science

The Forest Department changed its strategy, making a beginning in the Arabari forest range of Midnapore district, at the insistence of a far-seeing forest officer named:

A. KA Midhun

B. AK Banerjee



C. ED Arun Ghosh

D. TA Chatterjee



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Q58 General Science

Which of the following groups represents metals?

A. Group 2



B. Group 18

C. Group 17

D. Group 16

Q59 General Science

Copper is used in _____ due to its low resistivity.

A. electric bulbs

B. heaters

C. transmission lines



D. toasters

Q60 General Science

Refractive index of flint glass is 1.56. Then the critical angle(I_c) for glass air interface can also be expressed as $\sin I_c$ equals :

A. 0.64

B. 0.74

C. 0.84

D. 0.94

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q61 General Science

The general formula C_nH_{2n-2} represents:

A. alkane

B. alkene

C. alkyne



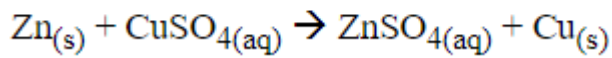
D. acyclic compound



कृत्रिम किडनी के उपयोग से नाइट्रोजनयुक्त अपशिष्ट को हटाने की प्रक्रिया _____ कहलाती है।

- A. एंजियोग्राम (angiogram)
- B. हीमोडायलिसिस (haemodialysis) ✓
- C. राइनोप्लास्टी (rhinoplasty)
- D. ट्रांसप्लांटेशन (transplantation)

The given reaction is an example of a _____.



- A. combination reaction
- B. double displacement reaction
- C. decomposition reaction
- D. displacement reaction ✓

When light passes from water to air then _____ changes.

- A. its frequency
- B. Wave length
- C. its speed
- D. its colour

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

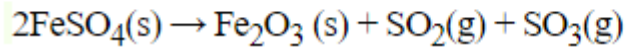
The gaseous waste product generated during photosynthesis is:

- A. carbon monoxide
- B. carbon dioxide
- C. nitrogen
- D. oxygen ✓



Q66 General Science

What is the colour of ferrous sulphate in the given chemical reaction?



A. Blue

B. Green



C. Yellow

D. Red

Q67 General Science

Arrange the following elements in the order of increasing atomic number.

B, Ne, K, O

A. B, K, O, Ne

B. B, O, Ne, K



C. K, B, O, Ne

D. Ne, K, B, O

Q68 General Science

One of the natural sources of lactic acid is:

A. Curd



B. Orange

C. Tomato

D. Vinegar

Q69 General Science

The direction of a magnetic field can be obtained from the _____ drawn at any point of the magnetic lines of force.

A. slope

B. tangent



C. secant

D. subtangent



Q70 General Science

Which of the following statements regarding HIV transmission is FALSE?

- A. HIV can be transmitted from an infected mother to her new born child.
- B. Transfusion of HIV infected blood transmits HIV.
- C. HIV can be transmitted through a mosquito bite after it has bitten an HIV infected person. ✓
- D. HIV can be transmitted through unsafe sexual contact with an infected person.

Q71 General Science

Carbon compounds DO NOT conduct electricity in the molten state because _____.

- A. they are non-covalent in nature
- B. they are ionic in nature
- C. bonding in carbon compounds involve formation of ions
- D. bonding in carbon compounds does not involve formation of any ions ✓

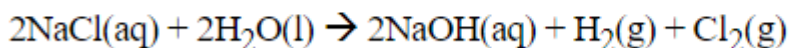
Q72 General Science

An ice-ball of 6 cm diameter is placed 30 cm in front of a concave mirror and its principal focus is double the distance of the object. Following the new Cartesian sign convention, the diameter of the image is:

- A. 10 cm
- B. 12 cm ✓
- C. 14 cm
- D. 16 cm

Q73 General Science

Which product is formed near the cathode in the given chemical reaction?



- A. H_2 , Cl_2
- B. NaOH ✓
- C. NaOH, H_2
- D. NaOH, Cl_2



Q74 General Science

Energy flow through the various trophic levels in the ecosystem is _____.

- A. random
- B. bidirectional
- C. reduced with each higher trophic level ✓
- D. increased with each higher trophic level

Q75 General Science

The current in a short circuit _____.

- A. does not change
- B. reduces enormously
- C. increases enormously ✓
- D. varies continuously

Q76 General Science

Which cell organelle is known as the 'suicide bags of a cell'?

- A. Centrosome
- B. Mitochondria
- C. Nucleus
- D. Lysosome ✓

Q77 General Science

Resistance is represented by _____.

- A. $\text{work done} / (\text{charge} \times \text{current})$ ✓
- B. $\text{work done} / \text{charge}$
- C. $\text{work done} / \text{current} \times \text{time}$
- D. $\text{work done} \times \text{time}$



Q78 General Science

The full form of ATP is _____.

- A. Adenosine Triphosphate ✓
- B. Adenosine Tetraphosphate
- C. Adenine Triphosphate
- D. Adenine Tetraphosphate

Q79 General Science

Which of the following is an example of the barrier method of contraception?

- A. Loops
- B. Oral pills
- C. Condoms ✓
- D. Vasectomy

Q80 General Science

The resistance of a wire of length l , radius r , and resistivity ρ is _____.

- A. $R = \frac{\rho l}{\pi r^2}$ ✓
- B. $R = \frac{\rho l}{4\pi r^2}$
- C. $R = \frac{\rho l}{4\pi r}$
- D. $R = \frac{\rho l}{2\pi r}$

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which language is a descendant of Sanskrit and is influenced by the languages of Dravidian, Arabic, Portuguese, English, Persian and Turkey?

- A. Tamil
- B. Hindi ✓
- C. Bengali
- D. Urdu



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Q82 General Awareness and Current Affairs

The Cardamom hills are located in which state of India?

- A. Maharashtra
- B. Goa
- C. Karnataka
- D. Kerala



Q83 General Awareness and Current Affairs

Who among the following was the Prime Minister of India during the Eighth Five-Year Plan?

- A. Manmohan Singh
- B. Chandra Shekhar
- C. Rajiv Gandhi
- D. PV Narasimha Rao



Q84 General Awareness and Current Affairs

Who is the ex-officio Chairman of the Rajya Sabha?

- A. Prime Minister of India
- B. Vice-President of India
- C. President of India
- D. Home Minister of India



Q85 General Awareness and Current Affairs

If $C = 400$ and $Y = 1000$, then what is the average propensity to consume?

- A. 0.4
- B. 2.5
- C. 40
- D. 250



Q86 General Awareness and Current Affairs

Which of the following is a result of the federal form of Government in India?

- A. Council of Ministers headed by Prime Minister
- B. Multi-tiered government – Union, State and Local ☒
- C. Three organs of government – the Legislature, the Executive and the Judiciary
- D. Rights of individuals against the State as well as against other individuals

Q87 General Awareness and Current Affairs

The Home Rule League was established in India by Indian nationalist Bal Gangadhar Tilak and Indian independence leader _____ in September 1916 in Madras, with the objective of achieving self-government in India.

- A. Annie Besant ☒
- B. Bipin Chandra Pal
- C. Lala Lajpat Rai
- D. Swami Vivekananda

Q88 General Awareness and Current Affairs

In March 2022, a captive floating solar power plant which is claimed to be the country's first and largest floating power plant, set up by the agri-nutrient and fertilisers company Southern Petrochemicals Industries Corporation Limited, popularly known as SPIC Limited, formally went on stream at which place?

- A. Thoothukudi ☒
- B. Udaipur
- C. Bhopal
- D. Kodaikanal

Q89 General Awareness and Current Affairs

What is the term used for interest rates that change during the tenure of the loan?

- A. Floating rate ☒
- B. Prime rate
- C. Drifting rate
- D. Buoyant rate



Q90 General Awareness and Current Affairs

Who became the first Indian to bag a medal at the IBSA Judo Grand Prix, in 2022?

- A. Navjot Chana
- B. Kapil Parmar
- C. Akram Shah
- D. Avtar Singh



Q91 General Awareness and Current Affairs

On 1 March 2022, the National Commission for Protection of Child Rights (NCPCR) marked its _____ Foundation Day.

- A. 11th
- B. 13th
- C. 15th
- D. 17th



Q92 General Awareness and Current Affairs

What is the name of the cell created in 2016 by the Government of India in which a dedicated team has been established to promote Korean investment in India?

- A. Korea Sigma
- B. Korea Multiply
- C. Korea Combined
- D. Korea Plus



Q93 General Awareness and Current Affairs

In which season do the dry and hot winds known as 'Loo' blow in the afternoon?

- A. The Cold Weather Season
- B. The Hot Weather Season
- C. The Southwest Monsoon Season
- D. The Retreating Monsoon Season



Q94 General Awareness and Current Affairs

Panchayats have been defined in which Article of the Indian Constitution?

A. Article 242

B. Article 243



C. Article 244

D. Article 245

Q95 General Awareness and Current Affairs

Which Indian state is the host of the FIH Hockey Men's World Cup 2023?

A. Tamil Nadu

B. New Delhi

C. Odisha



D. Haryana

Q96 General Awareness and Current Affairs

The Sunni and Shia are the two major sects in which religion or belief?

A. Parsi

B. Sikhism

C. Islam



D. Judaism

Q97 General Awareness and Current Affairs

National Unity Day in India is observed on 31 October, coinciding with the birthday of _____.

A. Sardar Vallabhbhai Patel



B. Jawaharlal Nehru

C. Indira Gandhi

D. Dr. BR Ambedkar



Q98 General Awareness and Current Affairs

On the occasion of 'World Day against Human Trafficking' (30 July, 2022), National Commission for Protection of Child Rights (NCPCR) launched a _____ campaign called 'Combating Child Trafficking' in 75 bordering districts of India in August 2022.

A. 25 day



B. 15 day

C. 10 day

D. 7 day

Q99 General Awareness and Current Affairs HINDI - no English version saved

जब मुख्य नदियां एक-दूसरे के समांतर बहती हों और सहायक नदियां उनसे समकोण पर मिलती हों, तो ऐसे प्रतिरूप को _____ अपवाह प्रतिरूप कहते हैं।

A. वृक्षाकार (dendritic)

B. अरीय (radial)

C. जालीनुमा (trellis)



D. अभिकेंद्री (centripetal)

Q100 General Awareness and Current Affairs

India's first indigenous COVID-19 vaccine 'COVAXIN' is developed by BBIL in collaboration with the Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV). The 'BBIL' is stand for -

A. Bharat Biological International Limited

B. Bharat Biotech International Limited



C. Bharat Biotechnology International Limited

D. Bharat Biochemistry and International Limited



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

By selling an article for ₹940 a man incurs a loss of 6%. What is its cost price?

A. ₹1,250

B. ₹480

C. ₹960

D. ₹1,000



Q2 Mathematics

Find the arithmetic mean of the following data.

x	5	10	15	20	25	30
f	3	5	6	2	1	3

A. 12.5

B. 13.5

C. 14.5

D. 15.5



Q3 Mathematics

If $\tan q + \cot q = 14$, then find the value of $7\tan^2 q + 7\cot^2 q$.

A. 194

B. 1386

C. 1358

D. 198



Q4 Mathematics

A shopkeeper bought articles A and B for a total of ₹2,540. He sold A at a gain of 15% and sold B at a loss of 25%. The selling price of A was ₹109 more than that of B. His profit or loss percentage in the entire transaction is (correct to one decimal place):

- A. profit, 8.3%
- B. loss, 8.3%
- C. loss, 8.5%
- D. profit, 8.5%

**Q5 Mathematics**

Simplify the given expression.

$$(y - z)^3 + (z - x)^3 + (x - y)^3$$

- A. $(x - y)(y - z)(z - x)$
- B. $3(x - y)(y - z)(z + x)$
- C. $3(x - y)(y - z)(z - x)$
- D. $3(x - y)(y - z)(x - z)$

**Q6 Mathematics**

Ramu works in shop for ₹125 per hour. If his pay is increased to ₹145 per hour, find his percentage increase in pay.

- A. 12%
- B. 14%
- C. 16%
- D. 18%

**Q7 Mathematics**

Which of the following statements is NOT necessarily true?

- A. The diagonals of a rectangle bisect each other.
- B. The diagonals of a parallelogram bisect each other.
- C. The diagonals of a rhombus bisect each other.
- D. The diagonals of a kite bisect each other.



Q8 Mathematics

If $0.045 + 0.154 - 0.09 + 1.5 - (0.3 \times 0.8) = x - 0.231$, then the value of x lies between:

- A. 1.1 and 1.3
- B. 1.3 and 1.5
- C. 1.5 and 1.8
- D. 1.8 and 2.0

**Q9** Mathematics

If an investment earns a simple interest rate of 4% per annum, then how many years will it take for the investment to double itself?

- A. 10
- B. 20
- C. 25
- D. 15

**Q10** Mathematics

Express $3.\overline{31}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

- A. $\frac{109}{33}$
- B. $\frac{328}{99}$
- C. $\frac{329}{99}$
- D. $\frac{10}{3}$

**Q11** Mathematics

If the sum of two numbers is 48, while the HCF of these two numbers is 6, then the total number of such pairs of numbers (x, y) , where $x > y$, is:

- A. 4
- B. 3
- C. 2
- D. 1



Q12 Mathematics

The average score of a cricketer in his first 7 innings is 28 runs. His average score in the next 3 innings is 32 runs. Determine the score he should get in his 11th inning so that his overall average score becomes 33 runs.

A. 49

B. 50

C. 55

D. 71

**Q13** Mathematics

If $x = b + c$, $y = c - a$, $z = a - b$, then find the value of $x^2 + y^2 + z^2 - 2xy - 2xz + 2yz$.

A. $4c^2$ B. $4a^2$ C. $4b^2$ D. $2b$ **Q14** Mathematics

Find the area of a rhombus whose diagonals measure 24.6 cm and 28.6 cm, respectively.

A. 657.46 cm^2 B. 251.78 cm^2 C. 703.56 cm^2 D. 351.78 cm^2 **Q15** Mathematics

Which of the following represents a quadratic equation?

A. $5x^2 + 4x - 2 = 7x$ B. $(x + 7)4 = 14$ C. $3x + 7 = 7x^3$ D. $4x^2 + 6x + 5 = 4x(x + 1)$ 

Q16 Mathematics

Two pipes can fill a cistern, individually, in 60 min and 75 min, respectively. There is a pipe located at the bottom of the cistern to empty it. If all the three pipes are opened simultaneously, then the empty cistern gets filled in 50 min. How long will the pipe at the bottom of the tank take to empty the completely filled cistern if no other pipe is then open?

- A. 75 min
- B. 100 min
- C. 150 min
- D. 200 min

**Q17** Mathematics

The difference between the total surface area and the lateral surface area of a cube is 4050 units². Find the length of each side of the cube.

- A. 40 units
- B. 54 units
- C. 45 units
- D. 35 units

**Q18** Mathematics

Simplify the given expression.

$$[(x - y) + \frac{y^2}{x + y}] \div [x^2 + y^2 + \frac{y^4}{x^2 - y^2}] \times \frac{y^2}{x - y}$$

A. $\frac{x^2}{y^2}$

B. $\frac{y^2}{x^2}$

C. $\frac{x^2 - y^2}{x^2 y^2}$

D. $x^2 y^2$



Q19 Mathematics

The units digit of a 2-digit number is three times its tens digit. If the units digit is 6, what is the value of twice the number?

A. 26

B. 52

C. 24

D. 48

**Q20** Mathematics

Let $x = 55^{100} + 55^{101} + 55^{102}$. Which of the following prime number is NOT a factor of x ?

A. 3

B. 11

C. 71

D. 79

**Q21** Mathematics

Navya and Bhavya can paint a house in 20 days and 30 days, respectively. If they work on alternate days, starting with Bhavya, in how many days can the duo complete painting that house?

A. 40 days

B. 48 days

C. 24 days

D. 12 days

**Q22** Mathematics

145 is divided into two parts, a and b , such that $a : b :: 2 : 3$. Also, $a : c :: c : b$ and $c > 0$. Find the value of c , correct to the nearest integer.

A. 61

B. 65

C. 71

D. 75



Q23 Mathematics

$[(324 \div 9) \div 4] \times 25 + 186$ equals:

A. 411



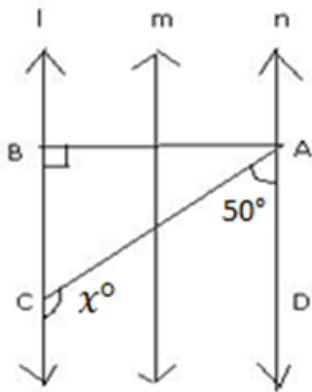
B. 114

C. 386

D. 141

Q24 Mathematics

In the given figure, l is parallel to m and m is parallel to n . Find the value of x° .



A. 30°

B. 50°

C. 100°

D. 130°



Q25 Mathematics

If $x = \frac{2}{3}$ is one of the solutions of the quadratic equation $7x^2 + kx - 3 = 0$, then the value of k satisfies the equation:

A. $6k^2 - 5k + 1 = 0$

B. $6k^2 - 3k - 1 = 0$

C. $12k^2 + 4k - 1 = 0$

D. $12k^2 - 4k - 1 = 0$



Q26 General Intelligence and Reasoning

Refer to the given number, symbol series and answer the question that follows.

(Left) $9 + \$ 5 @ \$ 2 6 3 \% 2 \& 8 \# * 2 9 ! 4 3$ (Right)

How many such symbols are there (from left to right) which are immediately preceded by a symbol and also immediately followed by an even number?

A. 1

B. 2



C. 3

D. 4

Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

2.9, 4.4, 5.9, 7.4, 8.9, ?

A. 9.4

B. 10.4



C. 9.9

D. 10.9

Q28 General Intelligence and Reasoning

If 1 is added to each even digit and 2 is subtracted from each odd digit in the number 38572352, what will be the sum of the digits which are second from the left and fourth from the right in the number thus formed?

A. 4

B. 10

C. 11

D. 12



Q29 General Intelligence and Reasoning

If '−' means '+', '+' means '×', '×' means '÷', '÷' means '−', what will come in place of the question mark (?) in the following equation?

$$3 \div 8 \times 2 + 1 - 5 = ?$$

A. 6

B. 7

C. 5

D. 4



Q30 General Intelligence and Reasoning

OT 05 is related to SX 07 in a certain way. In the same way, GK 09 is related to KO 11. To which of the following is BG 13 related following the same logic?

A. FK 15



B. KF 51

C. FK 20

D. KF 15

Q31 General Intelligence and Reasoning

A, B, C, D, E and F are sitting around a circular table facing the centre. B is sitting second to the right of D. C is sitting third to the right of A. A is an immediate neighbour of both E and F. D sits to the immediate right of E. Who is sitting to the immediate left of B?

A. C



B. D

C. A

D. F

Q32 General Intelligence and Reasoning

M, N, O, P, Q and R live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6.

Q lives on an odd-numbered floor but not on the lowermost floor. Only one person lives between Q and N. R lives immediately above Q. Only two people live between O and Q. If P lives immediately above R, where does M live?

A. 4th floor

B. 6th floor

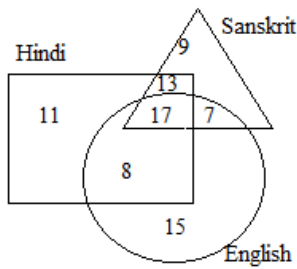
C. 1st floor

D. 2nd floor



Q33 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of students speaking various languages.



How many students can speak all three languages i.e. Sanskrit, Hindi and English?

A. 17



B. 25

C. 24

D. 30

Q34 General Intelligence and Reasoning

Study the given table and answer the following question.

	Number of cushions sold in	
	February	March
Store X	196	114
Store Y	72	98
Store Z	84	155

The total number of cushions sold by store X in February and March is what percentage more than the number of cushions sold by store Z in March?

A. 100%



B. 50%

C. 200%

D. 155%



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Q35 General Intelligence and Reasoning

Which two numbers, from among the given options, should be interchanged to make the given equation correct?

$$21 \div 9 + 99 - 81 \times 5 = 3$$

A. 21 and 5

B. 9 and 81

C. 9 and 5

D. 21 and 81



Q36 General Intelligence and Reasoning

This question consists of a statement followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Waking up early in the morning has many benefits.

Arguments:

I. Waking up early gives you ample amount of time to exercise.

II. Waking up early keeps you stress free.

A. I weakens while II strengthens the statement.

B. II weakens while I strengthens the statement.

C. Both I and II weaken the statement.

D. Both I and II strengthen the statement.



Q37 General Intelligence and Reasoning

Which of the following letter-clusters will replace the question mark (?) in the given series to make it logically complete?

FAN 15, KFS 20, PKX 25, UPC 30, ?

A. ZVI 35

B. YSL 40

C. ZUH 35



D. YLS 45



Q38 General Intelligence and Reasoning

A statement is given followed by four conclusions. Find out which conclusion is **INCORRECT** based on the given statement.

Statement: $G \geq B > D > P < H = C$

Conclusions:

- 1) $P < C$
- 2) $G > P$
- 3) $D < C$
- 4) $B > P$

A. 1

B. 2

C. 3



D. 4

Q39 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

19, 19, 21, 63, 67, ?

A. 72

B. 335



C. 196

D. 330

Q40 General Intelligence and Reasoning

Bharti starts from point T and drives 7 km towards north. Then she turns right, drives 4 km, turns right and drives 10 km. She then turns right and walks 6 km. She takes a final right turn, drives 3 km and stops at point E. How far and in which direction should she drive to reach point T from point E?

(All turns are 90° turns only)

A. 2 km towards north

B. 2 km towards south

C. 2 km towards east



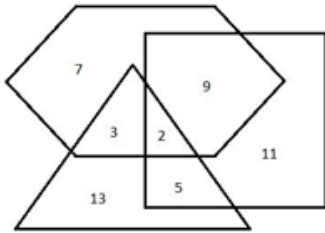
D. 2 km towards west



Q41 General Intelligence and Reasoning

In the following Venn diagram, the square represents 'creative people', the hexagon represents 'painters', and the triangle represents 'people who live in rural areas'.

Select the option which represents the number of creative painters who live in rural areas.



A. 3

B. 9

C. 5

D. 2



Q42 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(17, 238, 7)

(23, 414, 9)

A. (15, 225, 15)

B. (19, 360, 9)

C. (27, 270, 5)

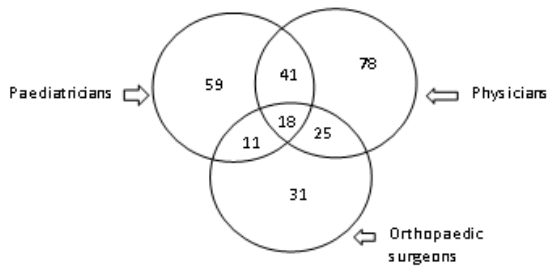


D. (13, 273, 7)



Q43 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such persons are there who are paediatricians and also orthopaedic surgeons but NOT physicians?

A. 36

B. 19

C. 11



D. 40

Q44 General Intelligence and Reasoning

Five friends live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 5. Only Meera lives on the floor between Shrishti and Richa. Anshul lives on the floor immediately below Richa. Chandan lives on the first floor. No one lives above Shrishti. Who lives on the second floor?

A. Meera

B. Richa

C. Anshul



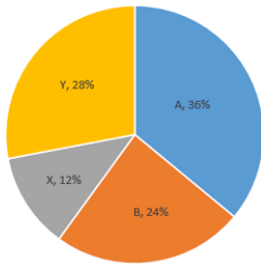
D. Shrishti



Q45 General Intelligence and Reasoning

Study the given pie-chart and answer the following question.

The given pie chart depicts the number of chairs manufactured of four brands (A, B, X and Y). The total number of chairs manufactured of the four brands together is 200.



The total manufacturing cost of chairs of Brand A was ₹14,400. What was the manufacturing cost of one chair of Brand A?

A. ₹150

B. ₹220

C. ₹240

D. ₹200

**Q46 General Intelligence and Reasoning**

How many such pairs of letters are there in the word INTERNATIONAL (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. 7

B. 6

C. 5

D. 4

**Q47 General Intelligence and Reasoning**

A group of friends are playing a game sitting together facing north. Rehana is to the left of Arjun, who is seated exactly in front of Somil. If Arjun exchanges his position with Somil, to which direction of Arjun is Rehana seated now?

A. North

B. North-East

C. North-West

D. South-West



Q48 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(11, 117, 2)

(9, 56, 5)

A. (7, 46, 1)

B. (10, 98, 2)

C. (13, 169, 2)

D. (12, 108, 6)



Q49 General Intelligence and Reasoning

In a certain code language, 'BFKMT' is written as 'CHNQY' and 'XUAFL' is written as 'YWDJQ'. How will 'GESIO' be written in that language?

A. HFUJQ

B. HGVOT

C. HGUMT

D. HGVMT



Q50 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) B & Z \$ 6 N M @ 4 X & 7 L # 3 T Z * 5 (Right)

How many such symbols are there which are immediately preceded by a letter and also immediately followed by a number?

A. Two

B. Three

C. Four

D. Five



Q51 General Intelligence and Reasoning

In a certain code language, 5, 8, 2, 3, 4, 1, 7 and 6 are coded as P, W, D, L, X, T, A and G, respectively.

If the last two digits of the number-cluster are odd, then the first and last digits are to be coded as Q.

If the last two digits of the number-cluster are even, then the first and last digits are to be coded as L.

How will '231578' be coded in that language?

A. LLTPAL

B. DLTPAL

C. LLTPAW

D. DLTPAW



Q52 General Intelligence and Reasoning

This question is based on the five, five-digit numbers given below.

(Left) 72238 83745 52227 72253 63776 (Right)

(Example: 697 – first digit = 6, second digit = 9, third digit = 7)

(NOTE: All operations to be done from left to right)

If 1 is subtracted from the first digit of every number, in how many numbers will the first digit be exactly divisible by 3?

A. Two



B. Three

C. Four

D. Five

Q53 General Intelligence and Reasoning

In a group of six friends, Teena, Monu, Lalit, Rekha, Garima and Suman, each has a different height. Lalit is shorter than Garima and Rekha but taller than Monu. Suman is shorter than only Teena. Who is the shortest among all the six friends?

A. Garima

B. Suman

C. Monu



D. Lalit



Q54 General Intelligence and Reasoning

Five friends live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 5. Namita lives on the floor which is second from the top. Sanjana lives on one of the floor between Anand and Ritu. Avdhesh lives on the floor immediately above Namita. Ritu lives on the lowermost floor. Who lives on the fourth floor from the top?

A. Sanjana



B. Namita

C. Anand

D. Avdhesh

Q55 General Intelligence and Reasoning

Five friends, Hiba, Suhani, Pritam, Ahmed, and Rosy are sitting around a circular table facing the centre. Rosy is second to the right of Pritam, and is an immediate neighbour to both Suhani and Ahmed. If Ahmed is second to the left of Pritam, where is Hiba seated?

A. Third to the left of Suhani

B. To the immediate left of Suhani

C. Second to the left of Suhani



D. Second to the right of Suhani

General Science

25 Questions • Answer Key

Q56 General Science

In an electrical circuit, five identical bulbs are connected in parallel to each other to a battery of 20 V (negligible internal resistance). When all the five bulbs glow, a current of 5 A is recorded. Then the power dissipated in the circuit and the resistance of each bulb are ____ and ____, respectively.

A. 31.25 W, 1.25 Ω



B. 56.25 W, 2.25 Ω

C. 38.75 W, 1.55 Ω

D. 46.25 W, 1.85 Ω



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Q57 General Science

Select the correct balanced chemical equation for the given reaction.

Zinc + Silver nitrate $\rightarrow$ Zinc nitrate + Silver

- A. $\text{Zn(s)} + \text{AgNO}_3 \text{ (aq)} \rightarrow \text{ZnNO}_3 \text{ (aq)} + \text{Ag(s)}$
- B. $2\text{Zn (s)} + \text{AgNO}_3 \text{ (aq)} \rightarrow 2\text{ZnNO}_3 \text{ (aq)} + \text{Ag(s)}$
- C. $\text{Zn (s)} + 2\text{AgNO}_3 \text{ (aq)} \rightarrow \text{Zn (NO}_3)_2 \text{ (aq)} + 2\text{Ag(s)}$ ✓
- D. $2\text{Zn (s)} + \text{AgNO}_3 \text{ (aq)} \rightarrow \text{ZnNO}_3 \text{ (aq)} + \text{Ag(s)}$

Q58 General Science

What is the most effective solution to reduce the production of waste?

- A. Reuse
- B. Composting
- C. Refuse
- D. Combustion

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q59 General Science

In Mendel's experiments, crossing a pea plant bearing yellow-coloured peas with a plant bearing green-coloured peas gave plants that all had yellow-coloured peas. If these plants were allowed to self-pollinate and 500 peas were collected from them, how many would be green-coloured?

- A. Around 110 ✓
- B. Around 220
- C. Around 330
- D. Around 440



Q60 General Science

Which of the following chemical reactions are examples of combination reactions?

- i) $3\text{Fe(s)} + 4\text{H}_2\text{O(g)} \rightarrow \text{Fe}_3\text{O}_4\text{(s)} + 4\text{H}_2\text{(g)}$
- ii) $\text{CO(g)} + 2\text{H}_2\text{(g)} \rightarrow \text{CH}_3\text{OH(l)}$
- iii) $2\text{Mg(s)} + \text{O}_2\text{(g)} \rightarrow 2\text{MgO(s)}$
- iv) $\text{Zn(s)} + 2\text{AgNO}_3\text{(aq)} \rightarrow \text{Zn(NO}_3)_2\text{(aq)} + 2\text{Ag(s)}$

A. i and ii

B. ii and iii



C. i and iv

D. iii and iv

Q61 General Science

The potential difference across a resistor of 2 ohm when 200 joule of heat is produced each second is given by _____.

A. 10 volt

B. 20 volt



C. 40 volt

D. 80 volt

Q62 General Science

Stars twinkle at night due to:

A. atmospheric dispersion

B. atmospheric scattering of starlight

C. atmospheric refraction of starlight



D. atmospheric reflection of starlight



Q63 General Science

Name the tiny pores present on leaves of plants.

- A. Guard cells
- B. Stomata
- C. Chloroplasts
- D. Lenticels



Q64 General Science

Suppose Ram has placed a ball in front of a concave mirror of focal length (f) at various distances (u) and he has measured the corresponding image distances (v). From the values of u and v , Ram is able to plot a graph of $1/v$ against $1/u$. From the graph, Ram has observed that x intercept and y intercept are 0.1 cm and 0.11 cm, respectively. Then the focal length of the mirror is:

- A. 9.55 cm
- B. 11.25 cm
- C. 8.5 cm
- D. 12.65 cm



Q65 General Science

Direction of the magnetic field produced by the straight conductor carrying current in the east direction is along the _____ direction

- A. north
- B. west
- C. south
- D. east



Q66 General Science

A man with blood group A, married to a woman blood group B, had a child with group AB. What does this mean in terms of genetics?

- A. Gene for blood group A is dominant and gene for blood group B is recessive.
- B. Gene for blood group B is dominant and gene for blood group A is recessive.
- C. Gene for blood group A and gene for blood group B are both dominant.
- D. Gene for blood group A and gene for blood group B are both recessive.



Q67 General Science

Plants release excess water through a process called:

- A. evaporation
- B. transportation
- C. translocation
- D. transpiration



Q68 General Science

Bleaching powder is produced by the action of chlorine on?

- A. Caustic soda
- B. Slaked lime
- C. Quick lime
- D. Sodium chloride



Q69 General Science

A square-shaped coil of copper wires is rotating in a magnetic field. Then direction of the induced current in the coil changes once in each:

- A. one-fourth of the revolution of the coil
- B. one-eighth of the revolution of the coil
- C. one-half of the revolution of the coil
- D. one-sixth of the revolution of the coil



Q70 General Science

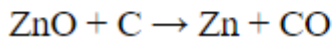
In the Modern Periodic Table, phosphorous is placed in the _____.

- A. 15th group and 2nd period
- B. 15th group and 3rd period
- C. 14th group and 2nd period
- D. 14th group and 3rd period



Q71 General Science

Identify the substance that is reduced in the following reaction.



A. C

B. ZnO



C. Zn

D. O

Q72 General Science

_____ helps to maintain potential difference across a conductor.

A. Plug key

B. Battery



C. Resistance

D. Voltmeter

Q73 General Science

Which of the following is produced when magnesium ribbon burns in the presence of air?

A. White powder of magnesium oxide



B. Blue powder of magnesium oxide

C. White powder of magnesium dioxide

D. White powder of magnesium carbonate

Q74 General Science

An object of height 3 cm is placed at a distance 30 cm in front of a convex lens of focal length 20 cm. The height of the image will be:

A. 4 cm

B. 6 cm



C. 8 cm

D. 10 cm



Q75 General Science

Which of the following changes in our eating habits will have the biggest impact on our environment?

- A. Growing our own food
- B. Giving up meat and animal products
- C. Stopping wastage of food
- D. Avoiding processed food



Q76 General Science

When copper oxide is added to dilute hydrochloric acid, the colour of the acid changes to blue-green, due to the formation of _____.

- A. copper (II) chloride
- B. hydrogen gas
- C. water
- D. copper (I) chloride



Q77 General Science

How many triads were identified by Dobereiner in his system of classification of elements?

- A. Five
- B. Six
- C. Four
- D. Three



Q78 General Science

Which of the following are the three-carbon molecules formed during respiration?

- A. Ethanol and lactic acid
- B. Lactic acid and pyruvate
- C. Pyruvate and ethanol
- D. Ethanol and malic acid



Q79 General Science

What will happen if bubbles of air are sent through lime water taken in a container?

- A. The solution will foam and froth
- B. The solution will turn milky due to insoluble suspension of Calcium carbonate ✓
- C. The temperature will rise due to an exothermic reaction
- D. The solution will instantly red as reacts with lime

Q80 General Science

In the Leviathan telescope in Ireland, a concave mirror of focal length 3.0 m is used. If an image of height 80 cm is formed at a distance of 4.0 m, then the object height, object distance and magnification are (the object is placed in front of the mirror):

- A. 1.2 m, 12 m and $\frac{1}{3}$ respectively
- B. 2.4 m, 12 m and $\frac{1}{3}$ respectively ✓
- C. 2.4 m, 12 m and $\frac{1}{2}$ respectively
- D. 2.4 m, 6 m and $\frac{1}{3}$ respectively

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following days marked the 17th Foundation Day of the National Commission for Protection of Child Rights?

- A. 1 March 2022 ✓
- B. 2 March 2022
- C. 3 March 2022
- D. 4 March 2022

Q82 General Awareness and Current Affairs

Which of the following types of soils found in India cover about 40 per cent of the total area of the country?

- A. Alluvial soils ✓
- B. Black soils
- C. Red and yellow soils
- D. Laterite soils



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Q83 General Awareness and Current Affairs

Who won the third edition of the BBC Indian Sportswoman of the Year Award in 2021?

A. Mirabai Chanu



B. Radha Yadav

C. PV Sindhu

D. Saina Nehwal

Q84 General Awareness and Current Affairs

What is name of the grant-in-aid scheme of the department under Tribal Sub Plan that aims at improving living conditions and empowerment of scheduled tribes based on sustainable science and technology (S & T) activities/application?

A. Technological Involvements for Tribal Empowerment (TITE)

B. Technical Interventions for Tribal Empowerment (TITE)

C. Technological Interventions for Tribal Enablement (TITE)

D. Technological Interventions for Tribal Empowerment (TITE)



Q85 General Awareness and Current Affairs

In which of the following years, was the Article 21-A inserted in the Constitution of India, which deals with the Fundamental Right of getting compulsory education for all children in the age group of six to fourteen years?

A. 2001

B. 2002



C. 2003

D. 2004



Q86 General Awareness and Current Affairs

Select the correct group of statements that support the criteria of being a classical language in India according to the Government of India.

The language in its property should have:

- A) high antiquity of its early texts/recorded history over a period of 1500-2000 years.
- B) a body of ancient literature/texts, which is considered a valuable heritage by a generations of speakers
- C) original literary tradition that is not borrowed from another speech community
- D) been spoken by at least two million active speakers

A. B, C and D

B. A, B and C



C. A, C and D

D. A, B and D

Q87 General Awareness and Current Affairs

An integrated scheme for school education, 'Samagra Shiksha Scheme' of the Government of India has been continued for which of the following periods?

A. 2019-20 to 2024-25

B. 2020-21 to 2025-26

C. 2021-22 to 2025-26



D. 2022-23 to 2026-27

Q88 General Awareness and Current Affairs

With reference to cost, what is the full form of SMC from the following?

A. Short run Marginal Cost



B. Special Marginal Cost

C. Silent Marginal Cost

D. Subjective Marginal Cost



Q89 General Awareness and Current Affairs

Which of the following is the largest fair of West Bengal?

- A. Rass Mela
- B. Joydeb Kenduli Mela
- C. Ramkeli Mela, Malda
- D. Gangasagar Mela



Q90 General Awareness and Current Affairs

The 73rd and 74th Amendments to the Indian Constitution provide for elections to local bodies _____.

- A. every year
- B. after every five years
- C. after every three years
- D. after every two years



Q91 General Awareness and Current Affairs

In which year was the AU Small Finance Bank founded?

- A. 2005
- B. 1996
- C. 2012
- D. 2000

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q92 General Awareness and Current Affairs

During the revolt of 1857, which of the following Jat leaders mobilised the headmen and cultivators in and around pargana Barut in Uttar Pradesh to rebel against the British?

- A. Maulvi Ahmadullah Shah
- B. Maulvi Liyakat Ali
- C. Gajadhar Singh
- D. Shah Mal



Q93 General Awareness and Current Affairs

The _____ is a macroeconomic term that refers to the proportion of income that is saved rather than spent on current goods and services.

- A. Marginal propensity to save
- B. Average propensity to consume
- C. Average propensity to save
- D. Marginal propensity to consume



Q94 General Awareness and Current Affairs

In March 2022, Narasingapettai Nagaswaram of which state has received the Geographical Indication Tag?

- A. Haryana
- B. Kerala
- C. Punjab
- D. Tamil Nadu



Q95 General Awareness and Current Affairs

Which Gana did Gautam Buddha belong to?

- A. Malla
- B. Lichchavi
- C. Moriya
- D. Sakya



Q96 General Awareness and Current Affairs

Which of the following national sports events is NOT associated with cricket?

- A. Ranji Trophy
- B. Vijay Hazare Trophy
- C. Deodhar Trophy
- D. Durand Cup



Q97 General Awareness and Current Affairs

The Constitution of India does NOT consider _____ as a part of the Union Executive.

- A. President of India
- B. Prime Minister of India and her/his Council of Ministers
- C. Advocate-General of State
- D. Vice President



Q98 General Awareness and Current Affairs

In which of the following years did the Twelfth Five Year Plan end?

- A. 2016
- B. 2017
- C. 2018
- D. 2019



Q99 General Awareness and Current Affairs

Integrated approach in S&T for Sustainable Future' is the theme for which one of the following?

- A. National Engineers Day 2022
- B. National Science Day 2022
- C. National Teachers Day 2022
- D. National Doctors' Day 2022



The most widespread forests in India are of what type?

- A. Montane Forests
- B. Tropical Evergreen Forests
- c. Mangrove Forests
- D. Tropical Deciduous Forests



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The sum of two consecutive even numbers is 842. What is the smaller number?

A. 421

B. 422

C. 420



D. 423

Q2 Mathematics

A cistern has a hole in the bottom through which the water is leaking. A tap can fill the cistern in 3 hours and the hole in the bottom can empty the fully filled cistern in 5 hours. If both the tap and the hole are open, then what will be the time taken to completely fill the empty cistern?

A. 7.5 hours



B. 7 hours

C. 8.5 hours

D. 6.5 hours

Q3 Mathematics

The following is a cumulative frequency distribution (less than type) of 900 persons, each of age 30 years and above. What is the modal age (in years) (correct to one decimal place)?

Age below (in years)	40	50	60	70	80
Number of persons	120	250	650	850	900

A. 54.5

B. 54.8

C. 55.2

D. 55.7



Q4 Mathematics

Simplify the given expression.

$$x^2 + 3x + 12 - 2(x^3 - x + 4)$$

A. $4 + 5x - x^2 - 2x^3$

B. $4 + 5x + x^2 + 2x^3$

C. $4 + 5x + x^2 - 2x^3$ ✓

D. $4 - 5x + x^2 - 2x^3$

Q5 Mathematics

Express $1.\bar{2}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{10}{9}$

B. $\frac{11}{9}$ ✓

C. $\frac{4}{3}$

D. $\frac{13}{9}$

Q6 Mathematics

A trader claims to sell rice at a profit of 25%, but also dishonestly uses a weight which is 15% less than what is mentioned on it. Find the total percentage of profit earned by the trader. (Round the answer to the nearest whole number.)

A. 57%

B. 50%

C. 49%

D. 47% ✓

Q7 Mathematics

Raju's sister is 6 years older than Raju. If his sister's age is 38 years, then find Raju's age?

A. 28 years

B. 23 years

C. 32 years ✓

D. 30 years



Q8 Mathematics

If p and q are the roots of $x^2 + 4x - 21 = 0$ and $p < q$, then the quadratic equation in x whose roots are $(p - 1)$ and $(q + 1)$ is:

A. $x^2 + 4x + 32 = 0$

B. $x^2 + 4x - 32 = 0$ ✓

C. $x^2 + 6x + 16 = 0$

D. $x^2 + 6x - 16 = 0$

Q9 Mathematics

The height of a right circular cylinder is 23 cm and circumference of its base is 77 cm. What is its curved surface area?

A. 1771 cm^2 ✓

B. 1823 cm^2

C. 1979 cm^2

D. 2014 cm^2

Q10 Mathematics

On selling an article X at a loss of 10% and an article Y at a gain of 15%, a man gains ₹7. If he had sold article X at a gain of 12% and article Y at a gain of 5%, he would have gained ₹10. What is the total original cost price (in ₹) of X and Y?

A. 120

B. 125

C. 130 ✓

D. 140

Q11 Mathematics

If in a parallelogram ABCD, E and F are points on the diagonal AC such that $\overline{AE} = \overline{FC}$, then quadrilateral BEDF is a:

A. square

B. trapezium, but not a parallelogram

C. parallelogram ✓

D. rectangle



Q12 Mathematics

A person 1.75 m tall casts a 2 m shadow. At the same instance, a lamp-post casts a shadow of 6.4 m. The height of the lamp-post is:

A. 5.6 m



B. 5.7 m

C. 5.8 m

D. 5.9 m

Q13 Mathematics

If three metallic spheres of radii 3 cm, 4 cm and 5 cm respectively are melted to form a single sphere, then what will be the volume of the new sphere? [Use $\pi = \frac{22}{7}$]

A. $905\frac{1}{7} \text{ cm}^3$



B. $825\frac{2}{7} \text{ cm}^3$

C. $675\frac{3}{7} \text{ cm}^3$

D. $345\frac{5}{7} \text{ cm}^3$

Q14 Mathematics

100 eggs were purchased for ₹100. 12 eggs broke in transit. The trader sold the remaining eggs at ₹1.20 per egg. Find his profit.

A. ₹7.60

B. ₹17.60

C. ₹15.60

D. ₹5.60

**Q15 Mathematics**

Find the median of the below data.

2, 6, 5, 2, 4, 9, 6, 2, 6, 4, 10, 12, 6, 3, 4, 9

A. 4.5

B. 6

C. 5

D. 5.5



Q16 Mathematics

Azim borrowed a certain sum which amounted to ₹19,800 in 36 months at 12.5% per annum simple interest. What is the borrowed sum?

A. ₹12,800

B. ₹14,400



C. ₹13,600

D. ₹9,600

Q17 Mathematics

If a and b are the roots of the equation $x^2 - 5x - 6 = 0$, then the value of $(a - b)^2$ is:

A. 25

B. 49



C. 24

D. 18

Q18 Mathematics

Two trains of equal length are running on parallel lines in the same direction at speeds of 36 km/h and 26 km/h. The faster train passes the slower train in 18 seconds. The length of each train is:

A. 75 metres

B. 70 metres

C. 50 metres

D. 25 metres

**Q19** Mathematics

When a number is divided by 15, it leaves a remainder of 3. If the same number is divided by 17, the remainder is 11. Which of the options below gives such a number?

A. 183

B. 185

C. 190

D. 198



Q20 Mathematics

Simplify the following.

$$0.\overline{1} + 0.\overline{5}$$

A. $\frac{1}{90}$

B. $\frac{2}{3}$ ✓

C. $\frac{4}{9}$

D. $\frac{1}{9}$

Q21 Mathematics

Simplify the given expression.

$$\frac{\sqrt{2187} \times \sqrt{432}}{\sqrt{324}}$$

A. 42

B. 48

C. 54 ✓

D. 56

Q22 Mathematics

If α is an acute angle and $\tan^2 \alpha - \sec \alpha = 19$, then the value of $\cos \alpha$ is:

A. $\frac{2}{3}$

B. $\frac{1}{5}$ ✓

C. $\frac{1}{4}$

D. $\frac{1}{2}$



Q23 Mathematics

The simplest form of the ratio 722 : 1083 is:

A. 3 : 2

B. 2 : 3

C. 1 : 3

D. 3 : 5

**Q24** Mathematics

The population of a city increased by 10% in 2020 and then decreased by 8% in 2021. Find the percentage change in the population of the city at the end of 2021 with respect to its population at the beginning of 2020.

A. 0.9% decrease

B. 0.9% increase

C. 1.2% decrease

D. 1.2% increase

**Q25** Mathematics

The product of the LCM and the HCF of two numbers is 270. If one of the numbers is 18, find the other number.

A. 15

B. 30

C. 20

D. 27

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Rahul drives 80 km towards the north, and then he turns towards the west and drives 100 km. After that, he turns south and drives 80 km, and in the end, he turns east and drives 120 km. How far is the end point from the initial point?

A. 80 km

B. 50 km

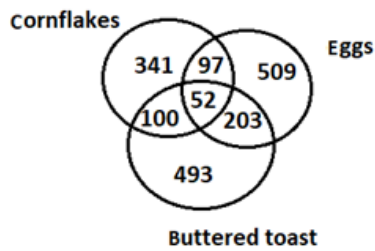
C. 140 km

D. 20 km

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Q27 General Intelligence and Reasoning

Study the given Venn diagram carefully and answer the question that follows. The numbers in different sections indicate the number of persons who consume a certain type of breakfast.



How many such persons are there, who consume both cornflakes and buttered toast?

A. 341

B. 52

C. 100

D. 152



Q28 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

12 : 20 :: 30 : ? :: 56 : 72

A. 44

B. 42

C. 45

D. 41



Q29 General Intelligence and Reasoning

Study the given table and answer the following question.

	Distance travelled (in km) by	
	Train A	Train B
Day 1	362	480
Day 2	282	596
Day 3	421	640

What was the average of the distance travelled (in km) by Train A on the given three days?

A. 336

B. 345

C. 356

D. 355

**Q30** General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6.

Only one person lives below E. A does not live on the topmost floor. Only three people live between A and C. C lives below A. D lives immediately above B. Who lives immediately above A?

A. F



B. D

C. E

D. B



Q31 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(24, 42)

(36, 63)

A. 48, 96

B. 36, 91

C. 40, 82

D. 52, 91



Q32 General Intelligence and Reasoning

Six friends, A, B, C, D, E, and F are sitting around a circular table facing the centre.

C is the immediate neighbour of A and E. F is second to the right of C and third to the left of A. If B is second to the left of C, where is D seated?

A. Second to the left of A



B. Second to the left of B

C. Fourth to the right of C

D. Third to the right of E

Q33 General Intelligence and Reasoning

How many 6s are there in the following sequence each of which is NOT immediately preceded by 3 but immediately followed by 3?

8 6 3 6 4 8 6 8 1 8 6 3 6 5 4 8 6 2 4 3 6 8 6 9 8 8 6 4 6 9

A. Five

B. Four

C. Two



D. Six



Q34 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word 'NOTED' is arranged in alphabetical order?

A. None



B. Three

C. Four

D. Five

Q35 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

8 ? 4 6 12 30

A. 6

B. 2

C. 4



D. 8

Q36 General Intelligence and Reasoning

Select the term from among the given options that can replace the question mark (?) in the following alpha-numeric series to make it logically complete.

O5U, L7S, I10Q, F14O, ?

A. D19N

B. D20N

C. C20N

D. C19M



Q37 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

YVQ : TQL
WKG : RFB

A. QHK : JSP

B. DUR : APM

C. SIY : NDT



D. FHL : CIU



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Q38 General Intelligence and Reasoning

If each of the digits in the number 25731640 is arranged in descending order, the position of how many digits will remain unchanged as compared to that in the original number?

A. One



B. None

C. Three

D. Two

Q39 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some cheese are custards.
2. All milk are cheese.
3. Some curds are cheese.

Conclusions:

I-All cheese are milk.

II-Some custards are cheese.

A. Only conclusion I follows.

B. Only conclusion II follows.



C. Both conclusions I and II follow.

D. Neither conclusion I nor II follows.

Q40 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully and decide which of the conclusions logically follow(s) on basis of the statement(s).

Statements: $B < D$, $C = E$, $F > D$, $E < G$, $K = G$, $C < F$

Conclusions:

1. $G > C$
2. $G < C$

A. Only conclusion 1 follows.



B. Only conclusion 2 follows.

C. Both conclusions 1 and 2 follow.

D. Neither conclusion 1 nor 2 follows.



Q41 General Intelligence and Reasoning

A, B, C, D, E and F are sitting around a circular table facing the centre. B is sitting third to the right of F. F is an immediate neighbour of both C and A. C sits second to the right of B. D is not the immediate neighbour of C. Who is sitting to the immediate left of E?

A. D

B. C

C. A

D. B



Q42 General Intelligence and Reasoning

This question consists of a statement followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement – Prices of tomatoes in Kerala will rise sharply as many trucks carrying them from other states have been stopped at the border

I. Tomatoes are mostly brought to Kerala from outside.

II. The quantity of tomatoes grown in Kerala is not enough to meet the demand in the state.

A. I weakens while II strengthens the statement

B. II weakens while I strengthens the statement

C. Both I and II weaken the statement

D. Both I and II strengthen the statement



Q43 General Intelligence and Reasoning

In a certain code language, 'SMART' is written as 'VKDPW' and 'FRAUD' is written as 'IPDSG'. How will 'PURGE' be written in that language?

A. SSUEH

B. QTSFF

C. RWTIG

D. RSTEG



Q44 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. No one is sitting to the right of E. Only two people are sitting to the left of B. D is sitting third to the right of B. Only four people are seated between B and F. Only eight people are seated between D and C. E is seated second to the right of C. If no other person is sitting in the row, what is the total number of persons seated?

A. 16

B. 22

C. 17



D. 21

Q45 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the condition is your answer.

Number/Symbol	/	#	9	7	@	%	>	2	!	?	6	4	<	=
Code	D	F	T	J	N	G	E	X	V	W	K	U	P	Z

Conditions:

- (i) If the first element is a number and the last a symbol, the codes for these two are to be interchanged.
- (ii) If the first element is an odd number and the last an even number, the first and the last elements are to be coded as O.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

How will '< 9 4 # 2' be coded?

A. PTUFX

B. PUUF X

C. PTTFX



D. PTPFV

Q46 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number, the fourth number is related to the third number.

48 : 5 :: 96 : 7 :: 6 : ?

A. 36

B. 2



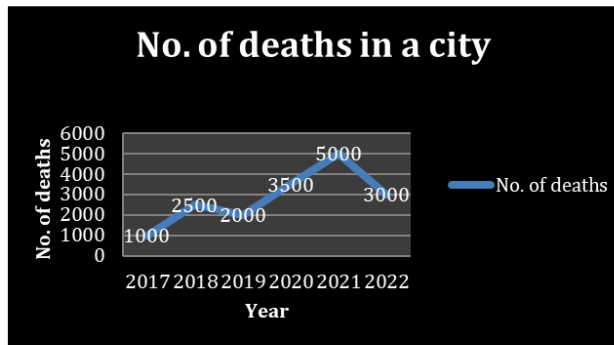
C. 10

D. 4



Q47 General Intelligence and Reasoning

The given line graph shows the number of deaths in a city from the year 2017 to 2022. Study the graph and answer the question that follows.



What is the approximate percentage decrease in deaths from 2021 to 2022 and increase in deaths from 2020 to 2021, respectively?

- A. 30% and 32.93%
- B. 40% and 42.83%
- C. 42.83% and 40%
- D. 32.93% and 30%

Q48 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Some pliers are levers
All levers are ramps
Some cutters are pliers.

Conclusions:

- (I) Some cutters are levers
- (II) Some ramps are cutters
- (III) All pliers are ramps

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Either conclusion I or III follows
- D. None of the conclusions follow



Q49 General Intelligence and Reasoning

In the evening, a person was standing such that his shadow was to his left. In which direction was he facing?

- A. East
- B. West
- C. North
- D. South



Q50 General Intelligence and Reasoning

How many such pairs of letters are there in the word '*ADVERSE*' (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

- A. 4
- B. 3
- C. 2
- D. 1



Q51 General Intelligence and Reasoning

If '+' means '×', '×' means '÷', '÷' means '−', and '−' means '+', then what will be the value of the given expression?

$$93 - 91 \times 7 + 8 \div 3$$

- A. 201
- B. 194
- C. 89
- D. 198



Q52 General Intelligence and Reasoning

Five friends have their interview on different dates in the month February of a leap year. All have their interviews on even dates. There are exactly five days gap between each interview. On which date does the first person will have the interview, if none of them have their interview on 28th February?

- A. 8th
- B. 6th
- C. 2nd
- D. 4th



Q53 General Intelligence and Reasoning

Refer to the following number series and answer the question that follows.

(left) 3 7 9 2 1 5 3 9 2 6 5 8 7 9 1 3 5 9 4 6 (right)

Which is the eighth digit to the left of the twelfth digit from the left end of the series?

A. 2



B. 9

C. 1

D. 5

Q54 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

35, 34, 36, 33, 37, ?

A. 41

B. 32



C. 34

D. 42

Q55 General Intelligence and Reasoning

Each of six sports persons, Falak, Bala, Renu, Rekha, Priya and Pallavi, has a different weight. Rekha is heavier than only Falak and Renu but lighter than Bala and Priya. Pallavi is the heaviest. Priya is heavier than Bala and Falak is heavier than Renu. Who is the lightest among all the sports persons?

A. Bala

B. Falak

C. Renu

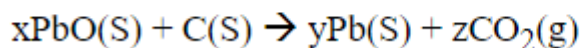


D. Priya



Q56 General Science

What is the value of x, y and z in the following chemical equation?



A. $x = 2, y = 1, z = 1$

B. $x = 2, y = 2, z = 1$

C. $x = 2, y = 1, z = 2$

D. $x = 1, y = 1, z = 2$

Q57 General Science

Respiration reaction in humans is an example of _____.

A. endothermic reaction

B. redox reaction

C. displacement reaction

D. exothermic reaction

Q58 General Science

At what pH level does tooth decay start?

A. pH 7

B. pH below 5.5

C. pH above 7

D. pH 6

Q59 General Science

Which among the following is not a change noticed among children who entered teenage (boys and girls)?

A. Hair growth in some parts of the body

B. Skin in many becomes oily

C. Hair growth is seen in all parts of the body

D. Some develop pimples



Q60 General Science

Three resistors, each of resistance $2\ \Omega$, $3\ \Omega$ and $5\ \Omega$, are connected in series to a battery of voltage V . If the current through the $2\ \Omega$ resistor is 4 A , then V is _____.

A. 20 V

B. 40 V



C. 60 V

D. 80 V

Q61 General Science

Which of the following statements is correct about striated muscles?

A. Cells are long, cylindrical, non-tapering and are unbranched

B. Cells are long with tapering ends and are unbranched

C. Cells are non-tapering and cylindrical in shape and are branched

D. Prominent light and dark bands are present



Q62 General Science

Which of the following is a symptom of Beriberi?

A. Poor vision or partial blindness

B. Weak teeth and bleeding gums

C. Poor skin health and swollen belly

D. Weak muscles and low energy



Q63 General Science

Why is HIV spread through sexual contact?

A. The virus lives inside sperms

B. Viral particles are abundant in seminal fluids



C. The virus is present in the skin of sex organs

D. Blood is mixed during sexual contact



Q64 General Science

If the forefinger indicates the direction of magnetic field and the thumb shows the direction of motion of a conductor, then the middle finger will show the direction of induced current, when the thumb, forefinger and middle finger are stretched perpendicular to each other. This is called _____.

- A. Fleming's left hand rule
- B. Fleming's right hand rule
- c. right hand thumb rule
- D. cork screw rule

Q65 General Science

Which of the following minerals help crops withstand pests?

- A. Potassium, Calcium and Magnesium
- B. Sodium, Calcium and Magnesium
- c. Calcium, Potassium and Sodium
- D. Magnesium, Iron and Boron

Q66 General Science

Festival lights in buildings are an example of _____.

- A. a series circuit
- B. electromagnetic induction
- c. a parallel circuit
- D. magnetic effect

Q67 General Science

What is the primary reason that river Ganga is called an endangered river?

- A. The river is drying up
- B. Aquatic life is diminishing
- c. The water is not potable
- D. There are too many dams on it



Q68 General Science

Which of the following elements is a metal?

A. B

B. C

C. Fe



D. Si

Q69 General Science

Law of Octaves became irrelevant after the discovery of:

A. radioactivity

B. noble gases



C. fullerene

D. isotopes

Q70 General Science

The phenomena behind the working of an electric oven is _____.

A. Joule's heating effect



B. electromagnetic induction

C. induced current

D. induced voltage

Q71 General Science

Which of the following allotropes of carbon is a good conductor of electricity?

A. Fullerene

B. Graphite



C. Charcoal

D. Diamond



Q72 General Science

Which of the following is an example of a combination reaction between two compounds to form new compound?

- A. Formation of ammonia
- B. Formation of water
- C. Formation of carbon dioxide
- D. Formation of calcium hydroxide



Q73 General Science

A normal adult human being produces _____ mL per day of urine daily.

- A. 10 – 20
- B. 100 – 200
- C. 1000 – 2000
- D. 10000 – 20000



Q74 General Science

The thick white and yellowish clouds of the planet Venus are made up of which of the following acids?

- A. Acetic acid
- B. Hydrochloric acid
- C. Nitric acid
- D. Sulphuric acid



Q75 General Science

A concave mirror forms a real image of three times the size of an object on a screen. The object and screen are then moved until the image is six times the size of the object. If the shift of the screen is 39 cm, then the focal length of the mirror is:

- A. 10 cm
- B. 13 cm
- C. 26 cm
- D. 39 cm



Q76 General Science

Which of the following is/are correct with respect to the reflection by spherical mirrors?

- (a) A concave mirror will diverge the rays of light if the object is placed between the pole and the focus.
- (b) A convex mirror can converge a beam of rays.

A. (a) is only correct



B. (b) is only correct

C. (a) and (b) both are correct

D. Both (a) and (b) are incorrect

Q77 General Science

In case of an alternating current, _____.

A. the direction of current as well as magnitude of current does not change with time

B. the direction of current as well as magnitude changes with time



C. the direction of current changes but magnitude is constant

D. the direction of current is same but the magnitude changes with time

Q78 General Science

If a 12 V power supply supplies a power of 24 W to a bulb, then the power supplied would be when connected to a 6 V supply:

A. 12W

B. 18W

C. 6W



D. 9W

Q79 General Science

A ray of light is travelling from medium A to medium B. The incident ray makes an angle 75° with respect to the normal, and the refracted ray makes an angle 40° with respect to the normal. The refractive index of the medium A relative to the medium B is:

A. 1.50

B. 0.67

C. 1.34

D. 0.87

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



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Q80 General Science

Which state government's forest department recognised its failures in reviving the degraded Sal forests in the south-western districts of the state

A. West Bengal



B. Odisha

C. Madhya Pradesh

D. Rajasthan

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

India's Jhulan Goswami was in the news on 16 March 2022 for becoming the highest wicket taker in Women's ODIs by claiming 250 wickets. Against which team did she achieve this feat?

A. Australia

B. England



C. South Africa

D. New Zealand

Q82 General Awareness and Current Affairs

To celebrate Azadi Ka Amrit Mahotsav (75 years of India's Independence), to which school did the Government of India donate 50 computers?

A. Tokyo Metropolitan Asuka High School

B. The European School Copenhagen

C. Lycee Moderne Ampefiloha, Madagascar



D. Ermysted's Grammar School, Skipton

Q83 General Awareness and Current Affairs

In which year was the Steel Authority of India Ltd incorporated?

A. 1956

B. 1963

C. 1973



D. 1981



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Q84 General Awareness and Current Affairs

In which year was Lakhimi Baruah awarded the Padma Shri for social work?

A. 2021



B. 2020

C. 2018

D. 2017

Q85 General Awareness and Current Affairs

Where do mangroves flourish?

A. Coastal areas



B. Hills

C. Deserts

D. Marshes

Q86 General Awareness and Current Affairs

Extremely severe cyclonic storm 'Fani' hit Odisha in the year:

A. 2017

B. 2018

C. 2019



D. 2020

Q87 General Awareness and Current Affairs

'Kendriya Hindi Sansthan' has head office at which place as on July 2022?

A. New Delhi

B. Agra



C. Prayagraj

D. Varanasi



Q88 General Awareness and Current Affairs

The power of Parliament to amend the Constitution of India is a constitutive power established in the:

- A. Twenty-Fourth Amendment Act
- B. Twenty-Sixth Amendment Act
- C. Forty-Second Amendment Act
- D. Forty-Fourth Amendment Act

Q89 General Awareness and Current Affairs

Which Article of the Constitution of India lays down that the State shall take steps to organise village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government?

- A. Article 40
- B. Article 41
- C. Article 42
- D. Article 44

Q90 General Awareness and Current Affairs

Indira point is located in the southern part of which of the following islands?

- A. Little Andaman island
- B. Great Nicobar island
- C. Car Nicobar island
- D. Middle Andaman island

Q91 General Awareness and Current Affairs

In macroeconomic analysis, the ratio of the total increment in equilibrium value of final goods output to the initial increment in autonomous expenditure is called the _____ of the economy.

- A. investment multiplier
- B. consumption multiplier
- C. income multiplier
- D. savings multiplier



Q92 General Awareness and Current Affairs

Which part of the Constitution of India deals with rights of citizenship of certain persons who have migrated to India from Pakistan?

- A. PART I
- B. PART II
- C. PART III
- D. PART IV



Q93 General Awareness and Current Affairs

A curve that joins all points representing bundles which are considered indifferent by the consumer is called a/an _____.

- A. indifference curve
- B. consumer curve
- C. marginal curve
- D. utility curve



Q94 General Awareness and Current Affairs

Which of the following is a private sector bank in India?

- A. Federal Bank
- B. UCO Bank
- C. Punjab National Bank
- D. Bank of Baroda



Q95 General Awareness and Current Affairs

In which sports, Amit Panghal won a gold medal in Commonwealth Games 2022?

- A. Judo
- B. Wrestling
- C. Boxing
- D. Athletics



Q96 General Awareness and Current Affairs

The teachings of Mahavira and his followers were written down about 1500 years ago in the form in which they are presently available at which place?

- A. Vaishali in Bihar
- B. Lachhuar in Bihar
- C. Pawapuri in Bihar
- D. Valabhi in Gujarat



Q97 General Awareness and Current Affairs

Who among the following was one of the recipients of the Nobel Prize in Physics 2021?

- A. Dmitry Muratov
- B. Syukuro Manabe
- C. Maria Ressa
- D. David Julius



Q98 General Awareness and Current Affairs

In which city was Jawaharlal Nehru born?

- A. Delhi
- B. Lucknow
- C. Allahabad
- D. Srinagar



Q99 General Awareness and Current Affairs

What is the major aim of the INSPIRE Awards 'MANAK' being executed by the Department of Science and Technology, Government of India?

- A. To motivate farmers who are doing commercial agriculture
- B. To motivate students studying in classes 6 to 10
- C. To motivate scientists for technological development
- D. To motivate scientists for space related research



The police of which of the following States developed an app called 'Disha' for women's safety in February 2020?

- A. Goa
- B. Punjab
- C. Uttarakhand
- D. Andhra Pradesh



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Pankaj can do one-fifth of a piece of work in 6 days and Jagath can do one-fourth of the same work in 8 days. Find the number of days taken to complete the work if both work together. (Round the answer to one decimal place.)

A. 15.5



B. 15.8

C. 16.5

D. 14.5

Q2 Mathematics

The following are the marks obtained in a test out of 20 by a group of 10 students. Find the mode of the data.

15, 12, 13, 14, 16, 15, 18, 19, 11, 15.

A. 15



B. 16

C. 18

D. 19

Q3 Mathematics

A man crosses a 375 m road in 75 sec. His speed (in km/h) is:

A. 18



B. 15

C. 13

D. 20

Q4 Mathematics

The price of a bike was increased by 10% and then again increased by 8%. The net percentage increase in the price of the bike is:

A. 17%

B. 18%

C. 18.8%



D. 19%



Q5 Mathematics

If the length of a rectangle is twice its breadth and the perimeter of that rectangle is 42 cm, then find its length (in cm).

- A. 7
- B. 8
- C. 11
- D. 14

**Q6 Mathematics**

The ratio of Teja's and his mother's present ages is 7 : 11. The difference between their ages is 20 years. The age of Teja after 3 years will be:

- A. 29 years
- B. 32 years
- C. 35 years
- D. 38 years

**Q7 Mathematics**

Mr. Rao walks 45 minutes in a day. What fraction of a day does he walk per day, expressed as a fraction?

- A. $\frac{1}{32}$
- B. $\frac{3}{4}$
- C. $\frac{1}{24}$
- D. $\frac{1}{80}$



Q8 Mathematics

Which of the following statements is/are always true?

- a) In a parallelogram, diagonals bisect each other.
- b) In a rectangle, the opposite angles are equal and each measure 90° .
- c) Diagonals of a kite intersect at right angles.

- A. Only (a)
- B. Only (a) and (b)
- C. Only (b) and (c)
- D. All three of (a), (b) and (c)



Q9 Mathematics

The value of $2 - \frac{\cos^2 \theta}{1 + \sin \theta} + \frac{1 + \sin \theta}{\cos \theta} - \frac{\cos \theta}{1 - \sin \theta}$ is:

- A. $1 - \sin \theta$
- B. $1 + \sin \theta$
- C. $1 - \cos \theta$
- D. $1 + \cos \theta$



Q10 Mathematics

If the quadratic equation $ax^2 - 4x + 1 = 0$ has equal roots, then the value of a is:

- A. 4
- B. 3
- C. 2
- D. 1



Q11 Mathematics

If 5 is one root of $x^2 - (a - 1)x + 10 = 0$, then the other root is:

- A. 6
- B. 4
- C. 2
- D. 1



Q12 Mathematics

Two mixtures A and B have the following compositions.

Mixture A has copper and tin in the ratio 1 : 2

Mixture B has copper and tin in the ratio 1 : 3

If equal quantities of mixtures A and B are used for producing mixture C, then find the ratio of copper and tin in mixture C.

A. 1 : 5

B. 2 : 5

C. 7 : 12

D. 7 : 17

**Q13** Mathematics

The value of $3 - 25 \div [12 \div 4 \times 2 - (3 \times 7 \div 21)]$ is:

A. -2

B. -1

C. 2

D. 1

**Q14** Mathematics

Express $0.\overline{25}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{25}{90}$

B. $\frac{25}{99}$

C. $\frac{25}{100}$

D. $\frac{25}{10000}$



Q15 Mathematics

Mr. Rao sold a car at ₹1,64,000, thereby incurring a 20% loss. The cost price of the car was:

A. ₹ 2,05,000



B. ₹ 2,50,000

C. ₹ 2,00,500

D. ₹ 2,00,050

Q16 Mathematics

If the area of the base of a cylinder is 3850 cm^2 and its height is twice the radius of its base, then find the volume of the cylinder. [Use $\pi = \frac{22}{7}$]

A. 245340 cm^3

B. 235320 cm^3

C. 269500 cm^3



D. 201250 cm^3

Q17 Mathematics

The measure of each interior angle of a regular octagon is:

A. 135°



B. 140°

C. 165°

D. 180°

Q18 Mathematics

Find the arithmetic mean of the following data.

12, 13, 18, 12, 15, 15, 16, 13, 19, 17

A. 14

B. 15



C. 13.5

D. 15.5



Q19 Mathematics

Pallavi bought a toy for ₹128, decorated it at a cost of ₹15, and sold the toy for ₹130. Find the loss or gain percentage.

A. $\frac{100}{11}\%$ Loss



B. $\frac{100}{11}\%$ Gain

C. 10% Gain

D. 10% Loss

Q20 Mathematics

Two numbers are in the ratio 5 : 3, and the difference between these two numbers is 34. Find the smaller of the two numbers.

A. 85

B. 21

C. 31

D. 51



Q21 Mathematics

A certain sum under simple interest at a certain rate of interest per annum amounts to ₹1,200 in 2 years and to ₹1,500 in 3 years. The rate of interest per annum is:

A. 10%

B. 15%

C. 25%

D. 50%



Q22 Mathematics

What is the highest common prime factor of 7140 and 13200?

A. 2

B. 3

C. 5



D. 11



Q23 Mathematics

The LCM of fractions is calculated as $\frac{\text{LCM of the numerators}}{\text{HCF of the denominators}}$. Find the LCM of $\frac{5}{6}$, $\frac{6}{5}$ and $\frac{3}{2}$.

A. 15

B. 20

C. 25

D. 30



Q24 Mathematics

If $x + y = 5$ and $xy = 4$, find the value of $x^3 + y^3$.

A. 125

B. 185

C. 65

D. 60



Q25 Mathematics

Find the surface area of a sphere having a radius of 9 cm. [Use $\pi = \frac{22}{7}$]

A. $1020\frac{4}{7} \text{ cm}^2$ B. $1018\frac{2}{7} \text{ cm}^2$ C. $1013\frac{5}{7} \text{ cm}^2$ D. $1010\frac{6}{7} \text{ cm}^2$ 

Q26 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

All grapes are lemons
Some dates are papayas
Some grapes are cherries

Conclusions:

- (I) Some lemons are dates
(II) Some grapes are papayas
(III) Some lemons are cherries

- A. Only conclusion I follows
B. Only conclusion II follows
C. Only conclusion III follows
D. None of the conclusions follow

Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1, 4, 11, 26, 57, 120, ?

- A. 247
B. 246
C. 128
D. 254

Q28 General Intelligence and Reasoning HINDI - no English version saved

निम्न अक्षर, संख्या, प्रतीक श्रृंखला के आधार पर पूछे गए प्रश्न का उत्तर दीजिए।

(बाएं) M K T # 7 8 R Y @ S F E ? D Q * 5 9 C = 2 H (दाएं)

ऐसे कितने प्रतीक हैं जिनके ठीक पहले एक अक्षर है और ठीक बाद एक संख्या भी है?

- A. एक
B. दो
C. तीन
D. चार



Q29 General Intelligence and Reasoning

If '+' means '×', '-' means '+', '×' means '+', and '÷' means '-', what will come in place of the question mark (?) in the following equation?

$$15 + 3 - 5 \div 7 \times 6 = ?$$

A. 10

B. 12

C. 15

D. 8



Q30 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

TPN : XTR

LSK : PWO

A. DQG : ZMC

B. ZMC : DQG



C. QGD : CMZ

D. MZC : DGQ

Q31 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Some pencils are lanterns

All lanterns are rubbers

Some candies are pencils.

Conclusions:

(I) Some candies are lanterns

(II) Some rubbers are candies

(III) All pencils are rubbers

A. Only conclusion I follows

B. Only conclusion II follows

C. Either conclusion I or III follows

D. None of the conclusions follow



Q32 General Intelligence and Reasoning

A statement is followed by two conclusions. Find out which conclusion is true based on the given statement.

Statement:

$$M \geq N < O = P > Q > R > S$$

Conclusions:

I. $M > Q$

II. $O > R$

A. Only conclusion I is true

B. Only conclusion II is true

C. Neither conclusion I nor II is true

D. Both conclusions I and II are true

Q33 General Intelligence and Reasoning

In a certain code language, 'LIST' is written as 'NKUV' and 'PACK' is written as 'RCEM'. How will 'PLANT' be written in that language?

A. QMBOU

B. RNCPV

C. RMCOV

D. OMBSR

Q34 General Intelligence and Reasoning HINDI - no English version saved

दी गई अक्षर, संख्या, प्रतीक श्रृंखला का अध्ययन करें, और पूछे गए प्रश्न का उत्तर दें।

7 T % N 9 * M \$ 3 U L = 8 Y @ G & 4 E > 5 & R 3 ! K # 7 H = Y 6 R

ऐसी कितनी संख्याएं हैं, जिनके ठीक पहले एक प्रतीक और ठीक बाद एक अक्षर आता है।

A. 5

B. 2

C. 4

D. 3



Q35 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement.

Statement: Insufficient sleep is the major cause of swelling under eyes.

Conclusions:

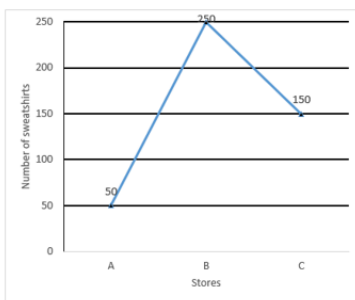
- (I) A good night's sleep leads to increase in memory and concentration.
(II) People who get sufficient sleep never have swelling under the eyes.

- A. Only conclusion I follows.
B. Only conclusion II follows.
C. Both conclusions I and II follow.
D. Neither conclusion I nor conclusion II follows. ✓

Q36 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of sweatshirts in stores A, B and C.



Out of the number of sweatshirts in stores A and B, 20% and 40%, respectively were sold. What is the total number of sweatshirts sold by stores A and B?

- A. 120
B. 110 ✓
C. 90
D. 130



Q37 General Intelligence and Reasoning

Refer to the following letter and symbol series and answer the question.

(Left) Z # U * Y \$ K W P Q @ G & A % J B L % & H E # V (Right)

How many such symbols are there in the series which are immediately preceded by a vowel and also immediately followed by a consonant?

- A. Two
- B. Four
- C. Five
- D. Three



Q38 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

20 : 30 :: 42 : ? :: 72 : 90

- A. 55
- B. 51
- C. 56
- D. 52



Q39 General Intelligence and Reasoning

A certain number of people are sitting in a row and facing north. U is sitting 4th to the right of S. V is sitting 5th from the right end. V is seated at the immediate right of U. If no other person is sitting in the row, what is the total number of persons seated ?

- A. 10
- B. 4
- C. 8
- D. 11



Q40 General Intelligence and Reasoning

If '+' means '÷', '-' means '+', '×' means '-', and '÷' means '×', what will come in place of the question mark (?) in the following equation?

$$15 \times 6 \div 12 + 4 - 5 = ?$$

A. 8

B. 12

C. 2



D. 5

Q41 General Intelligence and Reasoning

Six friends are sitting around a round table facing the centre with equal distances between two neighbours. Wasim is second to the right of Muskan. Ekta is sitting to the immediate left of Rohit. Anushri is sitting third to the left of Wasim. Suresh is second to the left of Ekta. Who is to the immediate right of Wasim?

A. Ekta



B. Suresh

C. Muskan

D. Rohit

Q42 General Intelligence and Reasoning

Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. Only two boxes are kept above C. Only E is kept between D and F. G is kept immediately below F. B is kept immediately below A. Only C is kept between B and D. How many boxes are kept between B and F?

A. Three



B. Two

C. One

D. Four

Q43 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor, which is numbered 6. Only one person lives above C. Only three people live between C and B. A does not live on the topmost floor. Only one person lives between A and F. F lives below A. D lives on an even numbered floor. Who lives immediately below E?

A. D

B. A

C. B

D. F



Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

30, 54, 86, 126, 174, ?

A. 208

B. 210

C. 220

D. 230



Q45 General Intelligence and Reasoning

In a certain alpha-numeric code, 'ACE' is written as 9 and 'FORT' is written as 59. How will 'CREAM' be written in the same code?

A. 55

B. 40

C. 49

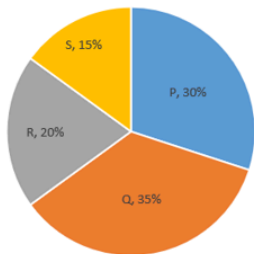
D. 69



Q46 General Intelligence and Reasoning

Study the given pie-chart and answer the following question.

The given pie chart depicts the number of trousers purchased of four brands (P, Q, R and S). The total number of trousers purchased of the four brands together is 120.



Out of the total number of trousers purchased of brands Q and R, one-third were slim fit trousers. What is the total number of slim fit trousers purchased of brands Q and R?

A. 18

B. 24

C. 22

D. 33



Q47 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement:

Statement: $G < L < T > Y = V \geq P > X$

A. $G \leq T$

B. $Y > L$

C. $G < Y$

D. $P \leq Y$



Q48 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All chocolates are balls.

All balls are festivals.

Some festivals are tennis.

Conclusions:

(I) All chocolates are festivals.

(II) Some balls are tennis.

A. Only conclusion (I) follows.



B. Only conclusion (II) follows.

C. Both conclusion (I) and conclusion (II) follow.

D. Both conclusion (I) and conclusion (II) do not follow.

Q49 General Intelligence and Reasoning

Amit starts moving in the north direction from his initial position. Before reaching his final destination, he turns two times right and one time left and again one time right. In which direction is he moving now? (All turns are 90 degree turns only)

A. South



B. West

C. North

D. East



Q50 General Intelligence and Reasoning

Town C is west of town D. Town E is south of the mid-point of the line joining C and D. Town F is south-west of C such that F and E are along the same straight line. What is the position of E with respect to F?

A. East



B. West

C. North

D. South

Q51 General Intelligence and Reasoning

Six friends are sitting around a round table facing the centre with equal distances between two neighbours. Gaurav is sitting second to the left of Yashvi. Sana is sitting third to the left of Aaliya. Danish is sitting to the immediate left of Aaliya. Varnit is sitting third to the left of Yashvi. Gaurav is sitting to the immediate right of Varnit. Who is sitting to the immediate left of Sana?

A. Danish

B. Yashvi

C. Varnit

D. Gaurav



Q52 General Intelligence and Reasoning

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

P3WJ, R10TO, T24QT, V45NY, ?

A. X67KC

B. X73LD

C. X67KD

D. X73KD



Q53 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

8 : 63 :: 11 : ? :: 13 : 168

A. 121

B. 120



C. 118

D. 119



Q54 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '+' means '×', '×' means '+', what will come in place of the question mark (?) in the following equation?

$$78 \times 3 - 2 \div 6 + 4 = ?$$

A. 72

B. 45

C. 91

D. 83



Q55 General Intelligence and Reasoning

In the word 'WEBSITE', if each vowel is replaced with the immediate next letter and each consonant is replaced with the immediate previous letter as per the English alphabetical order, then how many vowels will be there in the word so formed?

A. One



B. Two

C. Three

D. None

General Science

25 Questions • Answer Key

Q56 General Science

If the angle between the direction of current flowing through a conductor and the direction of magnetic field is zero, the force (F) acting on the conductor will be _____.

A. Zero



B. F

C. 2F

D. F/2

Q57 General Science

What is the best method to dispose of hospital waste?

A. Sterilise and separate metals from cotton



B. Bury it in deep trenches

C. Segregate and recycle

D. Wash before burning



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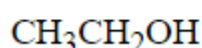
Q58 General Science

Which of the following statements for a parallel circuit is true?

- A. The net resistance of a parallel circuit is always less than the sum of individual resistances. ✓
- B. The net resistance of a parallel circuit is always greater than the sum of individual resistances.
- C. The potential difference across individual resistances of a parallel circuit is always unequal.
- D. The net current of a parallel circuit is always less than that of individual currents.

Q59 General Science

Which of the following is a correct nomenclature of the given structure?



- A. Ethan-1-ol ✓
- B. Methan-1-ol
- C. Ethan-2-ol
- D. Methan-2-ol

Q60 General Science

What will be the colour of pH paper when it is dipped in gastric juice?

- A. Red ✓
- B. Greenish-yellow
- C. Blue
- D. Yellow

Q61 General Science

Light travels from air into water with an index of refraction of 1.33. The light ray will:

- A. bend towards the normal ✓
- B. bend away from the normal
- C. go parallel to the normal
- D. go perpendicular to the normal



Q62 General Science

According to the Newland's law of octaves, how many elements are present in between Potassium and Copper?

- A. 5
- B. 8
- C. 7
- D. 9



Q63 General Science

What is the pH of a neutral solution?

- A. 0
- B. 7
- C. 8
- D. 14



Q64 General Science

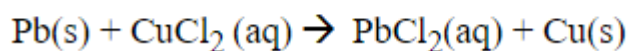
Which of the following natural resources do we need to use judiciously to prevent intense global warming?

- A. Coal and petroleum
- B. Petroleum and water
- C. Coal and water
- D. Metals and coal



Q65 General Science

In a given reaction, which element acts as an ion?



- A. Only Pb
- B. Only Cu
- C. Only Cl_2
- D. Both Pb and Cu



Q66 General Science

Which substance formed precipitates when a reaction occurs between potassium sulfate and barium chloride?

- A. Barium sulfate
- B. Potassium sulfate
- C. Barium chloride
- D. Potassium chloride

Q67 General Science

Which hormone helps the body to adjust to stress when one is very angry, embarrassed or worried?

- A. Testosterone
- B. Estrogen
- C. Adrenalin
- D. Thyroxine

Q68 General Science

The power of an electric equipment through which a charge of 15 coulomb is flowing per 5 seconds when it is connected to a 20 V source is _____.

- A. 1500 calorie
- B. 60 watt
- C. 60 calorie
- D. 1500 watt

Q69 General Science

The mathematical form of Ohm's law is represented as _____. (Here V = potential difference, I = current flowing through a conductor and R = Resistance.)

- A. $V = I/R$
- B. $I = V/R$
- C. $I = R/V$
- D. $I = R^2/V$

Q70 General Science

Which of the following statements with regard to the principal axis of a spherical mirror is/are correct?

- (a) The pole on the principal axis is similar to the origin of a Cartesian coordinate axes plane.
- (b) Distances measured from the pole, along the principal axis opposite to the direction of incident light are negative.
- (c) Heights of objects or images above the principal axis and perpendicular to it are considered negative.

A. Only (a) and (b)



B. Only (b) and (c)

C. Only (a) and (c)

D. (a), (b) and (c)

Q71 General Science

Newlands arranged the elements into the periodic table on the basis of _____.

A. increasing atomic mass



B. decreasing atomic mass

C. metallic character

D. non-metallic character

Q72 General Science

A concave mirror of focal length f produces a real image at a distance v from the pole, when an object is kept at the distance u from the pole. Here, focal length of the given mirror is:

A. $(u v) / (u + v)$



B. $(u + v) / (u v)$

C. $(1/u) - (1/v)$

D. $(1/v) - (1/u)$

Q73 General Science

Which of the following rules or laws correctly describe the direction of force, magnetic field and current at the same instant?

A. Palm rule

B. Right hand thumb rule

C. Fleming's left hand rule



D. Ampere's circuital law



Q74 General Science HINDI - no English version saved

किसी प्रिज्म पर श्वेत प्रकाश आपतित होने पर इसका वर्ण-विक्षेपण (dispersion) होता है। इस संदर्भ में, सही विकल्प का चयन कीजिए।

- (a) प्रिज्म में लाल रंग का प्रकाश सर्वाधिक मुड़ता है।
- (b) प्रिज्म में बैंगनी रंग के प्रकाश की चाल सबसे कम होती है।
- (c) बैंगनी रंग के प्रकाश का अपवर्तनांक सर्वाधिक होता है।
- (d) प्रिज्म को सीधा रखे जाने पर, बैंगनी रंग सबसे ऊपर होता है, और लाल रंग सबसे नीचे होता है।
- (e) इंद्रधनुष का बनना भी वर्ण-विक्षेपण (Dispersion) के कारण ही होता है।

A. (a), (c) और (d)

B. (b), (c) और (e)



C. (b), (c) और (d)

D. (b), (d) और (e)

Q75 General Science

Which blood cells help in clotting of blood and stop bleeding?

- A. Red blood cells
- B. White blood cells
- C. Platelets
- D. Both platelets and red blood cells



Q76 General Science HINDI - no English version saved

वह महिला, जो बच्चे को जन्म देने वाली है (A Woman About To Give Birth), के लिए सर्वोत्तम विकल्प कौन सा है?

- A. बच्चे को निकालने के लिए सर्जरी (सीजेरियन सेक्शन) कराना
- B. प्रसव में सहायता हेतु प्रशिक्षित नर्स की मदद लेना
- C. बच्चे के जन्म से एक सप्ताह पहले पर्याप्त आराम और पोषण प्राप्त करना
- D. एक सुविधा-संपन्न अस्पताल में जन्म देना



Q77 General Science

In a homologous series, which element is replaced by any functional group?

A. Hydrogen



B. Sodium

C. Sulphur

D. Helium

Q78 General Science

Ravi injured his knee while playing and it was bleeding. After some time, he noticed that the bleeding had stopped and a dark red clot had plugged the wound. Which type of cells help in blood clotting?

A. Red blood corpuscles

B. Lymphocytes

C. Eosinophils

D. Platelets



Q79 General Science

Anaerobic respiration of glucose in the muscles produces _____.

A. pyruvic acid

B. lactic acid



C. acetoacetic acid

D. citric acid

Q80 General Science

Identify the following cell.



A. Bone cell

B. Nerve cell



C. Muscle cell

D. Kidney cell



Q81 General Awareness and Current Affairs

Who is the first Indian woman to score a century in a pink-ball Test cricket match in 2021?

- A. Mithali Raj
- B. Sneha Rana
- C. Deepti Sharma
- D. Smriti Mandhana



Q82 General Awareness and Current Affairs

Which of the following statements is INCORRECT about the rivers of India?

- A. The Godavari rises in the Jabalpur district of Madhya Pradesh.
- B. The Krishna River rises near Mahabaleshwar in Sahyadri.
- C. The Mahanadi rises near Sihawa in Raipur district of Chhattisgarh.
- D. The Kaveri rises in Brahmagiri hills of Kogadu district in Karnataka.



Q83 General Awareness and Current Affairs

What is the name of the mission in which there is an attempt to boost Research and Development in the country by enabling and grooming potential PG / PhD level students by developing dedicated research skills in selected areas / disciplines / fields through high-end workshops and Training and Skill Internship?

- A. KARYASHALA
- B. ABHYAAS
- C. VRITIKA
- D. DAKSHATA



Q84 General Awareness and Current Affairs

Which of the following sports is NOT covered in the National Air Sports Policy 2022 of India?

- A. Drones
- B. Ballooning
- C. Aerobics
- D. Rally Flying



Q85 General Awareness and Current Affairs

MUDRA refers to _____

- A. Micro Units Developing and Regulatory Agency
- B. Micro Units Development and Refinance Agency ☒
- C. Medium Units Development Regulatory Association
- D. Medium Units Developed and Refinance Association

Q86 General Awareness and Current Affairs

In the context of five year planning in India, the period from 1966 to 1969 was a period of _____.

- A. no plan
- B. 3rd plan
- C. three annual plans ☒
- D. 4th plan

Q87 General Awareness and Current Affairs

Venkateshwara, also known as Venkatachalapati Srinivasa and Balaji, is a form of the Hindu God:

- A. Brahma
- B. Shiva
- C. Vishnu ☒
- D. Hanuman

Q88 General Awareness and Current Affairs

Which mode of political organisation unites separate states or other polities within an overarching political system in a way that allows each to maintain its own integrity?

- A. Federalism ☒
- B. Democracy
- C. Sovereignty
- D. Integrity



Q89 General Awareness and Current Affairs

Which of the following legendary wheat scientists was awarded the Padma Bhushan 2022 in the Science and Engineering category?

- A. Subbanna Ayyappan
- B. Sanjaya Rajaram
- C. Sanghamitra Bandyopadhyay
- D. Aditya Prasad Dash



Q90 General Awareness and Current Affairs

Bundelkhand and Baghelkhand are part of which physical feature of India?

- A. Himalayan Mountains
- B. Peninsular Plateau
- C. Northern Plains
- D. Coastal Plains



Q91 General Awareness and Current Affairs

The sum of average variable cost and average fixed cost is known as _____.

- A. average cost
- B. actual cost
- C. marginal cost
- D. total cost



Q92 General Awareness and Current Affairs

In September 2021, India's first pan-India toll-free helpline – 14567 which aims to provide information, guidance, emotional support, and in cases of abuse, immediate assistance too, was officially launched by the Ministry of Social Justice and Empowerment. What is this line called?

- A. Elder line
- B. Senior line
- C. Sahyog line
- D. Sampark line



Q93 General Awareness and Current Affairs

Annie Besant founded the Central Hindu College at Banaras which she later handed over to _____.

- A. Madan Mohan Malviya
- B. Swami Vivekananda
- C. Madame HP Blavatsky
- D. Col. HS Olcott



Q94 General Awareness and Current Affairs

Which of the following is the biggest Biosphere Reserve of India in terms of geographical area?

- A. Sunderbans
- B. Nanda Devi
- C. Gulf of Mannar
- D. Kachchh



Q95 General Awareness and Current Affairs

Which Article of the Constitution of India gives Advisory Jurisdiction to the Supreme Court of India?

- A. Article 143
- B. Article 142
- C. Article 132
- D. Article 133



Q96 General Awareness and Current Affairs

Which is one of the official languages of Andhra Pradesh?

- A. Banjara
- B. English
- C. Telugu
- D. Kokborok



Q97 General Awareness and Current Affairs

As per performance of the Indian states, which of the following states was in the 'Front Runner' category in the NITI Aayog SDG India Index 2020-21?

- A. Tripura ✓
- B. Manipur
- C. West Bengal
- D. Madhya Pradesh

Q98 General Awareness and Current Affairs

The festival 'BONALU' is celebrated in which of the following states in India?

- A. Telangana ✓
- B. Kerala
- C. Karnataka
- D. Tamil Nadu

Q99 General Awareness and Current Affairs

In relation to consumer behavior, two indifference curves _____.

- A. never intersect each other ✓
- B. intersect each other at 45 degrees.
- C. always intersect each other at right angles.
- D. intersect each other at 120 degrees.

Q100 General Awareness and Current Affairs

Under the Constitutional Article 243 (C), who decides on the composition of the Panchayat?

- A. State Assembly
- B. Lok Sabha
- C. Legislature of State ✓
- D. Council of States



Mathematics

25 Questions • Answer Key

Q1 Mathematics

If a solid sphere of radius 10 cm is melted into 8 spherical solid balls of equal radius, then what will be the surface area of each such ball? [Use $\pi = \frac{22}{7}$]

A. $314\frac{2}{7} \text{ cm}^2$



B. $319\frac{1}{7} \text{ cm}^2$

C. $324\frac{3}{7} \text{ cm}^2$

D. $335\frac{5}{7} \text{ cm}^2$

Q2 Mathematics

The roots of the quadratic equation $x + \frac{20}{x} = 9$ are:

A. 4, 5



B. -4, -5

C. 3, 6

D. -3, -6

Q3 Mathematics

Nilesh bought some quantity of barley for ₹5,000. Half of it is sold at a profit of 20%. If Nilesh wishes to make a profit of 15% on the whole, find the selling price (in ₹) of the remaining barley.

A. 2,750



B. 3,000

C. 3,250

D. 2,500



Q4 Mathematics

A man spends 30% of his salary on groceries, and is left with ₹3,500. Find his total salary.

A. ₹11,000

B. ₹6,000

C. ₹5,000



D. ₹5,500

Q5 Mathematics

A cyclist covered a distance of 900 km in 25 hours. What is the speed of the cyclist (in m/s)?

A. 8

B. 9

C. 11

D. 10



Q6 Mathematics

If α and β are the roots of the equation $x^2 + 5x + 6 = 0$, then the value of $\alpha\beta - \left(\frac{1}{\alpha} + \frac{1}{\beta}\right)$ is:

A. $\frac{41}{6}$



B. $\frac{31}{6}$

C. $-\frac{41}{6}$

D. $-\frac{31}{6}$

Q7 Mathematics

The compound interest on ₹30,000 in 2 years at 7% rate of interest per annum compounded annually is:

A. ₹3,347

B. ₹4,347



C. ₹2,347

D. ₹3,777



Q8 Mathematics

If the measures of the angles of a quadrilateral taken in order are in the ratio 1 : 3 : 1 : 3, then the quadrilateral is a:

- A. square
- B. trapezium, but not a parallelogram
- C. parallelogram
- D. rectangle



Q9 Mathematics

Find x and y in the equivalent fraction given below.

$$\frac{x}{9} = \frac{105}{63} = \frac{5}{y}$$

- A. $x = 3, y = 5$
- B. $x = 12, y = 3$
- C. $x = 15, y = 9$
- D. $x = 15, y = 3$



Q10 Mathematics

Which of the following is divisible by 17?

- A. 991
- B. 1887
- C. 2022
- D. 2989



Q11 Mathematics

Simplify $3x(x + 2) - 5x(x - 3) + 7$.

- A. $2x^2 + 11x + 7$
- B. $-2x^2 + 21x + 6$
- C. $2x^2 + 21x + 7$
- D. $-2x^2 + 21x + 7$



Q12 Mathematics

The product of the LCM and the HCF of 18 and 25 is:

- A. 270
- B. 360
- C. 450
- D. 465



Q13 Mathematics

The value of $\sqrt{\frac{4-5\cos^2\theta}{\sin^2\theta}} + \cot^2\theta$ is:

- A. 4
- B. 3
- C. 2
- D. 1



Q14 Mathematics

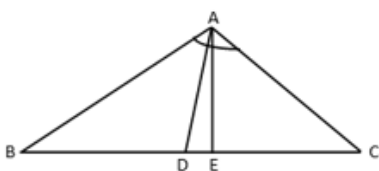
A tradesman allows a discount of 15% on the marked price. How much above the cost price must he mark his goods to gain 19% through the above transaction?

- A. 30%
- B. 40%
- C. 50%
- D. 25%



Q15 Mathematics

In a triangle ABC, if AD is the angle bisector of $\angle BAC$, $AE \perp BC$, $\angle B = 30^\circ$ and $\angle C = 50^\circ$, then $\angle DAE$ is:



- A. 10°
- B. 20°
- C. 30°
- D. 40°



Q16 Mathematics

A tank is attached with 30 pipes, some of these are filling pipes and the rest are emptying pipes. Each filling pipe can fill the tank completely in 24 hours and each emptying pipe can empty the tank completely in 18 hours. When all the pipes are opened together, it takes $1\frac{1}{2}$ hours to fill the tank completely. How many of the given pipes are emptying pipes?

A. 6



B. 8

C. 9

D. 12

Q17 Mathematics

If the difference between two numbers is 4 and their product is 32, then the absolute difference between their cubes is:

A. 484

B. 844

C. 448



D. 444

Q18 Mathematics

If the radius and the height of a cylinder are 7 cm and 15 cm, respectively, then find the volume of the cylinder.

[Use $\pi = \frac{22}{7}$]

A. 2125 cm^3 B. 2310 cm^3 C. 2451 cm^3 D. 2520 cm^3 **Q19** Mathematics

Find the mode of the following data.

2, 6, 5, 2, 4, 9, 6, 2, 66, 4, 10, 12, 6, 22, 2, 44, 9

A. 2



B. 6

C. 4

D. 9



Q20 Mathematics

A has a certain amount of money and B also has some money. If A gives ₹130 to B, then B will have 1.5 times the amount left with A. Instead, if B gives ₹70 to A, then A will have 2 times the amount left with B. What is the total amount of money that A and B together have between them?

A. ₹700

B. ₹720

C. ₹750



D. ₹780

Q21 Mathematics

The population of a town increased by 12% in the first year and by 16% in the second year. What is the percentage increase in the population at the end of the second year with respect to the population at the beginning of the given 2- year period?

A. 19.92%

B. 29.92%



C. 19.6%

D. 29.6%

Q22 Mathematics

Nine years ago, P's age was twice the age of Q. If the ratio of their present ages is 5 : 4, what is the sum of their present ages?

A. 27 years



B. 30 years

C. 35 years

D. 40 years

Q23 Mathematics

Express $0.2\bar{7}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

A. $\frac{1}{6}$ B. $\frac{2}{9}$ C. $\frac{5}{18}$ D. $\frac{1}{3}$ 

Q24 Mathematics

A water tank can be filled in 9 minutes by using 15 pipes of the same capacity. In how many minutes will the water tank be filled if we use 20 pipes of the same capacity as above?

A. 13

B. 10

C. 6.75



D. 18

Q25 Mathematics

If $x = \frac{\sqrt{1125} \times \sqrt{405}}{\sqrt{729}}$, then the value of $\sqrt{x}$ is:

A. 3

B. 5



C. 9

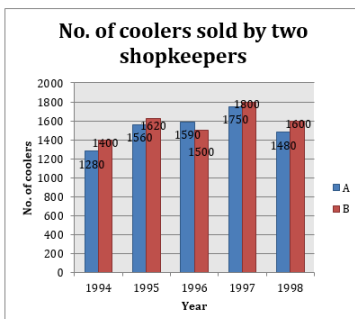
D. 25

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

The following bar graph shows the number of coolers sold by shopkeepers A and B in different years. Study the graph and answer the question that follows.



The total number of coolers sold by shopkeeper B in 1995 and 1998 together is approximately what percentage more/less than the total number of coolers sold by the shopkeeper A in 1996 and 1997 together?

A. 4% less



B. 4% more

C. 6% less

D. 6% more



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Q27 General Intelligence and Reasoning

Which two numbers from amongst the given options should be interchanged to make the given equation correct?

$$87 \times 122 - 369 - 13 \div 2 = 701$$

A. 122 and 13



B. 369 and 2

C. 87 and 2

D. 87 and 13

Q28 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(1, 6, 4)

(3, 15, 9)

A. (2, 16, 8)

B. (9, 25, 7)



C. (10, 33, 11)

D. (3, 18, 8)

Q29 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word FLAGSTONE is arranged in alphabetical order?

A. 3

B. 1

C. 2



D. 4



Q30 General Intelligence and Reasoning

If '+' means '×', '-' means '+', '×' means '-', and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$4 \times 5 + 3 \div 16 - 1 = ?$$

A. 10

B. 12

C. 8

D. 5



Q31 General Intelligence and Reasoning

A certain number of people are sitting in a straight line facing north. Only three people are sitting between D and I. There are only two people sitting between K and O. I is sitting to the immediate left of O. No one is sitting to the left of D. Only one person is sitting to the right of O. How many people are sitting in the row?

A. 7

B. 5

C. 8

D. 6



Q32 General Intelligence and Reasoning

Six teachers are sitting around a circular table facing the centre. Ruhi is sitting second to the left of Sophie. Gautam is sitting third to the right of Dinesh. Preeti is an immediate neighbour of both Sophie and Gautam. Mary is sitting to the immediate left of Ruhi. Who is an immediate neighbour of both Ruhi and Sophie?

A. Mary

B. Preeti

C. Dinesh

D. Gautam



Q33 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Bears are Teddies.
Some Rabbits are Teddies.
All Rabbits are Soft.

Conclusions:

(I) Some Rabbits are Bears.
(II) All Teddies are Soft.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows. ☒

Q34 General Intelligence and Reasoning

In the word 'BACKGROUND', if each vowel is changed to the letter immediately following it and each consonant is changed to the letter immediately following it in the English alphabetical order, then how many vowels will be there in the group of letters thus formed?

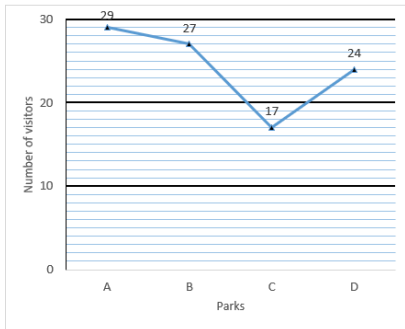
- A. One
- B. Two ☒
- C. Three
- D. None



Q35 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of visitors in four parks – A, B, C and D.



If out of the total number of visitors in parks A and C, 50% were females, what was the total number of male visitors in parks A and C?

A. 21

B. 23



C. 20

D. 18

Q36 General Intelligence and Reasoning

If each of the letters in the word 'LEUCOMA' is arranged in alphabetical order, how many letters are there in the English alphabetical order between the letters which is third from the left and the one which is second from the right?

A. Nine



B. Ten

C. Eight

D. Seven

Q37 General Intelligence and Reasoning

In a row of people standing in a waiting area, facing North, Hari stands seventh from the left end of the row and there are three people between him and the person standing at the exact centre of the row. How many people are standing in the row?

A. 20

B. 21



C. 18

D. 15



Q38 General Intelligence and Reasoning

This question consists of a statement followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Eating junk food is not good for health.

Arguments:

I. Junk food has high amount of fats, chemical additives and sodium leading to obesity.

II. High intake of sugars and fats tend to suppress the function of the brain that helps in learning and memory formation.

- A. I weakens while II strengthens the statement.
- B. II weakens while I strengthens the statement.
- C. Both I and II weaken the statement.
- D. Both I and II strengthen the statement. ☒

Q39 General Intelligence and Reasoning

While playing a game, P is standing to the south of D, who is to the west of A, who is to the north of J. If P exchanges his position with A, then what is the direction of J with respect to P?

- A. North
- B. South ☒
- C. East
- D. West

Q40 General Intelligence and Reasoning

Shalika walked 15 km towards south from her house, then she turned towards east and covered a distance of 10 km. She then turned north and covered a distance of 25 km. Finally turning west, she covered a distance of 15 km. In which direction is she from her house now?

(All turns are 90° turns only)

- A. South-west
- B. North-east
- C. South-east
- D. North-west ☒



Q41 General Intelligence and Reasoning

Refer to the given number, symbol series and answer the question that follows.

(Left) ¥ 1 λ 2 5 \$ 2 # 1 & 2 3 € 1 5 6 % ¥ 2 @ 6 (Right)

How many such symbols are there, each of which is immediately preceded by a symbol and also immediately followed by a number?

A. 0

B. 1



C. 2

D. 3

Q42 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $E \leq D < K = A > P > Z$

A. $Z = E$

B. $P > D$

C. $A > E$



D. $A \geq Z$

Q43 General Intelligence and Reasoning

P, Q, R, S, T and U are six friends sitting around a circular table, facing the centre of the table in a café. S is seated third to the right of U. Q is the immediate neighbour of U and P. T is seated to the immediate left of S. Who are the immediate neighbours of R?

A. T and S

B. U and T



C. P and S

D. Q and U



Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3 11 20 28 37 ?

A. 44

B. 55

C. 45



D. 54

Q45 General Intelligence and Reasoning

A statement is given followed by four conclusions as options. Select which conclusion is true based on the given statement.

Statement: $Z > Q > L = J < R < P$

A. $J < Z$



B. $Q < P$

C. $R > Z$

D. $P < L$

Q46 General Intelligence and Reasoning

In a certain code language, 'TRAMP' is written as 'VOCJR' and 'BLANK' is written as 'DICKM'. How will 'AMPLE' be written in that language?

A. CIRHG

B. DJSIH

C. CJRIG



D. BOSPJ



Q47 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Cakes are Ice-Creams.

Some Cakes are Butters.

All Cakes are Eggs.

Conclusions:

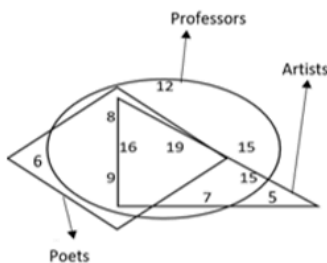
(I) Some Butters are Ice-creams.

(II) All Eggs are Ice-creams.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

**Q48** General Intelligence and Reasoning

Observe the given diagram carefully and answer the question that follows. The numbers in different sections indicate the number of persons.



How many such persons are there in the above group who are not artists and poets but are only professors?

- A. 22
- B. 35
- C. 17
- D. 27



Q49 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

7 : 42 :: 5 : 20 :: 11 : ?

A. 90

B. 110



C. 117

D. 132

Q50 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. B is sitting third to the right of C. No one is sitting to the left of C. Only four people are sitting between A and B. Only two people are seated to the right of D. Only four people are sitting between A and D. If no other person is sitting in the row, what is the total number of persons seated between C and D?

A. 15

B. 13

C. 12



D. 17

Q51 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

RTO : OQL

KMD : HJA

A. ABC : XWZ

B. JHG : FDS

C. UBF : RYC



D. LOP : IUW



Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

240 240 120 40 10 ?

A. 1

B. 8

C. 5

D. 2



Q53 General Intelligence and Reasoning

In a certain code language, 'PEN' is written as 'KVM' and 'CAN' is written as 'XZM'. How will 'GUN' be written in that code language?

A. TMF

B. FMT

C. TFM

D. TDM



Q54 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$25 \times 5 \div 7 - 10 \times 2 = ?$$

A. 38

B. 39

C. 40

D. 41



Q55 General Intelligence and Reasoning

Select the combination of letters that when placed from left to right in the blanks of the given series will complete the series.

_ _ LMT _ _ PLMT KPL _ _ _ KPLMT _

A. KPTKTMTTT

B. KPTKTMTTM

C. LPTKTMTTT

D. KLTKTMTTT



Q56 General Science

A mixture of sodium bicarbonate and a mild edible acid is known as _____.

- A. baking soda
- B. baking powder
- C. bleaching powder
- D. washing soda



Q57 General Science

An electric motor is a device used for converting electrical energy into _____ energy.

- A. Magnetic
- B. Heat
- C. Light
- D. mechanical



Q58 General Science

In Dobereiner's Triads, elements were written as:

- A. down the group with increasing atomic masses
- B. down the group with decreasing atomic masses
- C. Moving from left to right with increasing atomic masses
- D. Moving from left to right with decreasing atomic masses



Q59 General Science

Identify the correct statement(s) with respect to the reflection of light by a spherical mirror from among the following.

- (a) A convex mirror can only form real and inverted images.
- (b) A concave mirror can form real, inverted and virtual, erect images.
- (c) Images formed by convex mirrors are either diminished, same size or enlarged depending on the position of object.
- (d) Images formed by concave mirrors are either diminished, same size or enlarged depending on the position of the object.

A. (a) and (c) are only correct

B. (b) and (d) are only correct



C. (a) and (d) are only correct

D. (b) and (c) are only correct

Q60 General Science

To which of the following communities living in western Rajasthan on the border of the Thar desert has conservation of forest and wildlife been a religious tenet?

A. Bishnoi community



B. Vaishya community

C. Bhil community

D. Chhipa community

Q61 General Science

Three resistors of 12 ohm, 16 ohm and 48 ohm are connected in parallel. What is the net resistance?

A. 6 ohm



B. 76 ohm

C. $1/6$ ohm

D. $1/76$ ohm



Q62 General Science

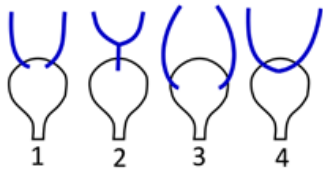
Which of the following is a saturated hydrocarbon?

- A. Ethane
- B. Ethene
- C. Benzene
- D. Acetylene



Q63 General Science

Which of the following diagrams depicts the positions of the ureters (shown as blue lines) and the urinary bladder in the human excretory system?



- A. Diagram 1
- B. Diagram 2
- C. Diagram 3
- D. Diagram 4



Q64 General Science

What is covered under 'Maternal Health'?

- A. Care of pregnant woman
- B. Care of all new mothers (after childbirth)
- C. Care during pregnancy and childbirth
- D. Care during prenatal, natal and post-natal period



Q65 General Science

The physical quantity having a unit of volt/ampere is _____.

- A. current
- B. charge
- C. work
- D. resistance



Q66 General Science

The homologue of ethanol is _____.

- A. methanol
- B. ethanal
- C. propanal
- D. ethane

Q67 General Science

If a coin is placed at the bottom of a tumbler of height 30 cm filled with water of refractive index 1.33, then the apparent depth of the coin appears to be:

- A. 39.9 cm
- B. 22.6 cm
- C. 25.7 cm
- D. 36.7 cm

Q68 General Science

Which of the following chemicals are known to deplete the ozone layer in the atmosphere?

- A. SO_2
- B. NO_2
- C. CFCs
- D. CO

Q69 General Science

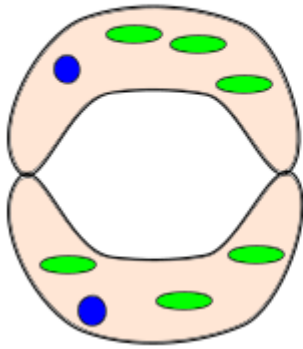
In an electric circuit, four equal resistors were in series, connected to a cell. These are now disconnected and connected back in parallel across the same cell. The ratio of current in the series circuit to the current in each resistor in the parallel circuit will be _____.

- A. 1 : 16
- B. 1 : 4
- C. 4 : 1
- D. 16 : 1



Q70 General Science

Where can you find the type of cells shown in the following figure?



A. Leaves and shoots



B. Stems and roots

C. Roots and flowers

D. Flowers and leaves

Q71 General Science

Which two elements were put in the same slot by Newland?

A. Na and Al

B. Co and Ni



C. As and Se

D. Ca and Cu

Q72 General Science

The reaction in which two reactants participate and produce only one product is called:

A. combination reaction



B. dissociation reaction

c. displacement reaction

D. double displacement reaction



Q73 General Science

Sexual reproduction in human beings involves the introduction of sperm in the vagina of the female. Where does fertilisation occur?

- A. In the vagina
- B. In the uterus
- C. In the fallopian tube
- D. In the cervix



Q74 General Science

Which of the following metals is less reactive than silver?

- A. Fe
- B. Cu
- C. Hg
- D. Au



Q75 General Science

Which of the following statements regarding blood pressure is FALSE?

- A. The pressure is measured using a sphygmomanometer.
- B. The pressure is much greater in veins than in arteries.
- C. The pressure during ventricular contraction is called systolic pressure and during ventricular relaxation is called diastolic pressure.
- D. The normal systolic pressure is about 120 mm of Hg and diastolic pressure is 80 mm of Hg.



Q76 General Science

Which of the following statement is INCORRECT for reduction?

- A. Loss of electrons
- B. Gain of electrons
- C. Addition of Hydrogen
- D. Removal of oxygen



Q77 General Science

The refractive index of a material can be linked with relative _____ of propagation of light in different media.

- A. acceleration
- B. displacement
- C. speed
- D. force



Q78 General Science

The centre of curvature of a concave mirror lies _____.

- A. in front of the mirror
- B. behind the mirror
- C. above the mirror
- D. below the mirror



Q79 General Science

In which part of the human body are villi present?

- A. Liver
- B. Eye
- C. Small intestine
- D. Kidney



Q80 General Science

The magnetic field produced by a current carrying conductor decreases as the _____ increases.

- A. current
- B. distance
- C. voltage
- D. resistance



Q81 General Awareness and Current Affairs

Which of the following festivals is associated with Jharkhand?

- A. Chavang Kut
- B. Tusu
- C. Saga Dawa
- D. Losar



Q82 General Awareness and Current Affairs

'Equality of opportunity in matters of public employment' as a Fundamental Right in the Indian Constitution is given in which Article of the Constitution?

- A. Article 14
- B. Article 15
- C. Article 16
- D. Article 17



Q83 General Awareness and Current Affairs

After formation of the Janata Party government at Centre, which of the following multinationals shut its India operations due to compliance issue with the Foreign Exchange Regulation Act that mandated foreign investors cannot own over 40% in Indian enterprises?

- A. Coca-Cola
- B. Unilever
- C. Colgate-Palmolive
- D. Nestle



Q84 General Awareness and Current Affairs

What is the name of India's first privately developed fully cryogenic rocket engine?

- A. Dhawan-1
- B. Kalam-1
- C. Sarabhai-1
- D. Bhabha-1



Q85 General Awareness and Current Affairs

The Ministry of Labour and Employment has developed eSHRAM portal for _____.

- A. creating a National Database of Organised Workers (NDOW)
- B. creating a National Database of Unorganised Workers (NDUW) ✓
- C. creating a National Database of Government Workers (NDGW)
- D. creating a National Database of Public Sector Undertakings Workers (NDPSUW)

Q86 General Awareness and Current Affairs

Which of the following is the only permanent unit in the Panchayati Raj System?

- A. Panchayat Samiti
- B. Gram Sabha ✓
- C. Zila Parishad
- D. Nagar Panchayat

Q87 General Awareness and Current Affairs

In Assembly Election 2022, how many seats did Aam Aadmi Party win in Punjab?

- A. 92 ✓
- B. 93
- C. 94
- D. 95

Q88 General Awareness and Current Affairs

Which is the first Indian mosque?

- A. Malik Dinar Mosque
- B. Palaiya Jumma Palli
- C. Cheraman Juma Mosque ✓
- D. Ziarat Shareef



Q89 General Awareness and Current Affairs

The 'Hunar Haat' exhibition was organised in the Kota district of Rajasthan from 27 February to 7 March 2021 under the USTTAD scheme of the _____.

- A. Ministry of Home Affairs
- B. Ministry of Finance
- C. Ministry of Skill Development and Entrepreneurship
- D. Ministry of Minority Affairs



Q90 General Awareness and Current Affairs

In which of the following states in India is the largest mass nesting site for the Olive-ridley Turtles found?

- A. Odisha
- B. Kerala
- C. Gujarat
- D. Tamil Nadu



Q91 General Awareness and Current Affairs

Services e-Health Assistance and Teleconsultation (SeHAT) is a teleconsultation service launched by which of the following ministries?

- A. Ministry of Home Affairs
- B. Ministry of Defence
- C. Ministry of Women and Child Development
- D. Ministry of AYUSH



Q92 General Awareness and Current Affairs

As of April 2022, how much FDI is permitted in railways under automatic route in construction, operation, and maintenance of Rail Infrastructure projects?

- A. 49%
- B. 74%
- C. 80%
- D. 100%



Q93 General Awareness and Current Affairs

In the year 2020, the Oriental Bank of Commerce (OBC) and the United Bank of India were merged with which of the following banks?

- A. Bank of Maharashtra
- B. Bank of India
- C. State Bank of India
- D. Punjab National Bank



Q94 General Awareness and Current Affairs

Who started the Mahila Seva Mandal to promote women's rights in 1852?

- A. Ramabai Ranade
- B. Annie Besant
- C. Sarojini Naidu
- D. Savitribai Phule



Q95 General Awareness and Current Affairs

In macroeconomic analysis, marginal propensity to save (MPS) is _____.

- A. the change in savings per unit change in income of an individual
- B. the savings per unit of income of an individual
- C. the savings per unit change in the price of a good
- D. the savings per unit of a good



Q96 General Awareness and Current Affairs

PV Sindhu won a bronze medal in May 2022 in which of the following badminton tournaments?

- A. European Badminton Championships 2022
- B. Badminton Asia Championships 2022
- C. Yonex Open 2022
- D. Australian National Badminton Championships 2022



Q97 General Awareness and Current Affairs

In June 2022, the 4th Edition of the Khelo India Youth Games was inaugurated in the state of _____.

- A. Rajasthan
- B. Gujarat
- C. Haryana
- D. Madhya Pradesh



Q98 General Awareness and Current Affairs

Taramati peak is located in:

- A. Maharashtra
- B. Rajasthan
- C. Madhya Pradesh
- D. Haryana



Q99 General Awareness and Current Affairs

In which year was Tamil declared a classical language by the Government of India?

- A. 2004
- B. 2005
- C. 2010
- D. 2014



Q100 General Awareness and Current Affairs

Which mineral ore's deposits are formed by the decomposition of a wide variety of rocks rich in aluminium silicates?

- A. Alumina
- B. Bauxite
- C. Iron
- D. Manganese



Mathematics

25 Questions • Answer Key

Q1 Mathematics

What annual equal payment (in ₹) will discharge a debt of ₹28,700 due in 2 years at 5% p.a., interest compounded annually?

A. 15,345

B. 15,435



C. 15,543

D. 15,534

Q2 Mathematics

5650 increased by 15% equals how much?

A. 6435.00

B. 6795.50

C. 6497.50



D. 6997.25

Q3 Mathematics

The average of the first 7 multiples of 3 is:

A. 11.3

B. 10.5

C. 12.5

D. 12



Q4 Mathematics

Simplify the given expression.

$$2(2x - 3) + 4\left(\frac{x^2}{2} - 3x + 4\right)$$

A. $2x^2 + 8x - 10$ B. $2x^2 - 8x + 10$ C. $2x^2 + 8x + 10$ D. $2x^2 - 8x - 10$ 

Q5 Mathematics

The edges of a cuboid are in the ratio $1 : 2 : 3$ and its volume is 1296 cm^3 . The surface area of the cuboid is:

A. 824 cm^2

B. 748 cm^2

C. 684 cm^2

D. 792 cm^2 ✓

Q6 Mathematics

The length of a rectangle is 20 cm and its breadth is 8 cm. When the length is increased to 25 cm, what will be the breadth of this rectangle if its area remains the same as before?

A. 6.4 cm ✓

B. 6.7 cm

C. 7.2 cm

D. 7.5 cm

Q7 Mathematics

$\frac{5}{12}$ is the same as :

A. $0.\overline{416}$

B. $0.4\overline{16}$

C. $0.41\overline{7}$

D. $0.41\overline{6}$ ✓

Q8 Mathematics

A rectangular courtyard, 7.35 meters long and 5.25 meters wide, is paved with square tiles of the same size. Find the longest possible length of the tiles used for this purpose.

A. 105 centimeters ✓

B. 115 centimeters

C. 120 centimeters

D. 125 centimeters



Q9 Mathematics

If a dishonest shop keeper claims to sell rice at cost price but uses a faulty weight and thus gains 14%, then find the weight he actually gives per kilogram of rice for which a customer pays. (Round the answer to the nearest whole number.)

A. 857 gm

B. 867 gm

C. 877 gm



D. 887 gm

Q10 Mathematics

Which of the options below give the solution to the equation $\frac{1}{x+3} + \frac{1}{x+5} = \frac{1}{6}$?

A. $x = 3 \pm \sqrt{37}$ B. $x = 2 \pm \sqrt{39}$ C. $x = 4 \pm \sqrt{37}$ D. $x = 2 \pm \sqrt{37}$ **Q11** Mathematics

The value of

$\operatorname{cosec}(47^\circ + \theta) - \sec(43^\circ - \theta) + \tan(61^\circ + \theta) - \cot(29^\circ - \theta) + \sin(45^\circ + \theta) - \cos(45^\circ - \theta)$ is equal to:

A. 1

B. 0

C. $\frac{1}{\sqrt{2}}$ D. $\frac{\sqrt{3}}{2}$ 

Q12 Mathematics

If $4^{3x} - 8^{x+1} + 16 = 0$ is written as a quadratic equation where $y = 2^{3x}$, then which of the options below will represent the quadratic equation mentioned above?

A. $y^2 - 4y + 16 = 0$

B. $4y^2 - 4y + 16 = 0$

C. $y^2 - 8y + 16 = 0$ ✓

D. $4y^2 - 8y + 16 = 0$

Q13 Mathematics

A table and a swing were sold for ₹9,936 each. The table was sold for a profit of 8% and the swing was sold for a loss of 8%. What is the gain or loss percentage in the whole transaction?

A. 0.64% loss ✓

B. 0.64% profit

C. No profit no loss

D. 2% profit

Q14 Mathematics

Two years ago, the ratio of the respective ages of Subash and Pranav was 4 : 5. Three years hence, this ratio will become 5 : 6. The present age of Pranav is:

A. 22 years

B. 25 years

C. 27 years ✓

D. 20 years



Q15 Mathematics

A can do a certain piece of work in 8 days, B can do the same work in 18 days and C can do the same work in 12 days. Find the number of days it will take to complete the same work, if they all work together.

A. $\frac{19}{72}$

B. $\frac{48}{19}$

C. $\frac{19}{48}$

D. $\frac{72}{19}$ ✓

Q16 Mathematics

Evaluate $\sqrt{21 + \sqrt{19 - \sqrt{6 + 3}}}$.

A. 3

B. 4

C. 5 ✓

D. 7

Q17 Mathematics

Eduardo, Abraham and Xavier can finish a certain piece of work in 12, 10 and 15 days, respectively. All three of them started the work together. Eduardo left the work after 2 days and Abraham left just three days before the work was completed. Find the total number of days taken for the work to be completed.

A. 8.6

B. 6.8 ✓

C. 7.8

D. 8



Q18 Mathematics

Which of the following options gives the correct empirical relationship between mean, median and mode of a data set?

- A. $\text{Mean} - \text{Mode} = 3 (\text{Mean} + \text{Median})$
- B. $\text{Mean} + \text{Mode} = 3 (\text{Mean} - \text{Median})$
- C. $\text{Mean} - \text{Mode} = 3 (\text{Mean} - \text{Median})$ ✓
- D. $\text{Mean} + \text{Mode} = 3 (\text{Mean} + \text{Median})$

Q19 Mathematics

If $0.4 : x :: x : 6.4$, and $x > 0$, then find the value of x .

- A. 1.6 ✓
- B. 0.5
- C. 16
- D. 4.64

Q20 Mathematics

If 2 and -3 are the roots of a quadratic equation, then the quadratic equation is:

- A. $x^2 + x + 6 = 0$
- B. $x^2 - x - 6 = 0$
- C. $x^2 + x - 6 = 0$ ✓
- D. $x^2 - x + 6 = 0$

Q21 Mathematics

The difference between two numbers is 18. If the difference between their squares is 360, find the larger number.

- A. 18
- B. 19 ✓
- C. 15
- D. 16



Q22 Mathematics

Find the smaller of the two roots of the equation

$$x^2 + 8x + 15 = 0.$$

A. $x = -5$



B. $x = -3$

C. $x = 5$

D. $x = 3$

Q23 Mathematics

The length of each side of a rhombus is 20 cm, and the length of one of its diagonal is 30 cm. Find the length (in cm) of its other diagonal.

A. $\sqrt{175}$

B. $10\sqrt{7}$



C. $6\sqrt{7}$

D. $\sqrt{7}$

Q24 Mathematics

In $\triangle ABC$ and $\triangle DEF$, if $AB = DE$, $AC = EF$ and $BC = DF$, then which of the following is true based on SSS theorem?

A. $\triangle ABC \cong \triangle DEF$

B. $\triangle ABC \cong \triangle EFD$

C. $\triangle ABC \cong \triangle FDE$

D. $\triangle ABC \cong \triangle EDF$

**Q25** Mathematics

Find the HCF of 12, 16 and 24.

A. 4



B. 48

C. 24

D. 16



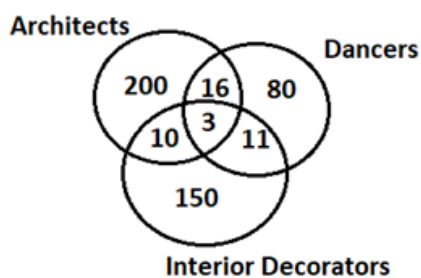
Q26 General Intelligence and Reasoning

Priyanka walks 9 m towards the south. She turns left and walks 7 m. Then she turns right and walks 5 m. She again turns right and walks 9 m. In which direction is Priyanka facing now? (All turns are 90 degree turns only)

- A. South
- B. East
- C. North
- D. West

**Q27** General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such interior decorators are there who are NEITHER architects NOR dancers?

- A. 174
- B. 171
- C. 160
- D. 150

**Q28** General Intelligence and Reasoning

In a certain code language, 'Peaches were sweet' is written as 'go la ba'. 'Sour grapes and sweet apples' is written as 'bimb ko da go sa'. Which of the following codes represents the word 'Sweet'?

- A. ba
- B. bimb
- C. la
- D. go



Q29 General Intelligence and Reasoning

In a group of six people, each has a different height. Reshma is the tallest and Kavita is taller than Surbhi, who is shorter than Lalita. Pallavi is taller than Ganga but shorter than Surbhi. Kavita is taller than Lalita. Who among the following is the shortest?

A. Surbhi

B. Ganga



C. Lalita

D. Kavita

Q30 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

$27 : 6 :: 18 : ? :: 36 : 8$

A. 3

B. 5

C. 6

D. 4



Q31 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$625 \times 31 \div 233 - 59 = ?$

A. 24



B. 20

C. 13

D. 33

Q32 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. C is taller than only two other friends. E is shorter than only one friend. B is shorter than C but taller than A. D is shorter than F. Who is the shortest among all the friends?

A. C

B. B

C. A



D. D



Q33 General Intelligence and Reasoning

Which two numbers should be interchanged to make the given equation correct?

$$25 \times 9 - 74 + 459 \div 3 = 52$$

- A. 25 and 3
- B. 9 and 3
- C. 25 and 74
- D. 74 and 3



Q34 General Intelligence and Reasoning

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All clouds are waters.
Some waters are juices.
All juices are sugars.

Conclusions:

- I. Some clouds are sugars.
- II. Some waters are sugars.
- III. Some waters are clouds.

- A. Only conclusions I and II follow
- B. Only conclusions I and III follow
- C. Only conclusions II and III follow
- D. Only conclusion III follows



Q35 General Intelligence and Reasoning

If each of the letters in the word FATIGUE is arranged in alphabetical order, then after rearrangement how many letters will be there in the English alphabetical series between the letter that is fourth from the left and the one that is second from the right?

- A. Nine
- B. Eleven
- C. Ten
- D. Twelve



Q36 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. M sits third to the right of A. M is second to the left of P. Only one person sits between P and S. Q sits to the immediate right of S, and no other person is sitting in the row. What is the total number of people seated in the row?

A. 8

B. 9



C. 10

D. 7

Q37 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 6. B lives immediately below A and immediately above C. Only one person lives above E. Neither B nor C lives on the lowermost floor. A does not live on the topmost floor. Only two people live between A and D. Who lives immediately below C?

A. D



B. A

C. E

D. F

Q38 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets. (NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(6, 17, 40)

(13, 9, 31)

A. (31, 16, 45)

B. (27, 14, 49)

C. (21, 15, 51)



D. (6, 13, 25)



Q39 General Intelligence and Reasoning

Veer starts from Point A and drives 7 km towards the north. He then takes a right turn, drives 8 km, turns right and drives 19 km. He then takes a right turn and drives 3 km, takes a right turn and drives 12 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

- A. 9 km towards the south
- B. 5 km towards the west
- C. 6 km towards the east
- D. 8 km towards the south

Q40 General Intelligence and Reasoning

Eight persons are sitting around a circular table facing the centre. Z is an immediate neighbour of both U and V. Z is second to the left of X. S is an immediate neighbour of both U and T. U sits third to the left of X. W is an immediate neighbour of T. Y sits second to the right of V. Who sits third to the left of T?

- A. W
- B. X
- C. Y
- D. Z

Q41 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3 3.5 4.5 6 8 ?

- A. 10.5
- B. 11
- C. 9.5
- D. 12.5

Q42 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

OWJ 4, MUH 9, KSF 14, IQD 19, ?

- A. GLC 23
- B. KLB 25
- C. JOB 22
- D. GOB 24

Q43 General Intelligence and Reasoning

Six presidents with the initials O, P, S, B, N and K are sitting around a circular table, facing the centre and at equal distance from each other, not necessarily in the same order.

P sits exactly between B and S. N sits exactly between K and O. B sits at the immediate right of K. O sits at the immediate right of S. Who sits second to the left of O?

A. S

B. P

C. N

D. K

Q44 General Intelligence and Reasoning

Study the given table and answer the question that follows.

The table represents the number of Rajasthani, Chinese and Gujarati dishes sold by three different restaurants (N, O and P) in one day.

Dishes	Restaurant		
	N	O	P
Rajasthani	410	560	710
Chinese	330	410	370
Gujarati	190	250	450

What is the ratio of the total number of dishes sold by 'O' to the total number of dishes sold by 'P'?

A. 122 : 153

B. 153 : 122

C. 182 : 171

D. 171 : 182

Q45 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

LGE : QLJ

KRB : PWG

A. PUN : KFD

B. SQG : HJT

C. WSN : RNJ

D. CTJ : HYO



Q46 General Intelligence and Reasoning

A certain number of people are sitting in a straight line facing north. Only one person is sitting between C and R. Only one person is sitting to the left of C. Only two people are sitting to the right of F. R is sitting to the immediate left of F. How many people are sitting in the row?

A. 6

B. 8

C. 5

D. 7



Q47 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some teeth are brushes.

All brushes are pastes.

Some pastes are gels.

Conclusions:

(I) Some brushes are gels.

(II) Some teeth are pastes.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.



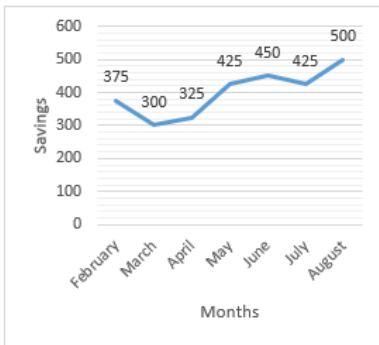
C. Both conclusion (I) and conclusion (II) follow.

D. Both conclusion (I) and conclusion (II) do not follow.



Q48 General Intelligence and Reasoning

The following graph shows the savings of Arvind over the months. Study the graph and answer the question.



What is the average savings of Arvind for all the given months?

A. 380

B. 400



C. 250

D. 395

Q49 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

200 119 70 45 36 ?

A. 35



B. 34

C. 36

D. 37

Q50 General Intelligence and Reasoning

If the numbers given below are arranged in descending order, then what is the sum of the number which is second from the right and the number which is fifth from the left?

Left 106, 91, 131, 95, 144, 123, 88, 93, 127, 73 Right

A. 194



B. 216

C. 198

D. 226



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Q51 General Intelligence and Reasoning

How many such pairs of letters are there in the word 'RIPOSTE' (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

- A. One
- B. Two
- C. Three
- D. More than three



Q52 General Intelligence and Reasoning

If the first and second, third and fourth, fifth and sixth and so on, letters of the word 'FORMULIZED' are interchanged, then the ninth letter from the left will be:

- A. Z
- B. D
- C. I
- D. U



Q53 General Intelligence and Reasoning

In a certain code language, 'SLEEK' is written as 'QICBI' and 'FROGS' is written as 'DOMDQ'. How will 'HOPES' be written in that language?

- A. FNLCQ
- B. ELMBP
- C. ELKBN
- D. FLNBQ



Q54 General Intelligence and Reasoning

Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement:

Eating foods which have been heated in plastic containers causes cancer, therefore it should be avoided.

Assumptions:

(I) Only storing food in plastic containers is not harmful for health.

(II) Non-plastic containers which can be used to heat food are available.

A. Only assumption I is implicit.

B. Only assumption II is implicit.



C. Neither assumption I nor II is implicit.

D. Both assumptions I and II are implicit.

Q55 General Intelligence and Reasoning

If tomorrow is Sunday, which day of the week will it be after 121 days from today?

A. Monday



B. Tuesday

C. Wednesday

D. Sunday

General Science

25 Questions • Answer Key

Q56 General Science

The general formula of alkene is:

A. C_nH_{2n}



B. C_nH_{2n-2}

C. C_nH_{2n+2}

D. C_nH_n



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Q57 General Science

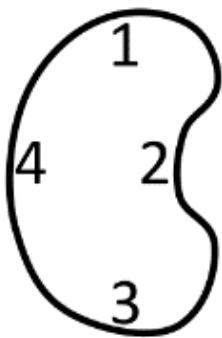
_____ protects circuits and appliances by stopping the flow of excessively high electric current.

- A. Electric heater
- B. Bulb
- C. Fuse
- D. Electric metre



Q58 General Science

The following figure shows the right human kidney. At which point does the ureter exit the kidney?



- A. Point 1
- B. Point 2
- C. Point 3
- D. Point 4



Q59 General Science HINDI - no English version saved

निम्न में से कौन सा जीवित/सजीव होने का एक सामान्य प्रमाण है?

- A. हमारी आंखों के सामने पौधों की दृश्यमान वृद्धि।
- B. पौधों की दृश्यमान गति।
- C. दृश्यमान गति के बिना कुछ प्राणी सांस ले सकते हैं।
- D. किसी भी प्रकार की गति, चाहे वृद्धि-संबंधी हो या श्वसन संबंधी।



Q60 General Science

Which of the following helps in temperature regulation in plants?

- A. Photosynthesis
- B. Absorption
- C. Transpiration
- D. Root pressure



Q61 General Science

One reason why Mendel was successful in discovering the laws governing inheritance of traits was _____.

- A. he used plants instead of animals
- B. he kept numerical count of the progeny
- C. he was trained in scientific methods
- D. he used his knowledge of evolutionary processes



Q62 General Science

A doublet is a combination of two lenses. One such doublet is made with a convex lens of focal length of 20 cm and a concave lens of focal length of 50 cm. The effective focal length and power of this doublet is _____ and _____, respectively.

- A. 33.3 cm, 3D
- B. 20 cm, 5D
- C. 50 cm, 2D
- D. 14.28 cm, 7D



Q63 General Science

Which of the following statements is/are true regarding the centre of curvature of a spherical mirror?

(S - I) Rays of light passing in any direction through the centre of curvature are normal to the mirror,

(S - II) A ray of light passing through the centre of curvature, and the principal focus is also normal to the mirror.

(S - III) The angle of incidence of the ray of light passing through the centre of curvature on to the mirror is 90° .

- A. (S - I) only
- B. (S - I) and (S - II) only
- C. (S - I) and (S - III) only
- D. (S - I), (S - II) and (S - III)

Q64 General Science

In an electric motor, the direction of currents flowing through the arms of the coil will be _____ to each other due to Fleming's left hand rule.

- A. parallel
- B. Perpendicular
- C. Opposite
- D. in the same direction

Q65 General Science

What is the best diet for a pregnant woman?

- A. A special diet prescribed by a dietician
- B. A diet rich in proteins and vitamins
- C. Adding iron supplements to a high calorie diet
- D. Diet rich in Ghee

Q66 General Science

When an object is placed at a distance of 60 cm from a concave lens of focal length 30 cm then the magnification of the image is:

- A. +1.33
- B. -0.33
- C. -1.33
- D. +0.33



Q67 General Science

Tawa dam was built in:

- A. 1960s
- B. 1970s
- C. 1980s
- D. 1990s

Q68 General Science

Which of the following statements is true about combination reaction?

- A. A single product is formed from two or more reactants.
- B. Only two elements react to give the products.
- C. Only two products are formed.
- D. A single reactant changes to a single product.

Q69 General Science

Select the correct homologous series of alkane.

- A. CH_4 , C_2H_4 , C_3H_8 , C_4H_{10}
- B. CH_4 , C_2H_6 , C_3H_8 , C_4H_{10}
- C. CH_4 , C_2H_4 , C_3H_4 , C_4H_{10}
- D. CH_4 , C_3H_8 , C_2H_6 , C_4H_{10}

Q70 General Science

When a thin beam of white light is passed through a prism then:

- A. light will converge
- B. light will reflect
- C. light will disperse
- D. light will twinkle



Q71 General Science

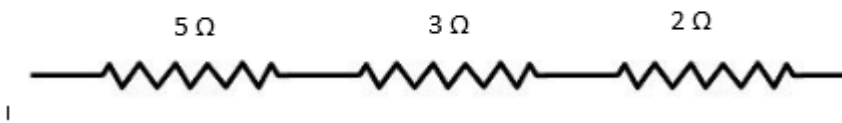
Elements were classified on the basis of their _____

- A. different physical but same chemical properties
- B. different physical as well different chemical properties
- C. state of matter
- D. different valency

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q72 General Science

The resistance of the given circuit in ohm is:



- A. 5
- B. 3
- C. 2
- D. 10



Q73 General Science

Which of the following ionic compounds has the highest boiling point?

- A. CaCl_2
- B. NaCl
- C. MgCl_2
- D. LiCl



Q74 General Science

Consider a circuit in which three resistors of $10\ \Omega$, $20\ \Omega$ and $30\ \Omega$ are connected in parallel to each other to a cell of $220\ \text{V}$. The effective resistance and the current in the $20\ \Omega$ resistor are _____ and _____, respectively.

- A. $\frac{60}{11}\ \Omega$, $22\ \text{A}$
- B. $\frac{60}{11}\ \Omega$, $11\ \text{A}$ ✓
- C. $\frac{30}{11}\ \Omega$, $22\ \text{A}$
- D. $\frac{30}{11}\ \Omega$, $11\ \text{A}$

Q75 General Science

Which statement regarding HIV is FALSE?

- A. HIV can be transmitted through sexual intercourse with an infected partner.
- B. HIV attacks your immune system by entering your red blood cells. ✓
- C. HIV stops your immune system from being able to protect your body.
- D. Once HIV has weakened your immune system, germs can take over your body, and you become sick.

Q76 General Science

Which of the following outcomes is NOT caused due to the burning of fossil fuels?

- A. Formation of oxides of nitrogen and sulphur
- B. Acid rain
- C. Decrease in ozone levels in the upper layers of the atmosphere ✓
- D. Smog formation

Q77 General Science

Which of the following mild non-corrosive basic salts is prepared by the reaction of aqueous sodium chloride solution with ammonia and carbon dioxide?

- A. Baking soda ✓
- B. Baking powder
- C. Bleaching powder
- D. Washing soda



Q78 General Science

The frequency of AC supply for house-hold purpose is _____.

- A. 50 Hz
- B. 100 Hz
- C. 150 Hz
- D. 200 Hz



Q79 General Science

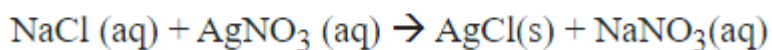
If element 'X' belongs to group 17 and period 4 in the periodic table, then how many shells will be completely filled?

- A. 1
- B. 2
- C. 3
- D. 4



Q80 General Science

Identify the following type of reaction.



- A. Combination reaction
- B. Combustion reaction
- C. Double displacement reaction
- D. Decomposition reaction



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Constant returns to scale (CRS) is a property of production function that holds when _____.

- A. a proportional increase in all inputs results in an increase in output by more than the proportion
- B. a proportional increase in all inputs results in an increase in output by the same proportion
- C. a proportional increase in all inputs results in an increase in output by less than the proportion
- D. a proportional increase in all inputs may results in an increase in output by less than or more than the proportion



Q82 General Awareness and Current Affairs

As per provisions given in Article 76 of the Indian Constitution, the President shall appoint a person as Attorney-General for India who is qualified to be _____.

- A. appointed as Judge of the Supreme Court
- B. appointed as Judge of any High Court
- C. appointed as Minister in the Union Cabinet
- D. appointed as Minister in any State Cabinet

Q83 General Awareness and Current Affairs

In which year was the SHG-Bank Linkage Programme (SHG-BLP) launched for the first time in India to improve the microfinance sector?

- A. 1985-86
- B. 1992-93
- C. 1996-97
- D. 2001-02

Q84 General Awareness and Current Affairs

A participative model with four interconnected tracks has been envisioned to formulate the STIP (Science, Technology and Innovation Policy) 2020. Identify the option that contains the four interconnected tracks mentioned in STIP 2020.

- A) Extended public and expert consultation
- B) Thematic group consultation
- C) Ministries and State consultation
- D) Apex level multi stakeholder consultation
- E) School student consultation

- A. A, B, D and E
- B. A, B, C and E
- C. A, B, C, and D
- D. B, C, D and E

Q85 General Awareness and Current Affairs

In which of the following states was the Santosh Trophy 2021-22 held in the month of April-May 2022?

- A. Andhra Pradesh
- B. Goa
- C. Kerala
- D. Tamil Nadu



Q86 General Awareness and Current Affairs

Under Article 243 Q of the Constitution of India, Municipalities are categorised in how many categories?

- A. Three
- B. Four
- C. Five
- D. Six



Q87 General Awareness and Current Affairs

Where is the Maulana Azad National Urdu University located?

- A. Hyderabad
- B. Aligarh
- C. Patna
- D. Bhopal



Q88 General Awareness and Current Affairs

Which Indian badminton player won the Women's Singles Title at the Singapore Open in 2022?

- A. Saina Nehwal
- B. Ashwini Ponappa
- C. PV Sindhu
- D. PC Thulasi



Q89 General Awareness and Current Affairs

Which of the following peaks of the Himalayas is located in India?

- A. Annapurna
- B. Kamet
- C. Dhaulagiri
- D. Makalu



Q90 General Awareness and Current Affairs

Which type of forest is a major source of shrubs, scrubs and resources such as silver fir, junipers, pines and birches to nomadic tribes, like the Gujjars and the Bakarwals?

- A. Montane forests
- B. Tropical evergreen forests
- C. Tropical deciduous forests
- D. Mangrove forests



Q91 General Awareness and Current Affairs

When was the Asiatic Society formed by Sir William Jones at Calcutta?

- A. 1780
- B. 1782
- C. 1784
- D. 1788



Q92 General Awareness and Current Affairs

Who was the Prime Minister of India when the Third Five-Year Plan was made?

- A. Jawaharlal Nehru
- B. Indira Gandhi
- C. Morarji Desai
- D. Rajiv Gandhi



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Q93 General Awareness and Current Affairs

The approximate total length of the coastline of the mainland of India, Lakshadweep Islands and Andaman & Nicobar Islands is:

- A. 7516.6 km
- B. 8516.6 km
- C. 9516.6 km
- D. 10516.6 km

Q94 General Awareness and Current Affairs

In the 2022-2023 budget, the Government of Rajasthan announced that it would provide free electricity of up to 50 units for domestic users consuming upto _____ units per month.

- A. 200
- B. 100
- C. 150
- D. 250

Q95 General Awareness and Current Affairs HINDI - no English version saved

इनमें से कौन सा शब्द सामान्यतः एक बौद्ध मठ को संदर्भित करता है, जिसमें बौद्ध भिक्षु रहते हैं?

- A. विहार
- B. गृह
- C. चैत्य
- D. स्तूप

Q96 General Awareness and Current Affairs

In 2014, the Government of India extended the validity of industrial licenses to as much as _____ years from three to encourage domestic manufacturing.

- A. seven
- B. eight
- C. nine
- D. ten



Q97 General Awareness and Current Affairs

ABHA (Ayushman Bharat Health Account) number is a/an _____ number that will uniquely identify a person as a participant in India's digital healthcare ecosystem.

- A. 16-digit
- B. 14-digit
- C. 10-digit
- D. 8-digit



Q98 General Awareness and Current Affairs

Which organization/institute received the Subhas Chandra Bose Aapda Prabandhan Puraskar for year 2022?

- A. Indian Institute of Science Bengaluru
- B. Indian Institute of Technology Delhi
- C. Gujarat Institute of Disaster Management
- D. Indian Institute of Technology Gandhinagar



Q99 General Awareness and Current Affairs

The Purandaradasa Aradhana is principally a _____ Festival.

- A. Dance
- B. Theater
- C. Martial Art
- D. Classical Music



Q100 General Awareness and Current Affairs

The Fundamental Duties in the Constitution of India are given in which part of the Constitution?

- A. Part IV
- B. Part IVA
- C. Part V
- D. Part VA



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Find the arithmetic mean of the following data.

x	6	10	18	24	30	36
f	4	3	4	2	1	1

A. 12

B. 13

C. 16



D. 17

Q2 Mathematics

If $a = 28 - 5\sqrt{12}$ and $b = 2 + \sqrt{3}$, find the value of $(a\sqrt{3} + b)$.A. $-28 + 29\sqrt{3}$ B. $31 - 8\sqrt{3}$ C. $32 + 27\sqrt{3}$ D. $-30 + 30\sqrt{3}$

Q3 Mathematics

If pipe A can fill a cistern in X hours, pipe B can fill the same cistern in Y hours, and pipe C can empty the full cistern in Z hours, then find the time taken to completely fill the cistern, if Pipes A, B and C are opened together.

A. $\frac{XYZ}{YZ + XZ - XY}$ B. $\frac{XYZ}{YZ - XZ - XY}$ C. $\frac{XYZ}{YZ + XZ + XY}$ D. $\frac{XYZ}{YZ - XZ + XY}$ 

Q4 Mathematics

Find the LCM of 20, 120 and 60.

- A. 60
- B. 80
- C. 100
- D. 120



Q5 Mathematics

What is the compound interest, rounded to nearest rupee, on ₹82,000 for 3 years at 6% per annum compounded annually?

- A. ₹14,674
- B. ₹15,366
- C. ₹15,663
- D. ₹15,000



Q6 Mathematics

If p and q are co-primes, then p^7 and q^9 are:

- A. co-primes, but not composite numbers
- B. primes
- C. composite numbers, but not co-primes
- D. co-primes, and composite numbers



Q7 Mathematics

The nature of the roots of the quadratic equation $x^2 + 4x + 8 = 0$ is:

- A. not real roots
- B. real, irrational, unequal roots
- C. real, rational, unequal roots
- D. real, rational, equal roots



Q8 Mathematics

If $x \neq y$, and $x^2y - xy^2 : yz(x - y) :: xa^2 - xb^2 : w$, then which of the options below gives an expression equivalent to w ?

A. $za^2 + zb^2$

B. $yza^2 - yzb^2$

C. $za^2 - zb^2$ ✓

D. $a^2 - b^2$

Q9 Mathematics

If the volume of a sphere is 4851 cm^3 , then find the radius of the sphere. [Use $\pi = \frac{22}{7}$]

A. 10.5 cm ✓

B. 11.5 cm

C. 12.5 cm

D. 13.5 cm

Q10 Mathematics

Simplify the given expression.

$$3x(x - 9) - 9x^2 + 2x + 24 - x^3$$

A. $24 - 25x - 6x^2 - x^3$ ✓

B. $24 - 25x - 6x^2 + x^3$

C. $24 - 25x + 6x^2 - x^3$

D. $24 + 25x - 6x^2 - x^3$

Q11 Mathematics

Identify the quadratic equation one of whose roots is $4 + \sqrt{3}$.

A. $x^2 + 8x + 13 = 0$

B. $x^2 - 8x + 13 = 0$ ✓

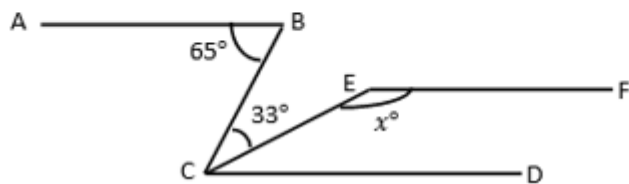
C. $x^2 - 8x + 11 = 0$

D. $x^2 + 8x + 11 = 0$



Q12 Mathematics

In the given figure, $AB \parallel CD \parallel EF$. The value of x° is:



A. 147°

B. 148° ✓

C. 115°

D. 126°

Q13 Mathematics

Simplify $\left(\frac{16a^{\frac{4}{3}}b^{\frac{-5}{6}}}{a^{\frac{-2}{3}}b^{\frac{1}{6}}} \right)^{\frac{1}{2}}$.

A. $\frac{1}{(ab)^{\frac{1}{2}}}$

B. $\frac{a}{\frac{1}{b^2}}$

C. $\frac{4a}{\frac{1}{b^2}}$ ✓

D. $\frac{4a}{b^2}$

Q14 Mathematics

The marks of a student increased from 10 to 12. Find the percentage increase in the marks.

A. 12%

B. 20% ✓

C. 2%

D. 17%



Q15 Mathematics

Deeksha travels in her car from City A to City B at a speed of 120 km/h, and while coming back by the same route from City B to City A, she travels at a speed of 130 km/h. Find Deeksha's average speed during the whole journey

- A. 123.9 km/h
- B. 122.8 km/h
- C. 125.0 km/h
- D. 124.8 km/h

**Q16** Mathematics

If the base area of a right circular cylinder is 346.50 cm^2 and its height is 21 cm, then find its total surface area.

[Use $\pi = \frac{22}{7}$]

- A. 2079 cm^2
- B. 2145 cm^2
- C. 2231 cm^2
- D. 2352 cm^2

**Q17** Mathematics

If $3 \sin^2 \theta + 7 \cos^2 \theta = 6$ and $0 < \theta \leq 90^\circ$, then the value of θ is:

- A. 90°
- B. 60°
- C. 45°
- D. 30°

**Q18** Mathematics

If $\sqrt{y} \div \sqrt{121} = 0.03$, then find the value of y , giving your answer correct to 3 decimal places.

- A. 0.109
- B. 0.176
- C. 1.760
- D. 1.640



Q19 Mathematics

If $a\%$ is the first discount and $b\%$ is the second discount on the marked price of an article, then an equivalent single discount percentage is given by:

A. $a + b + \frac{ab}{100}$

B. $a + b - \frac{ab}{100}$ ✓

C. $a + b - \frac{a + b}{100}$

D. $a + b - \frac{a - b}{100}$

Q20 Mathematics

Straight line FB is parallel to straight line GD. A is a point on straight line FB and C is a point on straight line GD. E is a point between FB and GD such that $\angle BAE = 118^\circ$ and $\angle DCE = 112^\circ$. What is the measure of $\frac{1}{2} \angle AEC$?

A. 62°

B. 65° ✓

C. 72°

D. 75°

Q21 Mathematics

A number is split into two parts such that one part is 14 more than the other, and the ratio of the two parts is 7 : 5. Find the number.

A. 84 ✓

B. 35

C. 49

D. 54



Q22 Mathematics

Prakash and Vinesh can complete a certain piece of work in 12 and 14 days, respectively. They started to work together, and after 3 days, Vinesh left. In how many days will Prakash complete the remaining work?

A. $\frac{44}{7}$

B. $\frac{43}{8}$

C. $\frac{45}{7}$ ✓

D. 44

Q23 Mathematics

If $21.134 \times 10^x = 0.0021134$, then find the value of x .

A. -4 ✓

B. -3

C. -2

D. 0

Q24 Mathematics

The ages of two persons differ by 14 years. If 4 years ago, the elder one was three times as old as the younger one, then the present age of younger one is:

A. 10 years

B. 11 years ✓

C. 12 years

D. 13 years

Q25 Mathematics

The marked price of a car is ₹5,00,000. Under a scheme successive discount of 10% and 8% are offered on it. Find the total discount offered while selling the car under the given scheme.

A. ₹76,000

B. ₹90,000

C. ₹82,000

D. ₹86,000 ✓



Q26 General Intelligence and Reasoning

Eight friends are sitting around a square table facing the centre. Four of them are sitting at the corners and remaining four are sitting at the exact middle of the four sides. Only Charu is sitting between Karan and Hitesh. Jay is sitting fourth to the left of Laxshita. Alok is sitting second to the left of Laxshita. Siya is sitting to the immediate right of Jay. Karan is sitting fourth to the left of Siya. Rashmi is sitting fourth to the right of Hitesh. Who is sitting to the immediate right of Alok?

- A. Siya
- B. Jay
- C. Hitesh
- D. Rashmi

**Q27** General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$2.59 \times 1.3 - 4 + 3 = ?$$

- A. 2
- B. 4
- C. 1
- D. 0

**Q28** General Intelligence and Reasoning

In a certain code language, 'QUILT' is written as 'RXJOU' and 'BLEAK' is written as 'COFDL'. How will 'CHAIR' be written in that language?

- A. DJCLT
- B. DJBKT
- C. DBLKS
- D. DKBLS



Q29 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

$7 : 52 :: 11 : ? :: 9 : 84$

A. 124



B. 119

C. 152

D. 132

Q30 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(1, 3, 4)

(8, 24, 18)

A. (8, 13, 10)

B. (19, 25, 12)

C. (10, 23, 15)



D. (8, 14, 10)



Q31 General Intelligence and Reasoning

Study the given bar-graph and answer the question that follows.

The bar-graph depicts the number of tickets booked for Delhi and Mumbai by Airlines P, Q and R.



The total number of tickets booked for Mumbai by Airlines Q and R was what per cent more than the number of tickets booked for Delhi by Airline R?

- A. 50%
- B. 200%
- C. 100%
- D. 150%

**Q32 General Intelligence and Reasoning**

The given statements are followed by three conclusions. Find out which conclusion is true based on the given statements.

Statements:

$$L > M = N \geq O, P \geq Q \leq R = O$$

Conclusions:

- I. $N \geq O$
- II. $L > R$
- III. $M \geq Q$

- A. Only conclusion I is true
- B. Only conclusion II is true
- C. Only conclusion III is true
- D. All conclusions I, II and III are true



Q33 General Intelligence and Reasoning

Each vowel in the word HOCKEY is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter thus formed is arranged in alphabetical order, which letter will be fourth from the right?

A. J

B. G



C. P

D. F

Q34 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Only three people sit between F and C. D sits second to the right of C. A sits third to the left of F. Only one person sits between D and B. If no other person is sitting in the row, what is the total number of persons seated?

A. 11

B. 14

C. 10

D. 12



Q35 General Intelligence and Reasoning

If 1 is added to each digit of the number 870548362, what will be the sum of the fourth, fifth and sixth digit when counted from left?

A. 17

B. 24

C. 16

D. 20



Q36 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All plums are guavas.

Some plums are mangoes.

No plum is a kiwi.

Conclusions:

- I. Some guavas are kiwis.
- II. Some mangoes are kiwis.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follows



D. Both conclusions I and II follow

Q37 General Intelligence and Reasoning

Which two signs should be interchanged to make the following equation correct?

$$[(15 + 3) - (4 \times 2)] \div (4 - 6) \times 5 = 10$$

A. $\times$ and $+$

B. $+$ and $-$



C. $\times$ and $\div$

D. $+$ and $\div$

Q38 General Intelligence and Reasoning

Kiran starts from Point A and drives 4 km towards the east. He then takes a right turn, drives 9 km, turns left and drives 5 km. He then takes a left turn and drives 17 km, takes a left turn and drives 14 km. He then turns left, drives 8 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 9 km towards the south

B. 12 km towards the west

C. 6 km towards the east

D. 5 km towards the east



Q39 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) B E S U Y N O A P S B G S A X T G (Right)

How many letters are there in the English alphabetical series between the letter which is sixth from the left end and the letter which is fifth from the right end of the given series?

A. 3

B. 4



C. 5

D. 6

Q40 General Intelligence and Reasoning

Bansi starts from Point A and drives 18 km towards the west. He then takes a left turn, drives 8 km, turns right and drives 3 km. He then takes a right turn and drives 4 km, takes a right turn and drives 21 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 4 km towards the north



B. 4 km towards the south

C. 6 km towards the east

D. 8 km towards the south

Q41 General Intelligence and Reasoning

A, B, C, D, E, F and G are seven students standing in a row facing North. D stands at the exact centre of the row. A stands second from the right end of the row. B stands second to the left of D. G stands exactly between D and A. F stands third from the left end of the row. C is the immediate neighbour of B. Who stands fifth from the left end of the row?

A. E

B. F

C. A

D. G



Q42 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement : $I > Q > P \geq S = U < M \leq Z$

A. $Q > S$

B. $Z > U$

C. $I < P$



D. $P \geq U$

Q43 General Intelligence and Reasoning

In a certain code language, 'ASIDE' is written as 'CVMIK' and 'ARRAY' is written as 'CUVFE'. How will 'BOUND' be written in that language?

A. DRYJS

B. DRSJY

C. DRJSY

D. DRYSJ



Q44 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1.1 ? 3.3 4.4 5.5

A. 2

B. 1.1

C. 3.3

D. 2.2



Q45 General Intelligence and Reasoning

Six workers with the initials C, E, G, J, L and M are sitting around a circular table, facing the centre and at equal distance from each other, not necessarily in the same order. J sits at the immediate right of E. E sits second to the left of M. L sits at the left of E. G sits second to the left of L. C sits at the immediate left of L. M sits at the immediate left of G. Who sits second to the left of E?

A. G

B. J

C. M

D. C



Q46 General Intelligence and Reasoning

Which of the following is NOT a leap year?

A. 2800

B. 2200



C. 6800

D. 3600

Q47 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Only four people are sitting to the left of C. Only three people are sitting to the right of B. A is sitting fourth to the left of B. A is sitting fourth to the right of E. C is sitting third to the left of E. If no other person is sitting in the row, what is the total number of persons seated?

A. 24

B. 19



C. 21

D. 23

Q48 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions numbered I and II. You have to assume everything in the statement to be true and decide which of them logically follows beyond a reasonable doubt from the information given in the statement.

Statement –

Price of onions has increased by 60 percent due to shortage of onions in the market.

Conclusion –

- I. Government can consider importing onions to bring down prices.
- II. People must stop eating onions and switch to potatoes instead.

A. Only conclusion I follows



B. Only conclusion II follows

C. Neither conclusion I nor II follows

D. Both conclusions I and II follow



Q49 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

ZA__XC__CD_AYBX_ABC_Z_YB_CA__D

A. YBACBCDAXAC

B. YBAAZBDAYBC

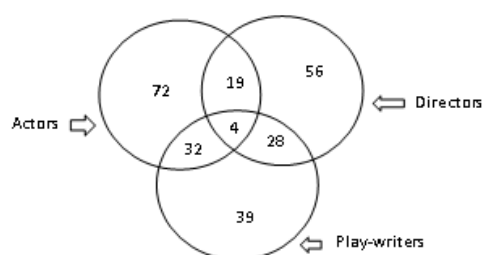
C. YBABZCDAXBC



D. YBDBACDBXBC

Q50 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such actors are there who are also directors but NOT play-writers?

A. 19



B. 4

C. 32

D. 23



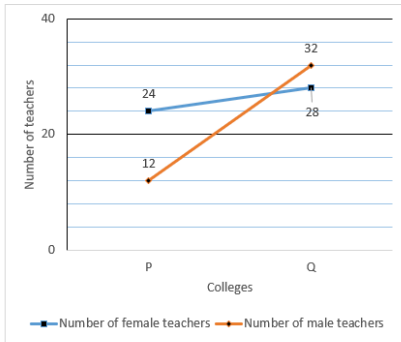
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Q51 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of teachers (male and female) in two colleges P and Q.



The number of female teachers in college P is what percentage of male teachers in college Q?

A. 75%



B. 80%

C. 85%

D. 90%

Q52 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word BRACKET is arranged in alphabetical order?

A. Two



B. Zero

C. One

D. Three

Q53 General Intelligence and Reasoning

XS 18 is related to SN 22 in a certain way. In the same way, KN 28 is related to FI 32. To which of the following is PH 44 related following the same logic?

A. KC 47

B. KC 48



C. CK 48

D. CK 74



Q54 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

All apples are papayas
Some papayas are berries
Some berries are cherries

Conclusions:

(I) Some berries are papayas
(II) All papayas are apples
(III) Some cherries are berries

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Both conclusions I and III follow
- D. None of the conclusions follow



Q55 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

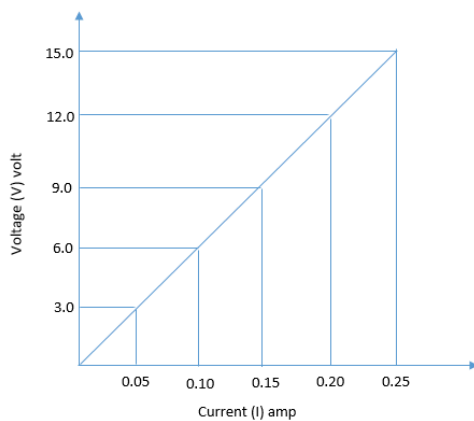
5, 24, 61, 122, 213, ?

- A. 320
- B. 334
- C. 340
- D. 350



Q56 General Science

Find the resistance of the conductor using the given graph.



- A. 60 ohm
- B. 0.016 ohm
- C. 0.24 ohm
- D. 600 ohm

**Q57** General Science

After 2 to 3 days of whitewashing of walls with a solution of slaked lime, which of the following compounds is produced that gives a shiny finish to the walls?

- A. Calcium carbonate
- B. Calcium hydroxide
- C. Calcium bicarbonate
- D. Calcium dioxide

**Q58** General Science

What is the chemical behaviour of washing soda?

- A. It is neutral in nature.
- B. It is basic in nature.
- C. It is acidic in nature.
- D. It is amphoteric in nature.



Q59 General Science

What is the relation between m , v , and u for a spherical mirror?

A. $m = v \times u$

B. $m = \frac{v}{u}$

C. $m = -v \times u$

D. $m = \frac{-v}{u}$



Q60 General Science

The correct relation between the focal length of a lens and its power is:

A. $P = f$

B. $P \propto f$

C. $P = \frac{1}{f}$



D. $P = -1/f$

Q61 General Science

The formula for Joule's heating effect is represented as _____. (In the options, H denotes the heat produced, I is the current flowing through the conductor, R is the resistance and t is the time period.)

A. $H = VI t$



B. $H = IR t$

C. $H = QI t$

D. $H = VIR$

Q62 General Science

According to Newlands law of octaves, which of the following elements have same properties?

A. Na and Cl

B. Be and Mg



C. B and Si

D. K and Co



Q63 General Science

Which of the following method(s) can be used to change the direction of force on a current carrying conductor?

- (i) Changing the magnitude of current
- (ii) Changing the strength of magnetic field
- (iii) Changing the direction of current

- A. Only (i)
- B. Only (iii)
- C. Both (i) and (iii)
- D. Both (ii) and (iii)



Q64 General Science

A heating device of power 1100 W is designed to operate at 220 V line voltage. If on a particular day the line voltage drops to 110 V, then the current through it and its output power will be ____ and ____.

- A. 5 A, 550 W
- B. 10 A, 550W
- C. 2.5 A, 275 W
- D. 10 A, 275 W



Q65 General Science

Why do plants lack a defined excretory system like kidneys in mammals?

- A. They excrete through their vegetative parts
- B. Because plants do not produce waste materials
- C. Because plants produce only gaseous wastes which diffuse out
- D. Because plants lack a circulatory system



Q66 General Science

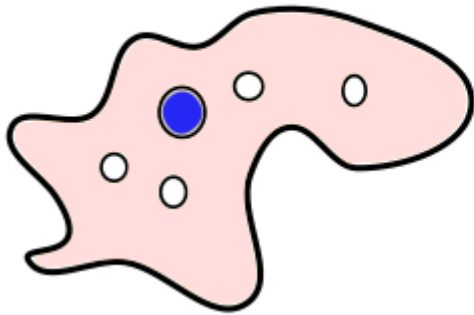
What does a self-sustaining ecosystem mean?

- A. It is not dependent on radiant energy for its maintenance.
- B. No organisms are added or removed from the biotic component.
- C. The organisms are well adapted to the local biotic components.
- D. The organic matter remains almost constant generation over generation.



Q67 General Science

How does the following organism get rid of its nitrogenous wastes?



- A. By secretion
- B. By simple diffusion
- C. Through excretory vacuoles
- D. By depositing crystals in vacuoles

Q68 General Science

Which of the following statements is INCORRECT Mendel's pea plant experiments?

- A. Mendel used a number of contrasting visible characters of garden peas – round/wrinkled seeds, tall/short plants.
- B. He took a tall plant and a short plant, produced progeny by crossing them and in the resulting F1 progeny, all plants were tall.
- C. In the second-generation, or F2 generation which are the progeny of the F1 tall plants, all the plants are tall.
- D. Appearance of both the tallness and shortness traits in F2 progeny indicated that both the traits were inherited in the F1 plants.

Q69 General Science

Which of the following belongs to homologous series of alkenes?

- A. C_3H_8
- B. C_3H_6
- C. C_3H_4
- D. C_5H_{12}



Q70 General Science

The force acting on a current carrying conductor placed in a magnetic field is _____.

- A. perpendicular to the direction of current and magnetic field ✓
- B. parallel to the direction of current and magnetic field
- C. parallel to the direction of current and perpendicular to the direction of magnetic field
- D. parallel to the direction of magnetic field and perpendicular to the direction of current

Q71 General Science

Which of the following statements regarding reproduction in flowering plants is FALSE?

- A. Reproduction may occur through seeds.
- B. Reproduction may occur from fragments of stems.
- C. Reproduction may occur through spores. ✓
- D. Reproduction may occur from tissues separated from the plant and grown on an artificial medium.

Q72 General Science

Which of the following sites is NOT suitable for building a water-harvesting pit?

- A. In the yard of a large housing complex
- B. In the corner of a small one-storey house
- C. Near a large open landfill site ✓
- D. Near a large and busy international airport

Q73 General Science

Which of the following elements shows maximum metallic character?

- A. Ga
- B. As
- C. Sc ✓
- D. Be



Q74 General Science

A ray of light in air is incident at an angle of 60° on the surface separating air from a medium of refractive index $\sqrt{3/2}$. The ray is refracted in the medium at an angle of _____.

A. 15°

B. 30°

C. 45°



D. 60°

Q75 General Science

Double displacement reaction occurs between:

A. ionic compounds



B. covalent compounds

C. both ionic and covalent compounds

D. neither ionic nor covalent compounds

Q76 General Science

Which of the following compounds is formed when baking soda is heated?

A. Sodium oxide

B. Calcium oxide

C. Sodium carbonate



D. Sodium hydroxide

Q77 General Science

Which of the following compounds has 7 covalent bonds?

A. Propane

B. Ethane



C. Butane

D. Methane



Q78 General Science

What is the rumen?

- A. A sac-like structure of the oesophagus
- B. A chamber of the stomach to store food ✓
- C. The region of the gut where cud is formed
- D. The first part of the duodenum of a cow

Q79 General Science

Which of the following converts acidic food into alkaline in the alimentary canal?

- A. Intestinal juice
- B. Bile juice ✓
- C. Gastric juice
- D. Pancreatic juice

Q80 General Science

In the following table, mirror, its application and the justification for the application are given. Identify the rows in which the information is completely correct, with regard to given spherical mirrors in column 2.

	Mirror	Application	Justification
1	Concave	Dentist Mirror	Virtual, Erect and Magnified Image
2	Convex	Street Lights	Diverges the light rays hence wider field of view is possible
3	Concave	Solar Furnace	Converges light rays from a distant source like sun
4	Convex	Rearview Mirrors	Virtual erect and enlarged images are formed

- A. Only 1
- B. Only 1 and 2
- C. Only 1, 2 and 3 ✓
- D. 1, 2, 3 and 4



Q81 General Awareness and Current Affairs

India's golden boy Neeraj Chopra secured a historic silver medal in the men's Javelin final event at the World Athletics Championships 2022 held at _____.

A. United States of America



B. United Kingdom

C. Denmark

D. Finland

Q82 General Awareness and Current Affairs

According to the Hindu Calendar, Buddha Purnima falls on the full moon day of _____.

A. Chaitra

B. Ashadha

C. Vaishakha



D. Magha

Q83 General Awareness and Current Affairs

Which of the following options explains the objectives of the National Informatics Centre (NIC)?

A) Technology partner of the government

B) Develops e-Content and learning materials for school education

C) Explores and advises on the use of emerging technologies

D) Provides data networks packages to the government and private institutes

A. A and D

B. B and C

C. A and C



D. C and D



Q84 General Awareness and Current Affairs

The second 'Muslim Women Rights Day' was observed across India on _____ to commemorate the enactment of the law against Triple Talaq.

- A. 1 June 2021
- B. 1 July 2021
- C. 1 August 2021
- D. 1 September 2021



Q85 General Awareness and Current Affairs

In which of the following years was the Delhi Land Reforms Act enacted?

- A. 1954
- B. 1951
- C. 1956
- D. 1953



Q86 General Awareness and Current Affairs

Sarhul is the main festival of the tribal population of which of the following states?

- A. Jharkhand
- B. Nagaland
- C. Meghalaya
- D. Assam



Q87 General Awareness and Current Affairs

_____ is defined as the output per unit of variable input.

- A. Minimum product
- B. Marginal product
- C. Total product
- D. Average product



Q88 General Awareness and Current Affairs

In the year 2022, tech giant Microsoft has announced to set up its fourth data centre in which of the following cities of India?

A. Hyderabad



B. Bengaluru

C. Mumbai

D. Delhi

Q89 General Awareness and Current Affairs

As of April 2022, what is the maximum strength of Rajya Sabha?

A. 325

B. 300

C. 275

D. 250



Q90 General Awareness and Current Affairs

As on August 2022, under the Pradhan Mantri Jeevan Jyoti Bima Yojana(PMJJB),the life cover of Rs. _____ lakhs shall be for the one year period stretching from 1st June to 31st May and will be renewable.

A. 1

B. 1.5

C. 2



D. 2.5

Q91 General Awareness and Current Affairs

According to the Constitution of India, the 'Protection of life and personal liberty' is a part of which Fundamental Right from the following?

A. Right to Equality

B. Right to Constitutional Remedies

C. Right to Freedom



D. Right against Exploitation



Q92 General Awareness and Current Affairs

Which of the following factors does NOT determine the climate of India?

- A. Latitude
- B. Distribution of land and water
- C. Altitude
- D. Surface area of the country



Q93 General Awareness and Current Affairs

Which of the following Acts empowered the British East India Company to retain the territories and the revenues in India in trust for the crown not for any specified period?

- A. The Regulating Act, 1773
- B. The Indian Council Act, 1909
- C. The Charter Act, 1853
- D. The Government of India Act, 1935



Q94 General Awareness and Current Affairs

As on April 2022, under the RBI guidelines, the financial assets of Non Banking Financial Companies (NBFCs) should be more than _____ of the total assets (netted off by intangible assets).

- A. 50%
- B. 60%
- C. 70%
- D. 80%



Q95 General Awareness and Current Affairs

Which of the following languages does NOT enjoy classical status in India?

- A. Maithili
- B. Telugu
- C. Malayalam
- D. Kannada



Q96 General Awareness and Current Affairs

In which year was the Mahatma Gandhi National Rural Employment Guarantee Act passed by the Government of India?

A. 2007

B. 2005



C. 2003

D. 2000

Q97 General Awareness and Current Affairs

Which place receives the highest rainfall in the world?

A. Mawsynram



B. Tura Peak

C. Dhupgarh

D. Kangto

Q98 General Awareness and Current Affairs

Who can direct to transfer any civil or criminal case from one State High Court to another State High Court or from a Court subordinate to another State High Court in India?

A. Supreme Court



B. Chief justice of High Court

C. Law commission of India

D. Governor of state

Q99 General Awareness and Current Affairs

Which of the following players won a gold at the IBA Women's World Boxing Championship 2022?

A. Nikhat Zareen



B. Sarita Devi

C. Mary Kom

D. Lekha KC



Which of the following statements is INCORRECT about soil formation?

- A. Parent rock determines colour.
- B. Temperature and rainfall influence rate of weathering.
- C. Altitude and slope determine the rate of humus formation. ☒
- D. Time determines thickness of soil profile.



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Find the HCF of 0.24 and 0.36.

A. 0.72

B. 0.12



C. 0.52

D. 0.32

Q2 Mathematics

If $x = 5$, then find the value of $16 \times x \sqrt{x^3 - x^2}$.

A. 600

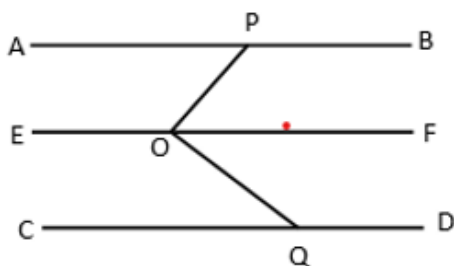
B. 700

C. 800



D. 900

Q3 Mathematics

In the given figure, $AB \parallel CD \parallel EF$, $\angle APO = 35^\circ$ and $\angle CQO = 43^\circ$. The value of $\angle EOP + \angle EOQ$ is:A. 276° B. 282° C. 264° D. 290° 

Q4 Mathematics

The HCF of fractions is calculated as $\frac{\text{HCF of the numerators}}{\text{LCM of the denominators}}$. Find the HCF of $\frac{2}{3}$, $\frac{4}{5}$ and $\frac{3}{2}$.

A. $\frac{5}{30}$

B. $\frac{3}{50}$

C. $\frac{1}{40}$

D. $\frac{1}{30}$ ✓

Q5 Mathematics

A shopkeeper sells a pair of shoes at a discount of 34% and still makes a profit of 10%. If the cost price of the pair of shoes is ₹480, find its marked price.

A. ₹800 ✓

B. ₹700

C. ₹850

D. ₹820

Q6 Mathematics

If $x = \sqrt{13 + 2\sqrt{40}}$ and $y = \sqrt{13 - 2\sqrt{40}}$, then what is the value of $(x - y)$?

A. $4\sqrt{5}$

B. $3\sqrt{2}$

C. $2\sqrt{5}$ ✓

D. $6\sqrt{2}$

Q7 Mathematics

A seller makes a profit of 20%. If he uses 10% lesser weight than the actual weight while selling goods, what is his actual profit percent?

A. 33.3% ✓

B. 15%

C. 36.6%

D. 30%



Q8 Mathematics

Find the simple interest on ₹9,600 at 7.2% per annum for 5 years.

A. ₹2,416

B. ₹3,456



C. ₹4,356

D. ₹3,546

Q9 Mathematics

The income of Hari is ₹42,000 per month. He spends 15% on rent, 8% on food, 45% on other things, and saves the remaining amount. What is the amount he saves per month?

A. ₹14,400

B. ₹13,440



C. ₹25,440

D. ₹28,560

Q10 Mathematics

16 years ago, the age of the father was 4 times the age of his son. Now the father is twice as old as his son. What is the difference between the present ages of the father and his son?

A. 24 years



B. 28 years

C. 12 years

D. 16 years

Q11 Mathematics

In a movie theatre, the price of the ticket per kid is \$2 while per adult it is \$5. On a particular day, 2000 people bought tickets and an amount of \$5,050 was collected. Find the number of \$2 tickets sold on that day.

A. 1650



B. 350

C. 1560

D. 1570



Q12 Mathematics

Hema can do a certain piece of work in 21 days. Hema and Raji can together do the same work in 18 days, and Hema, Raji and Smitha can do the same work together in 14 days. In how many days can Hema and Smitha do the same work, working together?

A. 63

B. $\frac{63}{4}$ ✓C. $\frac{63}{5}$ D. $\frac{36}{5}$ **Q13** Mathematics

Vishnu purchased 8000 products for ₹1.2 each, another 3000 products for ₹1.5 each and another 5000 products for ₹ 1.4 each. Find the average cost per product. (Round the answer to two decimal places.)

A. ₹1.41

B. ₹1.27

C. ₹1.39

D. ₹1.32 ✓

Q14 Mathematics

If $2xy^2 : 2x^2y :: 2x^2y : z$, which of the options below gives an expression equivalent to z ?

A. $4xy$ B. $4x^2y^2$ C. $2x^2$ D. $2x^3$ ✓**Q15** Mathematics

A cuboidal hall is 15 m long and 10 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of the four walls, then the volume of the hall is:

A. 900 m^3 ✓B. 840 m^3 C. 790 m^3 D. 930 m^3 

Q16 Mathematics

Each interior angle of a regular polygon of n sides is 144° . The number of sides (n) of the polygon is:

- A. 8
- B. 9
- C. 10
- D. 12

**Q17** Mathematics

Pipes A and B can fill an empty cistern in 16 minutes and 32 minutes, respectively. Both Pipe A and Pipe B are opened together. After how much time should Pipe A be turned off so that the empty cistern is completely filled in a total of 16 minutes?

- A. 9 min
- B. 7 min
- C. 8 min
- D. 6 min

**Q18** Mathematics

Using $\pi = \frac{22}{7}$, find the circumference of a circle whose diameter is 38.5 cm.

- A. 121 cm
- B. 154 cm
- C. 165 cm
- D. 170 cm

**Q19** Mathematics

If $3 + 2\sqrt{2}$ and $3 - 2\sqrt{2}$ are the roots of a quadratic equation, then the quadratic equation is:

- A. $x^2 - 6x - 1 = 0$
- B. $x^2 + 6x + 1 = 0$
- C. $x^2 - 6x + 1 = 0$
- D. $x^2 + 6x - 1 = 0$



Q20 Mathematics

The average of 7 numbers was given as 53. Later it was found that one number was misread as 16 instead of 58. What is the correct average of the given 7 numbers?

A. 59



B. 55

C. 56

D. 52

Q21 Mathematics

The cost of two chairs and three tables is ₹1,650. If the cost of a chair is ₹150 less than that of a table, then find the cost of a table.

A. ₹400

B. ₹290

C. ₹390



D. ₹380

Q22 Mathematics

What is the difference between the biggest and the smallest fractions among $\frac{1}{2}$, $\frac{3}{4}$, $\frac{4}{5}$ and $\frac{5}{6}$?

A. $\frac{1}{3}$ B. $\frac{1}{6}$ C. $\frac{1}{9}$ D. $\frac{1}{12}$ **Q23** Mathematics

Simplify the given expression.

$$3x(x - 3) + 2(3x^2 - 4)$$

A. $9x^2 + 9x - 8$ B. $9x^2 - 9x + 8$ C. $9x^2 - 9x - 8$ D. $9x^2 + 9x + 8$ 

Q24 Mathematics

If θ is an acute angle, and $\cos \theta = \frac{12}{13}$, then the value of $\frac{13 \sin \theta + 12 \sec \theta}{12 \tan \theta + 5 \operatorname{cosec} \theta}$ is:

A. 1



B. 2

C. $\frac{1}{2}$

D. $\frac{3}{2}$

Q25 Mathematics

If one root of the equation $(k + 1)x^2 - 13kx + 7 - 2k = 0$ is the reciprocal of the other, then the value of k is:

A. 4

B. 2



C. -2

D. -4

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

24 : 144 :: 16 : ? :: 8 : 48

A. 93

B. 95

C. 96



D. 94

Q27 General Intelligence and Reasoning

Laxmi walks 12 m towards the east. She turns left and walks 5 m. She again turns left to walk 12 m. Finally, she turns left and walks 5 m. In which direction is she facing by the end of her walk? (All turns are 90 degree turns only)

A. East

B. West

C. North

D. South



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Q28 General Intelligence and Reasoning

Five girls, M, N, O, P, and Q are sitting around a circular table facing the centre. P is an immediate neighbour of M and N. Q is second to the left of P. N and Q are the immediate neighbours of O. Who is sitting third to the right of Q?

A. N



B. M

C. O

D. P

Q29 General Intelligence and Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$55 + 34 \times 17 \div 7 - 51 = ?$$

A. 85

B. 90

C. 91

D. 92

**Q30** General Intelligence and Reasoning

Seven people (L, M, N, O, P, Q, and R) are sitting in a straight row, facing north. L sits third to the left of Q. Only two people sit to the left of L. M sits second to the left of Q. P is an immediate neighbour of O and L. Only two people sit between P and N. Who sits at the extreme right end of the row?

A. R



B. Q

C. N

D. M

Q31 General Intelligence and Reasoning

How many 5s are there in the following sequence which is immediately followed by 7 and immediately preceded by 8?

8 5 7 4 3 2 7 5 6 9 8 5 7 8 5 7 4 5 7 6 8 6 9 8 5 7 9 3

A. Three

B. Four



C. Five

D. Two



Q32 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some balloons are flowers.

All flowers are colours.

All colours are rainbows.

Conclusions:

(I) All flowers are rainbows.

(II) Some balloons are colours.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.

C. Both conclusion (I) and conclusion (II) follow.



D. Both conclusion (I) and conclusion (II) do not follow.

Q33 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Only three people sit between P and Q. N sits second to the left of P. L sits to the immediate left of N. M sits second to the left of L. M is not an immediate neighbour of Q. If no other person is sitting in the row, what is the total number of persons seated?

A. 8

B. 11

C. 9

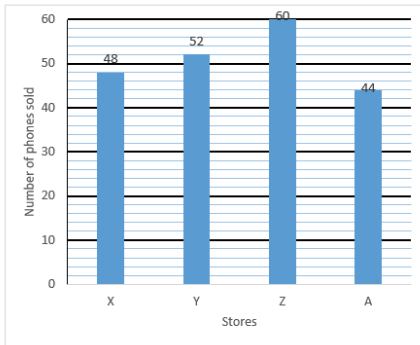
D. 10



Q34 General Intelligence and Reasoning

Study the given bar graph and answer the following question.

The given bar graph depicts the number of phones sold by stores X, Y, Z and A.



What is the total number of phones sold by the given four stores?

A. 206

B. 204



C. 208

D. 210

Q35 General Intelligence and Reasoning

If '+' means '-', '-' means '×', '×' means '÷', '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$15 - 2 \div 90 \times 9 + 10 = ?$$

A. 29

B. 30



C. 28

D. 32

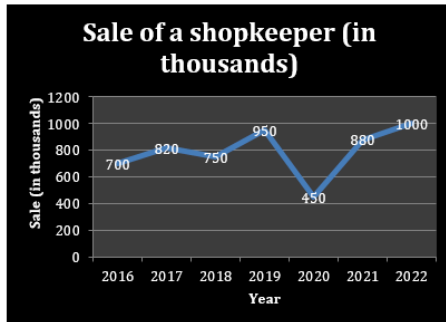


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Q36 General Intelligence and Reasoning

The given line graph shows the sale of a shopkeeper (in thousands) from the year 2016 to 2022. Study the graph and answer the question that follows.



The sale in 2020 is what percentage of sale in 2021?

- A. 61.73%
- B. 73.08%
- C. 51.13%
- D. 59.31%

**Q37** General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(17, 4913, 3)

(9, 6561, 4)

- A. (16, 1536, 2)
- B. (8, 512, 6)
- C. (7, 49, 2)
- D. (2, 64, 4)

**Q38** General Intelligence and Reasoning

One evening, Rohan walked 1 kilometre on a straight road, then turned left and walked 2 kilometres. Then he took a right turn and walked 1 kilometre again. At that time, he was facing the west direction. In which direction did he start to walk initially? (All turns are 90 degree turns only)

- A. North
- B. South
- C. East
- D. West



Q39 General Intelligence and Reasoning

In a certain code language, 'QUART' is written as 'RSBPU' and 'LEMON' is written as 'MCNMO'. How will 'JUMPY' be written in that language?

A. KWNRZ

B. KSNNZ



C. KSMNZ

D. KTNMZ

Q40 General Intelligence and Reasoning

Select the correct conclusion that can be drawn from the given statements.

Statements:

1. $X > Z = C \geq K$

2. $E \geq G \leq H = K$

A. $C \geq E$

B. $X > H$



C. $Z \geq E$

D. $C < E$

Q41 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Z sits second to the right of T. S sits second to the right of V. R sits to the immediate left of T. Only three people sit between K and R. S sits third to the left of K.

If no other person is sitting in the row, what is the total number of people seated?

A. 11

B. 12

C. 13



D. 14



Q42 General Intelligence and Reasoning

In this question, a group of letters is coded using numbers/symbols as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letters	T	P	J	Q	S	U	E	R	H	A
Numbers/Symbols	-	6	8	%	7	@	3	9	#	1

Conditions:

- (i) If there is more than 1 vowel in the word, all the vowels will be coded as 4.
(ii) If a word has consonants at both ends, both the consonants present at both ends will be coded as 2.

What will be the correct code for EARTH?

A. 349-#

B. 419-#

C. 449-#



D. 319-#

Q43 General Intelligence and Reasoning

Refer to the following letter, symbol series and answer the question.

(Left) E + Z = D * P B U V @ L & F \$ O G Q % & M E ? A (Right)

Which of the following is the tenth letter/symbol to the left of the thirteenth letter/symbol from the left end of the given series?

A. +

B. =

C. Z



D. D

Q44 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

CRH : APF
TON : RML

A. EKN : YUF

B. UIR : NSH

C. QLF : MBV

D. IWZ : GUX



Q45 General Intelligence and Reasoning

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All valleys are mountains.

Some mountains are hills.

Some hills are plateaus.

Conclusions:

I. Some plateaus are mountains.

II. Some valleys are plateaus.

III. Some mountains are valleys.

- A. Only conclusions I and II follow
- B. Only conclusions I and III follow
- C. Only conclusions II and III follow
- D. Only conclusion III follows



Q46 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

99, 92, 83, 76, 67, ?

- A. 58
- B. 62
- C. 60
- D. 54



Q47 General Intelligence and Reasoning

If '×' means '÷', '÷' means '+', '+' means '−', '−' means '×', what will come in place of the question mark (?) in the following equation?

$$2 - (684 + 228 \times 19) \times 21 \div 4 = ?$$

- A. 60
- B. 62
- C. 65
- D. 68



Q48 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some balloons are flowers.

All flowers are colours.

All colours are rainbows.

Conclusions:

I. All flowers are rainbows.

II. Some balloons are colours.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.



C. Both conclusion (I) and conclusion (II) follow.

D. Both conclusion (I) and conclusion (II) do not follow.

Q49 General Intelligence and Reasoning

Each vowel in the word **COMPLAINED** is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. Which of the following letters will appear twice in the group of letters thus formed?

A. P

B. B



C. K

D. C

Q50 General Intelligence and Reasoning

This question is based on the seven, three-digit numbers given below.

365, 125, 486, 548, 654, 552, 354

If 3 is added to first digit of every number, in how many numbers will the first digit be exactly divisible by the second digit?

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

A. Four

B. Three



C. Two

D. One



Q51 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement : $J > S \geq C > Q \geq T = A < N$

A. $S \geq T$



B. $C < J$

C. $N > T$

D. $C > A$

Q52 General Intelligence and Reasoning

Select the number that will replace the question mark (?) in the given series.

1 11 20 28 ?

A. 37

B. 36

C. 35



D. 34

Q53 General Intelligence and Reasoning

A statement is given followed by two conclusions numbered I and II. You have to assume everything in the statement to be true and decide which of the conclusions logically follow(s) beyond a reasonable doubt from the information given in the statement.

Statement:

The findings according to a recent study on marine life stated that plastic and other non-biodegradable waste material disposed in water bodies is one of the leading causes of harm to sea creatures.

Conclusions:

- I. Non-biodegradable materials should not be disposed of in water bodies.
- II. More research is being conducted on marine life to better understand sea creatures.

A. Only conclusion I follows



B. Only conclusion II follows

C. Neither conclusion I nor II follows

D. Both conclusions I and II follow



Q54 General Intelligence and Reasoning

Which of the following letter-clusters will replace the question mark (?) in the given series to make it logically complete?

AZP 13, DXR 17, GVT 21, JTV 25, ?

A. MSY 29

B. MRY 29

C. MSX 29

D. MRX 29



Q55 General Intelligence and Reasoning

In a row of people standing facing north, Vikram stands 11th from the left end of the row. His friend Aditya stands 3rd from the right end. There are 14 people standing between Vikram and Aditya. How many people are standing in that row?

A. 30

B. 28

C. 25

D. 32



General Science

25 Questions • Answer Key

Q56 General Science

For a concave mirror, the position of the image for an object placed at infinity is _____.

A. pole

B. focus

C. centre of curvature

D. Between focus and centre of curvature



Q57 General Science

In each of the triads, how many elements were identified by Dobereiner?

A. 3

B. 6

C. 9

D. 2



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Q58 General Science

The field produced by n turns of a coil is _____ times that of a single turn.

A. n



B. n^2

C. $1/n$

D. $1/n^2$

Q59 General Science

The unit of resistance is _____.

A. Coulomb

B. Ohm



C. Volt

D. Ampere

Q60 General Science

A coin of diameter 4 cm is placed at a distance of 45 cm in front of a convex lens of focal length 30 cm. Then the diameter of the image of the coin will be:

A. 6 cm

B. 8 cm



C. 10 cm

D. 12 cm

Q61 General Science

Which of the following is NOT a crystalline allotrope of carbon?

A. Graphite

B. Diamond

C. Fullerene

D. Coke



Q62 General Science

In which of the following animals does blood go through the heart twice during each cycle?

- A. Mammals, birds and reptiles
- B. Mammals, birds and fishes
- C. Mammals, fishes and reptiles
- D. Fishes, birds and reptiles



Q63 General Science

Which of the following sexually transmitted diseases affects our immune system?

- A. Gonorrhoea
- B. Warts
- C. Syphilis
- D. HIV-AIDS



Q64 General Science

Which of the following statements is/are INCORRECT?

- A) Oxides of metals are basic and that of non-metals are acidic in nature.
- B) Oxides of metals are acidic and that of non-metals are basic in nature.
- C) Non-metals are electronegative in nature while metals are electropositive in nature.

- A. Only A
- B. Both A and B
- C. Only B
- D. Both A and C



Q65 General Science

Rays of which of the following colours show the highest deviation by a prism?

- A. Red
- B. Green
- C. Yellow
- D. Violet



Q66 General Science

A 12V car head light lamp draws a current of 3A for 15 minutes. The energy transferred during this time by the car battery is

- A. 0.008 kWh
- B. 0.009 kWh
- C. 0.54 kWh
- D. 5.4 kWh



Q67 General Science

If a parallel beam of light is not parallel to the principal axis of a concave mirror, then such rays will converge at the _____.

- A. principal focal plane
- B. centre of curvature
- C. pole
- D. infinity



Q68 General Science

The uterine wall in females prepares itself to receive the developing fertilised egg. In case there is no fertilisation, the thickened lining of the uterine wall breaks down and goes out of the body along with blood. This is called:

- A. menstruation
- B. menopause
- C. secondary sexual characters
- D. Adam's apple



Q69 General Science

Where can we find the glomerulus in a human being?

- A. In the kidney
- B. In the bone marrow
- C. In the liver
- D. In the uterus



Q70 General Science

pH paper shows light blue colour when dipped into milk of magnesia. This indicates that milk of magnesia is:

- A. a mild acid
- B. a mild base
- C. neutral
- D. a strong acid

Q71 General Science

Which of the following statements correctly describes a homologous series?

- A. The members of a homologous series have different chemical properties due to the same functional group.
- B. The members of a homologous series have almost the same chemical properties due to the same functional group.
- C. The members of a homologous series have almost the same chemical properties due to different functional groups.
- D. The members of a homologous series have different chemical properties due to different functional groups.

Q72 General Science

Where can we find such cells with thickened cell walls in a plant?



- A. In xylem
- B. In phloem
- C. In epidermis
- D. In meristem

Q73 General Science

Which of the following takes up carbon dioxide at night and prepares an intermediate which is acted upon by the energy absorbed by the chlorophyll during the day?

- A. Fungi
- B. Bacteria
- C. Blue-green algae
- D. Desert plants



Q74 General Science

The formation of zinc ion from zinc is due to:

- A. reduction
- B. oxidation
- C. combination reaction
- D. hydrolysis

Q75 General Science

What is a good strategy of serving food, if you have to serve buffet food to around 150 guests in a family function? Note that this means the person has to hold the plate while standing and eating.

- A. Metal plates
- B. Banana leaves
- C. Plastic plates
- D. Banana leaves on washable and reusable plastic plates

Q76 General Science

A material of length l and area of cross section A has a resistance R . What should be changes in the area of cross section A if its length is tripled to produce the same resistance R ?

- A. The area of cross section should be decreased by 3 times.
- B. The area of cross section should be increased by 3 times.
- C. The area of cross section should be decreased by 9 times.
- D. The area of cross section should be increased by 9 times.

Q77 General Science

A student performs an experiment wherein he adds barium chloride to aluminium sulphate. Which of the following reaction is correct?

- A. $3\text{BaCl}_2(\text{aq}) + \text{Al}_2(\text{SO}_4)_3(\text{aq}) \rightarrow 3\text{BaSO}_4(\text{s}) + 2\text{AlCl}_3(\text{aq})$
- B. $\text{BaCl}_2(\text{aq}) + \text{Al}_2(\text{SO}_4)_3(\text{aq}) \rightarrow \text{Ba}(\text{s}) + \text{SO}_2(\text{g}) + 2\text{AlCl}_3(\text{aq})$
- C. $\text{BaCl}_2(\text{aq}) + \text{Al}_2(\text{SO}_4)_3(\text{aq}) \rightarrow 3\text{BaSO}_4(\text{s}) + \text{Al}(\text{s}) + \text{Cl}_2(\text{g})$
- D. $3\text{BaCl}_2(\text{aq}) + \text{Al}_2(\text{SO}_4)_3(\text{aq}) \rightarrow \text{BaSO}_4(\text{s}) + \text{AlCl}_3(\text{aq})$



Q78 General Science

The net resistance of two resistors R_1 and R_2 connected in series is 8 ohm and their net resistance in parallel is 2 ohm. What are the values of individual resistances R_1 and R_2 , respectively?

- A. 6 ohm; 2 ohm
- B. 4 ohm; 4 ohm
- C. 2 ohm; 6 ohm
- D. 8 ohm; 0 ohm

Q79 General Science

Which of the following is the correct chemical formula of bleaching powder?

- A. CaOCl_2
- B. Ca(OH)_2
- C. CaO
- D. CaCl_2

Q80 General Science

Which of the following statements is INCORRECT?

- A. Coal, petroleum and natural gas are fossil fuels.
- B. Fossil fuels are inexhaustible resources.
- C. Coke, coal tar and coal gas are the products of coal.
- D. We should use coal, petroleum and natural gas judiciously.

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

The _____ originates from the confluence of two rivers, the Chandra and the Bhaga, which themselves originate from either side of the Bara Lacha Pass in Lahul.

- A. Beas
- B. Jhelum
- C. Chenab
- D. Sutlej



Q82 General Awareness and Current Affairs

Which set of the statements is true about land use?

1. The use of land is determined by physical factors such as topography, soil, climate, minerals and availability of water.
2. Human factors such as population and technology are not determinants of land use patterns.
3. People and their demands are ever growing but the availability of land is limited.
4. Expansion of construction activities is one of the reasons for land degradation, landslides and soil erosion.

A. 1, 2 and 3

B. 2, 3 and 4

C. 4, 3 and 1



D. 1, 2 and 4

Q83 General Awareness and Current Affairs

The Annual Boat Race Festival is held in which state?

A. Kerala



B. Goa

C. Tamil Nadu

D. Odisha

Q84 General Awareness and Current Affairs

What does Article 243D of the Panchayat Constitution speak about?

A. Reservation of seats in Panchayat



B. Gram Sabha

C. Constitution of Panchayats

D. Composition of Panchayats

Q85 General Awareness and Current Affairs

Which of the following cities hosted the first Khelo India Fencing Women's League in July 2022?

A. New Delhi



B. Chennai

C. Karnal

D. Chandigarh



Q86 General Awareness and Current Affairs

Which of the four Vedas is known as 'Veda of Sacrificial Formulas' and contains prose formulas applicable to various rites, along with verses intended for a similar purpose?

- A. Rigveda
- B. Yajurveda
- C. Samaveda
- D. Atharvaveda



Q87 General Awareness and Current Affairs

When was the Council of States (Rajya Sabha) first constituted?

- A. 3 April 1952
- B. 26 January 1950
- C. 15 August 1947
- D. 7 May 1951



Q88 General Awareness and Current Affairs

A _____ is the collection of all bundles that the consumer can buy with his/her income at the prevailing market prices.

- A. Budget Model
- B. Budget Value
- C. Budget Line
- D. Budget Set



Q89 General Awareness and Current Affairs

The 16th Annual Status of Education Report (ASER) 2021 (Rural) was released by _____ in November 2021.

- A. Goonj
- B. Pratham foundation
- C. Navjyoti Foundation
- D. Bhumi



Q90 General Awareness and Current Affairs

Under the Indian budgetary classification of Central or State governments, which of the following would be classified as revenue receipts?

- A. Recoveries of loans
- B. Borrowings
- C. Tax receipts
- D. Receipts from disinvestment



Q91 General Awareness and Current Affairs

The Tropic of Cancer does not pass through _____.

- A. Nagaland
- B. Madhya Pradesh
- C. Gujarat
- D. Jharkhand



Q92 General Awareness and Current Affairs

Which of the following is a microfinance institution of India?

- A. Small Industries Development Bank of India
- B. National Housing Bank
- C. Industrial Finance Corporation of India
- D. Arohan Financial Services



Q93 General Awareness and Current Affairs

The removal of poverty was the foremost objective of which Five-Year Plan in India?

- A. Fourth
- B. Fifth
- C. Sixth
- D. Seventh



Q94 General Awareness and Current Affairs

Who among the following aquaculture scientists from Karnataka was awarded the Padma Shri 2022 in the Science and Engineering category?

A. Sanghamitra Bandyopadhyay

B. Aditya Prasad Dash

C. Subbanna Ayyappan



D. Moti Lal Madan

Q95 General Awareness and Current Affairs

The North Eastern Regional Language Centre is located in _____.

A. Kohima

B. Itanagar

C. Dispur

D. Guwahati



Q96 General Awareness and Current Affairs

In 2021, the Government of West Bengal state launched the 'Maa' scheme for provision of meals at a nominal cost of _____ per meal to poor people.

A. ₹5



B. ₹10

C. ₹15

D. ₹20

Q97 General Awareness and Current Affairs

Select the correct combination of personality and his/her associated organisation.

A. Poona Sarvajanik Sabha – Subhash Chandra Bose

B. Hindustan Socialist Republican Association – Annie Besant

C. Satyashodhak Samaj – Jyotiba Phule



D. Theosophical Society – Sarojini Naidu



Q98 General Awareness and Current Affairs

How many more Fundamental duty/duties had been added to the Indian Constitution by 86th Amendment Act 2002?

- A. Four
- B. Three
- C. Two
- D. One



Q99 General Awareness and Current Affairs

In March 2022 which company among the following founded the Startups Founders Hub, it is a new digital and inclusive platform for startup founders in India?

- A. Microsoft
- B. IBM
- C. Apple
- D. Google



Q100 General Awareness and Current Affairs

Who among the following became the first para-athlete to be conferred with the Padma Bhushan award, in 2022?

- A. Pramod Bhagat
- B. Manish Narwal
- C. Devendra Jhajharia
- D. Suhas L Yathiraj



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Currently Hema is 48 years old and Roja is 32 years old. How many years ago was the ratio of their ages 5 : 3?

A. 8 years



B. 9 years

C. 7 years

D. 6 years

Q2 Mathematics

The external length, breadth and depth of a cuboidal iron storage space are 4 m, 3.6 m, and 1.5 m, respectively. It is open at the top. What is the cost (in ₹) of painting its outer surface at the rate of ₹55 per m^2 ?

A. 1,936

B. 1,991

C. 2,046



D. 2,838

Q3 Mathematics

Which of the following is divisible by 9?

A. 1099

B. 2121

C. 2352

D. 3132



Q4 Mathematics

Find the gain percentage, given that Bushra sold her scooter for ₹15,000 gaining one-fifth of the selling price.

A. 10%

B. 15%

C. 25%



D. 20%



Q5 Mathematics

Arun is the elder brother of Kiran. The difference in their ages is 20 years. If 5 years ago, Arun was 5 times as old as Kiran then was, then find the present age (in years) of Arun.

A. 10

B. 20

C. 30



D. 40

Q6 Mathematics

If the arithmetic mean of 11, 15, 13, p and 10 is 11, then the value of p is:

A. 5

B. 6



C. 7

D. 8

Q7 Mathematics

Find the ratio between the LCM and the HCF of 5, 15 and 20.

A. 8 : 1

B. 14 : 3

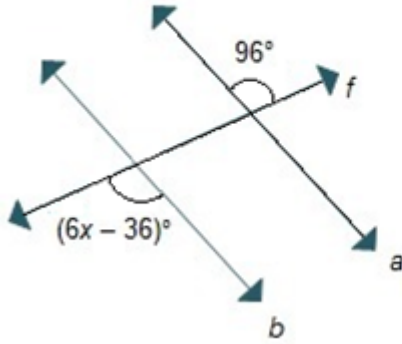
C. 11 : 2

D. 12 : 1



Q8 Mathematics

In the given figure, line a is parallel to line b . Find the value of x .



A. 32°

B. 36°

C. 96°

D. 22°



Q9 Mathematics

Arrange the numbers given below in ascending order.

705.0, 7.005, 7.500, 70.50, 7050, 7.050, 75

A. 7.005, 7.500, 7.050, 70.50, 75, 705.0, 7050

B. 7.005, 7.050, 7.500, 70.50, 75, 705.0, 7050

C. 7.005, 7.500, 7.050, 75, 70.50, 705.0, 7050

D. 7050, 705.0, 75, 70.50, 7.500, 7.050, 7.005



Q10 Mathematics

If $\sin^2 x + 3 \cos^2 x = 2$, and $(0^\circ < x < 90^\circ)$, find the value of $\operatorname{cosec} x$.

A. $\sqrt{2}$

B. 2

C. $\sqrt{3}$

D. $\frac{2\sqrt{3}}{3}$



Q11 Mathematics

The width of a rectangle is one-third of its length. If the perimeter of the rectangle is 64 cm, find the width of the rectangle.

A. 24 cm

B. 21 cm

C. 8 cm



D. 16 cm

Q12 Mathematics

The graph of $y = 9x^2 + 16$:

A. intersects the x-axis at $-\frac{4}{3}$ and $\frac{4}{3}$ B. touches the x-axis at $\frac{4}{3}$

C. either intersects or touches the x-axis

D. neither intersects nor touches the x-axis

**Q13** Mathematics

Mr. X travelled 220 km, 250 km and 140 km at a speed of 11 km/h, 5 km/h and 7 km/h, respectively. Find his average speed in km/h.

A. $7\frac{7}{9}$ B. $6\frac{2}{9}$ C. $6\frac{5}{9}$ D. $6\frac{7}{9}$ **Q14** Mathematics

Find the value of n , when $216^{\frac{2}{n}} = 36$.

A. 9

B. 6

C. 3



D. 1



Q15 Mathematics

20% of the population of a city died due to war, and of the remaining population, 5% died in an epidemic. If the present population of the city is 15,200, then find the population of the city before the war.

A. 19,680

B. 20,100

C. 23,500

D. 20,000 ☒**Q16** Mathematics

A man sells potatoes at ₹27 per kg, which he bought at ₹25 per kg. He also uses a faulty weight and each time gives 800 g instead of 1 kg. His actual gain percentage is:

A. 20%

B. 25%

C. 35% ☒

D. 40%

Q17 Mathematics

Find the total surface area of a solid right circular cylinder whose radius of base is 2 cm, and the height is 10 cm.

A. $48\pi \text{ cm}^2$ ☒B. $84000\pi \text{ cm}^2$ C. $8.4\pi \text{ cm}^2$ D. $840000\pi \text{ cm}^2$ **Q18** Mathematics

If $25 : 15 :: 15 : x$, then find the value of x.

A. 9 ☒

B. 11

C. 13

D. 15



Q19 Mathematics

A person borrows ₹20,000 at 25% compound interest per year, compounded annually. At the end of every year, he pays ₹2,500 as part payment. How much does he still owe after two such instalments?

A. ₹25,625



B. ₹25,725

C. ₹25,825

D. ₹25,925

Q20 Mathematics

Evaluate $\left(\frac{-5}{7}\right)^{-6} \times \left(\frac{-5}{7}\right)^4$.

A. $\frac{49}{25}$ B. $\frac{25}{49}$ C. $\frac{343}{125}$ D. $\frac{125}{343}$ **Q21** Mathematics

Find the arithmetic mean of the given frequency distribution.

Marks	Frequency
50	3
28	4
85	6
40	7

A. 52.6



B. 56.2

C. 40.95

D. 50.5



Q22 Mathematics

The value of $\sqrt{2 + \sqrt{2 + \sqrt{2 + \dots}}}$ is:

A. 2



B. 1.75

C. 2.5

D. 1.5

Q23 Mathematics

X people were given a contract for doing a piece of work in 15 days. 3 people did not turn up to work due to sickness, and the rest of the people completed the work in 20 days. What is the value of X?

A. 12



B. 15

C. 10

D. 14

Q24 Mathematics

The ratio of the ages of Arjun and Dharma is 4 : 5. Four years ago, this ratio was 10 : 13. What will be the ratio of their ages after 3 years?

A. 9 : 11



B. 8 : 13

C. 7 : 9

D. 5 : 7

Q25 Mathematics

In a triangle ABC, the lengths of its sides $\overline{AB}$, $\overline{AC}$ and $\overline{BC}$ are 4 cm, 5 cm and 6 cm, respectively. An angle bisector $\overline{AD}$ is drawn from A onto $\overline{BC}$, intersecting $\overline{BC}$ at D. Find $m(\overline{BD})$, correct to two places of decimal.

A. 1.50 cm

B. 2.67 cm



C. 2.25 cm

D. 3.00 cm



Q26 General Intelligence and Reasoning

Puneet walks 4 m towards the west. He turns right and walks 7 m. He turns left and walks 4 m. He again turns left and walks 7 m. He turns right and walks 3 m. In which direction is he facing now? (All turns are 90 degree turns only)

- A. East
- B. West
- C. North
- D. South

**Q27** General Intelligence and Reasoning

Refer to the following number series and answer the question.

(Left) 9 2 3 5 7 8 6 3 2 1 5 6 7 9 4 3 6 3 5 8 2 (Right)

How many such even numbers are there in the series each of which is immediately preceded and followed by an odd number?

- A. Three
- B. Four
- C. Five
- D. Six

**Q28** General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

7 : 4096 :: 6 : ? :: 4 : 1

- A. 245
- B. 243
- C. 246
- D. 242



Q29 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

FG _ C _ IQ _ SF _ SCAIQ _ SF _ SC _ I _ PS

A. SAPGPGAQ



B. SAPGBGAP

C. SAPGPGBQ

D. SAPFBFAP

Q30 General Intelligence and Reasoning

Six boxes M, N, O, P, Q and R are kept one above the other but not necessarily in the same order. Only 2 boxes are kept below M. Only one box is kept above Q. O is kept at any of the positions above R but not at the topmost position. R is not kept at the bottom most position. N is kept at any of positions below Q. Where is box P kept?

A. 2nd from the bottom

B. 3rd from the bottom

C. 3rd from the top

D. At the topmost position



Q31 General Intelligence and Reasoning

P, Q, R, S and T live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 5.

P lives immediately below T and immediately above S. P lives on an odd numbered floor. If R is not on the lowermost floor, where does T live?

A. 1st floor

B. 2nd floor

C. 5th floor

D. 4th floor



Q32 General Intelligence and Reasoning

A statement is given followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement: $P < Q \leq R < S > T \geq U > V$

Conclusions:

- 1) $T > V$
- 2) $P < R$
- 3) $S \geq V$
- 4) $Q < S$

A. 1

B. 2

C. 3



D. 4

Q33 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

40 31.2 23.2 16 9.6 ?

A. 4.2

B. 3.8

C. 4



D. 3

Q34 General Intelligence and Reasoning

Select the correct combination of mathematical signs that can sequentially replace the * and balance the given equation.

$32 * 16 * 8 * 2 * 3 * 5 * 5$

A. $-, +, \times, =, \div, +$

B. $-, +, \div, \times, =, +$

C. $+, -, \div, \times, =, +$

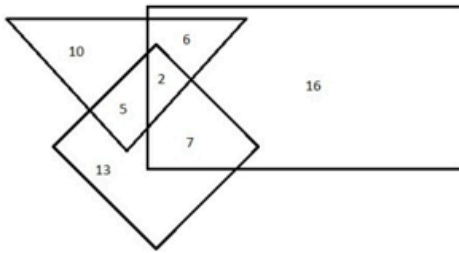
D. $-, +, \div, =, \times, +$



Q35 General Intelligence and Reasoning

In the following Venn diagram, the rectangle represents 'fruits', the triangle represents 'sour tasting eatables', and the square represents 'yellow coloured eatables'.

Select the option which represents the number of sour tasting yellow fruits.



A. 6

B. 2



C. 5

D. 7

Q36 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$3.01^3 \div 2.99 \times 6.01 = ?$$

A. 54



B. 46

C. 36

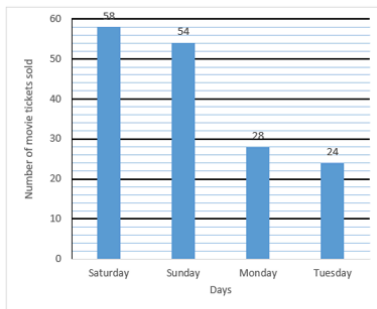
D. 64



Q37 General Intelligence and Reasoning

Study the given bar graph and answer the following question.

The given bar graph depicts the number of movie tickets sold on four days.



If the average number of tickets sold on Monday, Tuesday and Wednesday was 31, what was the number of tickets sold on Wednesday?

A. 39

B. 43

C. 41

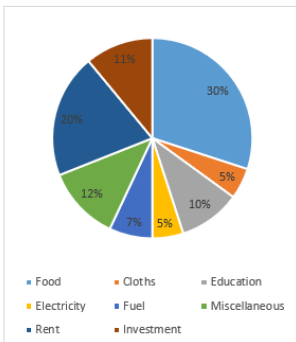


D. 45

Q38 General Intelligence and Reasoning

The given pie chart shows the expenses of a family in a month.

Read the chart and answer the question that follows.



What is the central angle for total expenditure on fuel, miscellaneous and investment?

A. 100°

B. 102°

C. 108°



D. 98°



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Q39 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

ADG : EHK

TJF : XNJ

A. KOH : OSL



B. FJW : HLZ

C. IPD : RKW

D. JQR : NTV

Q40 General Intelligence and Reasoning

A statement is given, followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Kids should be allowed to use mobile phones from an early age.

Arguments:

I. Continuous use of mobile phone causes distraction for the kids.

II. A lot of educational apps encourage playful competition among kids while enhancing the way they learn new ideas.

A. I weakens, while II strengthens the statement



B. II weakens, while I strengthens the statement

C. Both I and II weaken the statement

D. Both I and II strengthen the statement



Q41 General Intelligence and Reasoning

A statement is given followed by four conclusions. Find out which conclusion is INCORRECT based on the given statement.

Statement: $S > W = T < L < O \leq R$

Conclusions:

1. $W < R$
2. $S > L$
3. $W < O$
4. $T < S$

A. 1

B. 2



C. 3

D. 4

Q42 General Intelligence and Reasoning

Town X is west of town Y. Town Q is north of X. Town P is east of Q and north-west of Y. What is the position of town P with respect to X?

A. North-west

B. North-east



C. East

D. South-west

Q43 General Intelligence and Reasoning

Seven boxes E, F, G, H, I, J and K are kept one over the other but not necessarily in the same order. Only three boxes are kept between F and J. Neither G nor I is kept at the top. Only H is kept between G and I. K is kept immediately below J. Only one box is kept above F. How many boxes are kept between H and K?

A. Four

B. One

C. Two



D. Three



Q44 General Intelligence and Reasoning

Each vowel in the word 'REASON' is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter of the word thus formed is arranged in alphabetical order, which letter will be fourth from the left?

A. F

B. M

C. P



D. Q

Q45 General Intelligence and Reasoning

If the time in the mirror image of a 12-hour clock is 3:25, what is the actual time?

A. 7:45

B. 9:35

C. 8:35



D. 8:45

Q46 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the given table and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number / Symbol	5	3	@	8	%	2	#	&	6	ψ	π	7	5	φ
Code	A	V	L	K	R	M	B	F	N	T	E	C	S	W

Conditions:

(i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.

(ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.

(iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

ψ62%85

A. SNLRBT

B. TNBRLS

C. TNMRKS

D. SNMRKT



Q47 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

29, 30, 34, 43, 59, ?

A. 82

B. 86

C. 84



D. 79

Q48 General Intelligence and Reasoning

Seven boys, M, N, O, P, Q, R and S, are sitting around a circular table facing the centre. Exactly two boys sit between S and N, to the right of S. P is an immediate neighbour of M and S. R is second to the right of P and to the immediate right of S. N is an immediate neighbour of Q and O. If O is third to the left of M, where is Q seated?

A. To the immediate left of P

B. Fourth to the left of P

C. Third to the left of P

D. Second to the left of P

**Q49** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/Symbol	3	#	6	4	@	\$	7	2	%	5	=	9	8
Code	T	H	J	K	M	P	U	D	U	E	W	V	S

Conditions:

- If the first element is a symbol and the last, a number, the codes for these two (the first and the last elements) are to be interchanged.
- If the first element is an odd number and the last, an even number, the first and last elements are to be coded as ©
- If both second and third elements are perfect squares, the third element is to be coded as the code for the second element.

Decode %\$7#8 using the above information.

A. SPUHU



B. UPUHS

C. SKUHU

D. SPIHU



Q50 General Intelligence and Reasoning

Six students are sitting around a circular table facing the centre. Taran is an immediate neighbour of Karam and Viraj. Param is sitting second to the right of Taran. Sunny is an immediate neighbour of Param and Manjit. Karam is sitting second to the right of Sunny. Who is an immediate neighbour of Sunny and Viraj?

A. Param



B. Taran

C. Karam

D. Manjit

Q51 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$2.33 - 4.12 + 6.13 \times 11.3 = ?$$

A. 106

B. 43

C. 64



D. 39

Q52 General Intelligence and Reasoning

Three statements are given, followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

1. All flowers are white.
2. Some flowers are dark.
3. All darks are blue.

Conclusions:

- I. Some whites are blue.
- II. All darks are white.

A. Only conclusion I follows



B. Only conclusion II follows

C. Both conclusions I and II follow

D. Neither conclusion I nor II follows



Q53 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(22, 49, 568)

(25, 45, 560)

A. (30, 15, 225)

B. (33, 38, 568) ✓

C. (18, 27, 225)

D. (15, 33, 240)

Q54 General Intelligence and Reasoning

This question is based on the five three-digit numbers given below.

423 875 652 246 168

(Example - 697 – First digit = 6, second digit = 9 and third digit = 7)

What will be the resultant, if third digit of the second greatest number is added to the second digit of the smallest number?

A. 8 ✓

B. 10

C. 13

D. 11



Q55 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements: 1. Some classical dancers are students.

2. Rama is a classical dancer.

3. Sohan is a student of class X.

Conclusions : (I) Sohan is not a classical dancer.

(II) Rama is a student.

A. Only conclusion II follows.

B. Only conclusion I follows.

C. Both conclusions I and II follow.

D. None of the conclusions definitely follow.



General Science

25 Questions • Answer Key

Q56 General Science

The process of obtaining images of different body parts by using a weak magnetic field produced inside the body is called _____.

A. CT scan

B. MRI scan



C. PET scan

D. Ultrasound scan

Q57 General Science

The net resistance of the two resistors connected in series is 6 ohm. If one of the resistances is 2 ohm, what is the other resistance if the current flowing through them is 4 amp?

A. 8 ohm

B. 3 ohm

C. 4 ohm



D. 12 ohm



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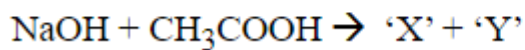
Q58 General Science

Which of the following compounds can conduct electricity?

- A. Glucose
- B. Sodium chloride
- C. Kerosene
- D. Alcohol

Q59 General Science

Identify 'X' and 'Y' products respectively, in the given chemical equation.



- A. NaO and CO_2
- B. CH_3COONa and H_2O
- C. $\text{CH}_3\text{CO}_2\text{H}$ and $\text{Na}(\text{OH})_2$
- D. Na_2OH and CO_2

Q60 General Science

Aquatic animals like fishes, excrete waste in which of the following forms?

- A. Ammonia
- B. Urea
- C. Uric acid
- D. Sweat salts

Q61 General Science

The radius of curvature of a convex mirror of focal length 2 m is:

- A. 0.5 m
- B. 2.0 m
- C. 4.0 m
- D. 1.0 m



Q62 General Science

Which of the following is non-biodegradable?

- A. Cotton
- B. Coffee powder
- C. Nylon
- D. Wool



Q63 General Science

The polarity of an electromagnet can be reversed by changing the _____.

- A. direction of current
- B. number of turns in the electromagnet
- C. distance between the turns
- D. magnitude of the current flowing through it



Q64 General Science

An object of size 3.0 cm is placed at a distance of 50 cm from a concave lens of focal length 25 cm. The size of the image formed will be :

- A. 1.5 cm
- B. 1.2 cm
- C. 1.0 cm
- D. 0.33 cm



Q65 General Science

What is the genetic material inherited from one generation to other?

- A. Proteins
- B. RNA
- C. DNA
- D. Enzymes



Q66 General Science

How is urea removed from the blood by an artificial kidney?

- A. By filtration
- B. By osmosis
- C. By absorption
- D. By enzymatic action

Q67 General Science

The allotrope of which non-metal conducts electricity?

- A. Phosphorous
- B. Sulfur
- C. Oxygen
- D. Carbon

Q68 General Science

In the phenomena of electromagnetic induction, when the coil carrying current and magnetic field are stationary, the galvanometer _____.

- A. deflects right
- B. deflects left
- C. shows null deflection
- D. Shows deflection on both sides alternately

Q69 General Science

Hemodialysis consists of several tubes having semi-permeable lining suspended in tank having fluid that has _____.

- A. Same composition as renal filtrate
- B. Same osmotic pressure as blood and is devoid of nitrogenous wastes
- C. Same composition as blood except that it has more heparin
- D. Low osmotic pressure to enable movement of molecules

Q70 General Science

Which of the following statements with respect to position of elements having atomic number 11, 12, 13, 14, 15, 16, 17 and 18, respectively, in the modern periodic table is INCORRECT?

- A. These elements are placed in the same period in the modern periodic table.
- B. These elements belong to the second period of the modern periodic table. ✓
- C. Electrons in the atoms of these elements are filled in K, L and M shells.
- D. These elements belong to the third period of the modern periodic table.

Q71 General Science

A cross between a tall plant (TT) and short plant (tt) resulted in F1 progeny which were all tall plants because:

- A. The plant height is governed by T or t
- B. The plant height is governed by T and t
- C. The plant height is governed by t only
- D. The plant height is governed by T only ✓

Q72 General Science

Which of the following reactions is the most accurate representation of the reaction between barium chloride and sodium sulphate?

- A. $NaSO_4 + BaCl \rightarrow BaSO_4 + NaCl$
- B. $Na_2SO_4 + BaCl_2 \rightarrow BaSO_4 + 2NaCl$ ✓
- C. $NaSO_4 + BaCl_2 \rightarrow BaSO_4 + NaCl_2$
- D. $Na_2SO_4 + BaCl \rightarrow BaSO_4 + 2NaCl$

Q73 General Science

Narmada Bachao Andolan is related to:

- A. Bhakra Nangal Dam
- B. Hirakud Dam
- C. Nagarjuna Sagar Dam
- D. Sardar Sarovar Dam ✓



Q74 General Science

The commercial unit of electrical energy is _____.

- A. Joule
- B. Watt
- C. Calorie
- D. Kilowatt hour



Q75 General Science

The emergent ray from the optical centre of the lens will be _____.

- A. deviated
- B. reflected
- C. bent
- D. un-deviated



Q76 General Science

An element 'A' reacts with chlorine to give a compound ACl with a high melting point. This compound is also soluble in water. The element 'A' is likely to be:

- A. sodium
- B. carbon
- C. silicon
- D. iron



Q77 General Science

In which group of modern periodic table are halogens placed?

- A. 16th
- B. 18th
- C. 1st
- D. 17th



Q78 General Science

Which among the following statement is FALSE about transportation through phloem?

- A. Transportation in phloem is by Utilization of energy (ATP)
- B. Sucrose is transported initially by using energy into phloem
- C. Transportation in phloem uses GTP & CTP ✓
- D. Increase in osmotic pressure due to sucrose causes water to move into phloem.

Q79 General Science

Which of the following DOES NOT contain covalent bond?

- A. H_2
- B. CH_4
- C. NH_3
- D. NaOH ✓

Q80 General Science

The nature of the image formed behind the mirror, in case of a convex mirror is _____.

- A. real and inverted
- B. virtual and inverted
- C. real and erect
- D. virtual and erect ✓

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

What is the correct statement about Mayor?

- A. Mayor is the second citizen of the Municipal Corporation after City Magistrate.
- B. Mayor is the head of the Municipal Corporation. ✓
- C. Tenure of Mayors of cities in India is fixed for five years.
- D. Mayor is elected by the Governor of the State.



Q82 General Awareness and Current Affairs

The Shanti Swarup Bhatnagar Prize for Science and Technology is a science award in India given annually by which of the following scientific bodies?

- A. Council of Scientific and Industrial Research (CSIR) ☒
- B. Indian Council of Medical Research (ICMR)
- C. Department of Biotechnology (DBT)
- D. Department of Science and Technology (DST)

Q83 General Awareness and Current Affairs

Which of the following alternatives is NOT a source of formal data on unemployment in India?

- A. Reports of Census of India
- B. Reports of National Family Health Survey ☒
- C. National Sample Survey Reports
- D. Reports by Directorate General of Employment

Q84 General Awareness and Current Affairs

Mango showers can be defined as:

- A. post-monsoon showers which are common in the states of Maharashtra and Madhya Pradesh
- B. pre-monsoon showers which are common in the states of Karnataka and Kerala ☒
- C. monsoon showers which are common in the states of Uttar Pradesh and Bihar
- D. Snow storms during the winter season

Q85 General Awareness and Current Affairs

Which of the following countries won the Thomas Cup for the first time ever, in 2022?

- A. India ☒
- B. Indonesia
- C. China
- D. Japan



Q86 General Awareness and Current Affairs

Match the cities in column-A with the rivers in column-B.

Column-A (City)	Column-B (River)
a. Ahmedabad	1. Godavari
b. Kolkata	2. Brahmaputra
c. Guwahati	3. Sabarmati
d. Nasik	4. Hooghly

A. a-1, b-2, c-3, d-4

B. a-4, b-3, c-2, d-1

C. a-3, b-4, c-2, d-1



D. a-4, b-3, c-1, d-2

Q87 General Awareness and Current Affairs

The 'NavIC' is an independent regional navigation satellite system being developed by which country?

A. Russia

B. Japan

C. France

D. India



Q88 General Awareness and Current Affairs

Select the correct chronological order of Acts and policies according to their first appearance in the Indian Constitution and legislative.

A. Information Technology Act, Right to Information Act, Right to Person with Disabilities Act, Right to Education Act

B. Information Technology Act, Right to Information Act, Right to Education Act, Right to Person with Disabilities Act



C. Right to Information Act, Right to Education Act, Right to Person with Disabilities Act, Information Technology Act

D. Right to Education Act, Information Technology Act, Right of Persons with Disabilities Act, Right to Information Act

Q89 General Awareness and Current Affairs

The budget of any government is defined as:

A. a monthly statement of the estimated receipts and expenditure of the government over the last month

B. an annual statement of the estimated receipts and expenditure of the government over the fiscal year



C. a biennial statement of the estimated receipts and expenditure of the government over the last two fiscal years

D. a weekly statement of the estimated receipts and expenditure of the government over the last week



Q90 General Awareness and Current Affairs

Select the correct group of fundamental rights provided by the Constitution of India from the given alternatives.

- A. Right to equality
- B. Right to freedom of religion
- C. Right to financial support for higher and professional education
- D. Right to constitutional remedies
- E. Right to paternal properties

A. A, C and E

B. B, D and E

C. A, B and D



D. C, D and E

Q91 General Awareness and Current Affairs

A production cycle in which at least one production factor is fixed is known as:

A. short run production



B. long run production

C. variable long term production

D. constant long term production

Q92 General Awareness and Current Affairs

Who won the Male Single's title of the All England Badminton Championship 2022?

A. Lee Zii Jia

B. Lakshya Sen

C. Viktor Axelsen



D. Kidambi Srikanth



Q93 General Awareness and Current Affairs

Select the correct statement about Rajya Sabha.

- A. The President of India act as ex-officio Chairman of Rajya Sabha.
- B. It is the lower house of parliament and it dissolves every five years.
- C. It is called upper house of parliament and it never dissolves. ✓
- D. A member who is elected for a full term in Rajya Sabha serves for a period of four years.

Q94 General Awareness and Current Affairs

Maulana Azad National Urdu University (MANUU) is a Central University established at National Level in _____ by an act of Parliament.

- A. 1998 ✓
- B. 1999
- C. 2001
- D. 2004

Q95 General Awareness and Current Affairs

Which of the following festivals is the mark of the triumph of Rama, an avatar of Vishnu, over the 10-headed demon king Ravana?

- A. Ram Navmi
- B. Rakshabandhan
- C. Holi
- D. Dussehra ✓

Q96 General Awareness and Current Affairs

Mother Teresa was canonized by Pope Francis I on September 4, _____.

- A. 2012
- B. 2014
- C. 2016 ✓
- D. 2018

Q97 General Awareness and Current Affairs

In December 2021, to improve leadership skills of grassroot women political leaders, the National Commission for Women (NCW) launched a pan-India capacity building programme. What is the name of this programme?

- A. 'Ladki Hoon, Lad Sakti Hoon'
- B. 'She is a Changemaker' ✓
- C. 'She is a Leader'
- D. 'Womanhood at Grassroot'

Q98 General Awareness and Current Affairs

The Mahanadi River system is the third largest in the peninsula of India and the largest river of _____.

- A. Assam
- B. West Bengal
- C. Odisha ✓
- D. Telangana

Q99 General Awareness and Current Affairs

How many districts of West Bengal were included in the 'Combating Child Trafficking' campaign in August 2022?

- A. 5
- B. 11 ✓
- C. 15
- D. 22

Q100 General Awareness and Current Affairs

On the eve of independence, what was the GDP of India?

- A. ₹27 lakh crore
- B. ₹270 lakh crore
- C. ₹2.7 lakh crore ✓
- D. ₹1 lakh crore



Mathematics

25 Questions • Answer Key

Q1 Mathematics

$\triangle ABC \sim \triangle QPR$ and $(\text{area of } \triangle ABC) : (\text{area of } \triangle PQR) = 3 : 2$. If $AB = 12$ cm, $BC = 10$ cm, and $AC = 9$ cm, then the length of QR (in cm) is:

A. $\frac{20}{\sqrt{3}}$

B. $3\sqrt{6}$ ✓

C. $\frac{10}{\sqrt{3}}$

D. $8\sqrt{3}$

Q2 Mathematics

If $a = \left(\frac{3}{7}\right)^2 \div \left(\frac{9}{7}\right)^0$, then find the value of a^{-2} .

A. $\frac{81}{2401}$

B. $\frac{2401}{81}$ ✓

C. $\frac{343}{81}$

D. $\frac{81}{343}$

Q3 Mathematics

The sum of 6 times Bob's age and 5 times Will's age is 43 years, and the sum of 5 times Bob's age and 5 times Will's age is 40 years. Find the age of Bob.

A. 1 year

B. 10 years

C. 3 years ✓

D. 5 years



Q4 Mathematics

The radius of the base of a right circular closed cylinder is 3.5 cm and its total surface area is 269.5 cm^2 . What is the ratio of its height to its diameter? (Take $\pi = \frac{22}{7}$)

A. 4 : 5

B. 5 : 7

C. 7 : 5

D. 5 : 4 **Q5 Mathematics**

6 men and 10 women complete a work in 10 days. 5 men and 4 women complete the same work in 14 days. How many days will it take for 1 woman to complete the same work?

A. 390

B. 280

C. 350

D. 364 **Q6 Mathematics**

8 men and 13 women can complete a piece of work in 12 days, and 10 men and 14 women can complete the same work in 10 days. The work of how many women is equivalent to that of one man?

A. 3

B. 2

C. 1.5

D. 4 **Q7 Mathematics**

Ramu is older than Lakshman by 4 years. If their present ages are in the ratio 6 : 5, how old is Lakshman?

A. 18 years

B. 20 years 

C. 22 years

D. 24 years



Q8 Mathematics

The roots of the quadratic equation $x^2 - 4x - 1 = 0$ are:

A. $-2 \pm \sqrt{5}$

B. $2 \pm \sqrt{5}$

C. $2 \pm \sqrt{3}$

D. $-2 \pm \sqrt{3}$



Q9 Mathematics

Solve the given equation.

$$(5x^2 - 5) + 5(-x^2 + 2x - 7) = 0$$

A. $x = 2$

B. $x = -2$

C. $x = -4$

D. $x = 4$



Q10 Mathematics

Which of the following is equal to $0.1\overline{82}$?

A. $\frac{181}{990}$

B. $\frac{1}{9}$

C. $\frac{1}{999}$

D. $\frac{81}{500}$



Q11 Mathematics

Surbhi invested a total sum of ₹47,740 in three schemes A, B and C such that the simple interest received from scheme A at 10% p.a. after 3 years, from scheme B at 9% p.a. after 4 years and from scheme C at 8% p.a. after 5 years were the same. What is the positive difference (in ₹) between the sums invested in schemes C and A?

A. 1,540

B. 3,080

C. 3,840

D. 4,620

**Q12** Mathematics

Raghu sold an article at a loss of 15%. If he had bought the item at 5% less and had sold it for ₹195 more, then he would have gained 10%. Find the cost price (in ₹) of the article.

A. 1,500

B. 1,000

C. 750

D. 1,250

**Q13** Mathematics

Find the median of the frequency distribution given below.

Marks	Frequency
30	4
40	7
50	2
85	6

A. 10

B. 50

C. 30

D. 40



Q14 Mathematics

In $\triangle ABC$, $m(\overline{AB}) = m(\overline{AC})$, and $m\angle BAC = 30^\circ$. If the side BC of $\triangle ABC$ is extended to D , then find $m\angle ACD$.

A. 105°



B. 75°

C. 50°

D. 120°

Q15 Mathematics

The ratio of the length and the width of a rectangle is $5 : 2$. If the width of the rectangle is 48 cm, find the length of the rectangle.

A. 120 cm



B. 102 cm

C. 186 cm

D. 168 cm

Q16 Mathematics

The area of a right-angled triangle, whose base is 24 cm and hypotenuse is 26 cm, is:

A. 312 cm^2

B. 240 cm^2

C. 130 cm^2

D. 120 cm^2

**Q17** Mathematics

If a 1950 m long train crosses a pole in 150 seconds, then find the time (in seconds) taken by the train to cross a 338 m long platform.

A. 175

B. 176



C. 170

D. 174



Q18 Mathematics

If the sum and the product of the roots of a quadratic equation are $\frac{q}{p}$ and $\frac{r^2}{q}$, respectively, where $p, q \neq 0$, then the quadratic equation and the discriminant of the quadratic equation are given, respectively, as:

- A. $pqx^2 + q^2x + pr^2 = 0$ and $q^2 - 4p^2r^2$
- B. $pqx^2 - q^2x + pr^2 = 0$ and $q^4 + 4p^2r^2q$
- C. $pqx^2 - q^2x + pr^2 = 0$ and $q^4 - 4p^2r^2q$ ✓
- D. $pqx^2 + q^2x + pr^2$ and $q^4 - 4p^2r^2q$

Q19 Mathematics

If $\cot^4 x + \cot^2 x = 1$, then the value of $\operatorname{cosec}^4 x - \operatorname{cosec}^2 x$ is:

- A. 4
- B. 2
- C. -1
- D. 1 ✓

Q20 Mathematics

Two numbers are in the ratio 5 : 7. If the sum of the numbers is 108, find the smaller number.

- A. 36
- B. 42
- C. 45 ✓
- D. 47

Q21 Mathematics

The average speed of a car for a given 4-hour journey is 60 km/h. If it travels at 65 km/h for the first 2 hours, then the speed of the car in the next 2 hours is:

- A. 50 km/h
- B. 53 km/h
- C. 55 km/h ✓
- D. 60 km/h



Q22 Mathematics

In the set $\{61, 62 \dots 100\}$, find the sum of the second largest and the second smallest primes.

A. 150

B. 156



C. 158

D. 164

Q23 Mathematics

Four bells toll at intervals of 2, 4, 6 and 8 seconds, respectively. They chimed together at 12 noon. How many times will they chime together in the next 50 minutes, excluding their chiming at 12 noon, but including the one at 12:50 p.m.?

A. 123

B. 124

C. 125



D. 126

Q24 Mathematics

6 kg of ₹48 per kg rice is mixed with 3 kg of another variety of rice to get a mixture costing ₹60 per kg. What is the price per kg of another variety rice in the mixture?

A. ₹80

B. ₹72

C. ₹64

D. ₹84

**Q25** Mathematics

If $x = 2$, then find the value of $\sqrt{(4x)(x) + 4x + 1} + 5x$.

A. 9

B. 13

C. 15



D. 17



Q26 General Intelligence and Reasoning

Sujoy starts from Point A and drives 11 km towards the east. He then takes a left turn, drives 5 km, turns left and drives 7 km. He then takes a left turn and drives 13 km, takes a right turn and drives 4 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

- A. 4 km towards the north
- B. 8 km towards the south
- C. 6 km towards the south
- D. 8 km towards the north

**Q27** General Intelligence and Reasoning

Refer to the given number, symbol series and answer the question that follows.

(Left) 2 @ 1 o \$ λ £ 5 3 & 9 # * 2 @ 6 7 & % 3 £ 2 & 1 5 (Right)

How many such numbers are there, each of which is immediately preceded by a symbol and also immediately followed by a number?

- A. 1
- B. 2
- C. 3
- D. 4

**Q28** General Intelligence and Reasoning

If 2 is added to each even digit and 3 is added to each odd digit in the number 4311253, what will be the sum of the digits which are third from the left and second from the right in the new number thus formed?

- A. 9
- B. 12
- C. 11
- D. 15



Q29 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions numbered I and II. You have to assume everything in the statement to be true and decide which of them logically follow(s) beyond a reasonable doubt from the information given in the statement.

Statement:

Radha knew that watermelon always tastes good in summer. The one she bought today was tasteless.

Conclusions:

- I. It is not summer season at present.
- II. The shopkeeper has cheated Radha.

- A. Only conclusion I follows ☒
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow

Q30 General Intelligence and Reasoning

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 1374856, which of the following digits will appear more than once in the new number thus formed?

- A. Only 8
- B. 4, 6 and 8
- C. 2, 4 and 6 ☒
- D. Both 6 and 7

Q31 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:

All grapes are apples

No apple is a pine

All pines are cones

Conclusions:

(I) No cone is a grape

(II) No grape is a pine

(III) Some cones are apples

A. Only conclusion I follows

B. Only conclusion II follows



C. Both conclusion I and conclusion II follow

D. None of the conclusions follow

Q32 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) 9 C W 7 S K T @ B 1 6 L C S 8 & J F 2 % U D 7 P 5 * 4 V Z ? A (Right)

If all the elements that are on the prime number position in the above series are to be dropped, then which of the following elements will be 18th from the left end?

A. K

B. F

C. 4



D. P



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Q33 General Intelligence and Reasoning

Refer to the following number series and answer the question that follows.

4 3 7 9 2 5 6 8 7 9 1 5 3 9 2 4 3 5 9

How many such odd digits are there, each of which is immediately preceded by an odd digit and also immediately followed by an even digit?

A. Four

B. Three

C. Two



D. One

Q34 General Intelligence and Reasoning

Kritika walks 6 m towards the south. She turns right to walk 6 m. She turns left and walks 5 m. She again turns left and walks 6 m. Again she turns left and walks 5 m. In which direction is she facing now? (All turns are 90 degree turns only)

A. North



B. West

C. South

D. East

Q35 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(4, 17, 33)

(5, 34, 59)

A. (6, 82, 118)



B. (9, 19, 37)

C. (3, 45, 51)

D. (27, 13, 28)



Q36 General Intelligence and Reasoning

Each of the digits in the number 7235491 is arranged in ascending order from left to right. What will be the sum of the digits that will remain unchanged as compared to that in the original number?

A. 17

B. 14

C. 9

D. 5

**Q37** General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number / Symbol	\$	3	@	8	%	2	#	&	6	φ	π	7	5	φ
Code	A	V	L	K	R	M	B	F	N	T	E	C	S	W

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©
- (iii) If both second and fourth elements are multiples of 3, both second and fourth elements are to be coded as the code for the second element.

#376φ%

A. KVCVWB

B. BVCVTR

C. ©ACAS©

D. BVCTRV

**Q38** General Intelligence and Reasoning

Based on the given statement, four conclusions are drawn. Find out which conclusion is true based on the statement.

Statement: $L < W > X = V > B \geq E$

A. $X < E$ B. $W > B$ C. $L = E$ D. $W = V$ 

Q39 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

VPR 3, TNP 7, RLN 11, ?, NHJ 19

A. PLJ 13

B. PJJ 15

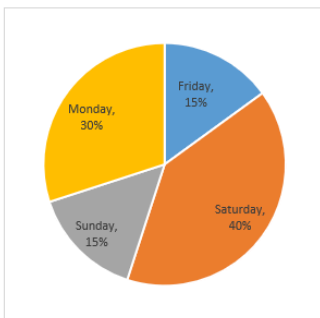
C. PJJ 13

D. PLJ 15

**Q40** General Intelligence and Reasoning

Study the given pie-chart and answer the question that follows.

The pie-chart depicts the percentage of children who visited a playground on 4 days, out of the total number of children (which is 40) who visited the playground on the given 4 days together.



If the price of the entry ticket for the playground was ₹25 for each child, what was the amount collected on Sunday?

A. ₹250

B. ₹200

C. ₹150

D. ₹300

**Q41** General Intelligence and Reasoning

Six teachers are sitting around a circular table facing the centre. Tommy is sitting second to the right of Priya. Oliver is sitting second to the left of Kavita. Oliver is an immediate neighbour of both Priya and Veena. Sagar is sitting second to the right of Kavita. Who is an immediate neighbour of both Sagar and Kavita?

A. Priya

B. Veena

C. Tommy

D. Oliver



Q42 General Intelligence and Reasoning

Select the option that is related to the fifth term in the same way as the fourth term is related to the third term and the second term is related to the first term.

SPACE : URCEG :: PLANET : RNCPGV :: MACHINE : ?

A. OCEJKPG



B. OCEFGPG

C. KYAJKPG

D. KYAFGLC

Q43 General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. P is taller than only three other friends. R is taller than only one friend. S is taller than R but shorter than U. T is taller than U. Who is the second tallest among all the friends?

A. Q

B. S

C. U



D. T

Q44 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.
233, 404, 575, 746, 917, ?

A. 1078

B. 1088



C. 1079

D. 1089

Q45 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

0, 7, 26, 63, 124, 215, ?

A. 342



B. 343

C. 344

D. 340



Q46 General Intelligence and Reasoning

All 29 students of a class are standing in a straight row facing north. Suresh is 24th from the right end, while Bhaskar is 16th from the left end. How many students stand between Suresh and Bhaskar?

A. 12

B. 14

C. 9



D. 6

Q47 General Intelligence and Reasoning

All 32 students of a class are standing in a straight row facing north. Anand is 6th from the right end, while Meena is 14th from the left end. How many students stand between Anand and Meena?

A. 8

B. 13

C. 12



D. 10

Q48 General Intelligence and Reasoning

Six boxes are kept vertically one above the other. F is kept at an even numbered position from the top but not at the 2nd position. B is kept at the bottommost position. Only one box is kept between F and E. C is kept immediately above F. F is kept immediately above A. What is the position of box A from the bottom?

A. 4th

B. 2nd



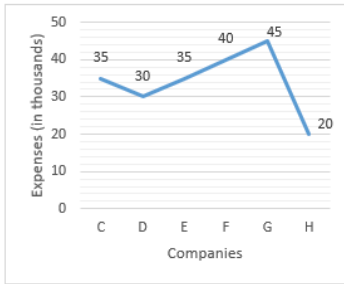
C. 3rd

D. 5th



Q49 General Intelligence and Reasoning

The following line graph shows expenditure of different companies in the month of January. Study the graph and answer the question.



What is the respective ratio of the total expenditure of companies C, D and E together to the total expenditure of companies F, G and H together?

A. 11 : 21

B. 100 : 101

C. 20 : 21



D. 21 : 11

Q50 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

All wires are metals

All metals are plastics

Some wires are coppers

Conclusions:

(I) Some coppers are metals

(II) Some plastics are coppers

(III) No copper is a plastic

A. Only conclusions I and II follow



B. Only conclusions II and III follow

C. Either conclusion I or III follows

D. None of the conclusions follow



Q51 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/deleting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(18, 27, 225)

(15, 33, 240)

A. (22, 49, 568)

B. (25, 45, 560)

C. (33, 38, 568)

D. (30, 15, 225) ✓

Q52 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

All potatoes are tomatoes.

All tomatoes are brinjals.

All brinjals are onions.

Conclusions:

(I) Some onions are potatoes

(II) All tomatoes are potatoes

(III) No tomato is a potato

A. Only conclusion I follows ✓

B. Only conclusion II follows

C. Either conclusion I or III follows

D. None of the conclusions follow

Q53 General Intelligence and Reasoning

In a certain code language, 'PROUD' is written as 'RPQSF' and 'FLICK' is written as 'HJKAM'. How will 'TEMPT' be written in that language?

A. VCONV ✓

B. UCNNU

C. VNOCV

D. UDOOU



Q54 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) G H U B Q R P M E N S T A V L M A (Right)

How many vowels are immediately preceded by a consonant and also immediately followed by a consonant?

A. 3



B. 4

C. 1

D. 6

Q55 General Intelligence and Reasoning

Six friends, A, B, C, D, E, and F are sitting around a circular table facing the centre. E is the immediate neighbour of B and D. F is to the immediate right of B, and second to the left of C. Where is A seated?

A. Second to the right of D

B. Third to the left of B

C. To the immediate right of F



D. To the immediate right of C

General Science

25 Questions • Answer Key

Q56 General Science

Which of the following statements is/are correct with regard to the principal axis of a spherical mirror?

(a) A principal axis is an imaginary line extended on both sides of the mirror.

(b) A principal axis passes through the center of curvature, principal focus and pole.

(c) The principal axis for a curved mirror is curved.

A. Only (a) is correct

B. Only (b) is correct

C. Only (a) and (b) are correct



D. (a), (b) and (c) are correct



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Q57 General Science

The path of a beam of light is visible through a _____ solution in which the size of the particles is relatively larger.

A. colloidal



B. sugar

C. water

D. salt

Q58 General Science

Which of the following animal tissues contain(s) flattened cells?

A. Cuboidal epithelium

B. Squamous epithelium



C. Plasma cells

D. Mast cells

Q59 General Science

The element used as a fuse _____ when a huge current flows through it.

A. heats up

B. cools

C. boils

D. melts



Q60 General Science

Which of the following statements is true about precipitation reaction?

A. An insoluble salt is formed.



B. Only water is formed.

C. Only soluble solution is formed.

D. Only hydrogen gas is formed.



Q61 General Science

Which of the following compounds contains only one carbon-carbon single bond?

A. Methane

B. Ethane



C. Propane

D. Butane

Q62 General Science

Ozone at the higher levels of the atmosphere is a product of UV radiation acting on _____ molecule.

A. oxygen (O₂)



B. carbon dioxide (CO₂)

C. carbon monoxide (CO)

D. sulphur dioxide (SO₂)

Q63 General Science

The oustees of which dam built in the 1970s are still fighting for the benefits they were promised?

A. Tawa dam



B. Sardar Sarovar dam

C. Nagarjuna Sagar dam

D. Hirakud dam

Q64 General Science

Maintenance processes are needed in life processes to:

A. transfer a source of energy from inside the body of organism

B. prevent damage and breakdown



C. add raw material from inside the body

D. transfer food material outside the body



Q65 General Science

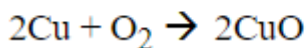
Where in a human body can anaerobic respiration take place?

- A. Only in red blood cells in the veins
- B. In mitochondria of all cells
- C. Only in striated muscle cells
- D. In the cytoplasm of cells



Q66 General Science

In the given reaction which substance undergoes oxidation?



- A. Copper oxide
- B. Only copper
- C. Only oxygen
- D. Copper and oxygen



Q67 General Science

Fleming's right hand rule gives the direction of current induced in a conductor moving in a _____.

- A. electric field
- B. magnetic field
- C. electromagnetic field
- D. gravitational field



Q68 General Science

How does a loop act as a contraceptive?

- A. It blocks access to the fallopian tubes.
- B. It blocks the release of sperm.
- C. It inhibits implantation of the embryo.
- D. It inhibits release of ovum.



Q69 General Science

During photosynthesis, the carbohydrates synthesised are stored in the form of:

- A. proteins
- B. starch
- C. fats
- D. vitamins

Q70 General Science

Which of the following elements belongs to the second group?

- A. Na
- B. B
- C. C
- D. Be

Q71 General Science

The length of a conducting wire is 1 km and its radius of cross section is 7 mm. A resistor of resistance $10\ \Omega$ is made out of this wire. The resistivity of this conductor will be _____.

- A. $2.22 \times 10^{-6}\ \Omega\text{-m}$
- B. $1.54 \times 10^{-6}\ \Omega\text{-m}$
- C. $7 \times 10^{-6}\ \Omega\text{-m}$
- D. $1 \times 10^{-6}\ \Omega\text{-m}$

Q72 General Science

Which of the following compounds is cyclic and unsaturated?

- A. Ethane
- B. Benzene
- C. Cyclopropane
- D. Cyclohexane



Q73 General Science

Throbbing movements called pulse is felt due to:

- A. blood flowing in the arteries
- B. blood flowing in the veins
- C. blood flowing in the heart
- D. blood flowing in the lungs



Q74 General Science

'X' gas is produced during the electrolysis of brine. Then, 'X' gas is used in dry slaked lime to produce CaOCl_2 . What is 'X'?

- A. Chlorine
- B. Hydrogen
- C. Nitrogen
- D. Sulphur



Q75 General Science

In the normal eye, the distance of the retina from the eye lens is 2.5 cm. The power of the eye lens when it is focussed at its near point 25 cm from the eye is :

- A. 4 D
- B. 44 D
- C. 40 D
- D. 22 D



Q76 General Science

If two parallel straight conductors are carrying current in the same direction, then the directions of the magnetic fields produced will be:

- A. in the same direction
- B. opposite to each other
- C. perpendicular to each other
- D. in random directions



Q77 General Science

The rate at which electrical energy is dissipated in an electric circuit is called _____.

- A. electric power
- B. electric heat
- C. electric work
- D. electric force

Q78 General Science

Suppose a satellite is 10^2 km above the ground and it is used to take high resolution images of objects. If a concave mirror is used to form a primary image of an object of size 1.0 m and if the image size is $5\ \mu\text{m}$ and it is inverted, then the principal focus of the concave mirror should be:

- A. +1.0 m
- B. -0.5 m
- C. +0.50 m
- D. -1.0 m

Q79 General Science

Select the correct increasing order of atomic radii.

- A. $\text{B} < \text{Be} < \text{Li} < \text{Rb}$
- B. $\text{B} < \text{Be} < \text{Rb} < \text{Li}$
- C. $\text{Li} < \text{B} < \text{Be} < \text{Rb}$
- D. $\text{Li} < \text{Be} < \text{B} < \text{Rb}$

Q80 General Science

Which of the following statements is/are correct?

- A) pH value of saliva: 6.2 – 8
- B) pH value of pure blood : 7.35 – 7.45
- C) pH value of pure water: 9

- A. A and B
- B. Only B
- C. Only C
- D. B and C

Q81 General Awareness and Current Affairs

In which year did PV Sindhu win the Swiss Open Super 300 badminton competition in Basel, Switzerland, defeating Busanan Ongbamrungphan of Thailand in the finals?

- A. 2019
- B. 2020
- C. 2021
- D. 2022

**Q82** General Awareness and Current Affairs

What is the full form of ESIC, which is an autonomous body created by the law under the Ministry of Labour and Employment, Government of India?

- A. Employers' State Insurance Corporation
- B. Employees' Statuary Insurance Corporation
- C. Employees' State Indemnity Corporation
- D. Employees' State Insurance Corporation

**Q83** General Awareness and Current Affairs

Between the ages of six and fourteen, parents or guardians should provide opportunities for their children's education. When did this become a part of the right to education legislation?

- A. 2004
- B. 2005
- C. 2008
- D. 2009

**Q84** General Awareness and Current Affairs

Which of the following has the authority to create a municipality, municipal corporation, or panchayat in a given area?

- A. State Government
- B. Divisional Commissioner
- C. Central Government
- D. District Collector



Q85 General Awareness and Current Affairs

Ranikhet hill station is located in which state of India?

A. Uttarakhand



B. Himachal Pradesh

C. Sikkim

D. Kerala

Q86 General Awareness and Current Affairs

When was the First Five-Year Plan launched?

A. 1956-1961

B. 1951-1956



C. 1961-1966

D. 1946-1951

Q87 General Awareness and Current Affairs

In the universal prayer of Jains, Navakara Mantra, what is the literal meaning of 'Namo Arihantanam'?

A. I bow down to all souls who have escaped all their gati karmas.



B. I bow down to all completely liberated souls.

C. I bow to all spiritual masters or divine teachers.

D. I bow down to all preceptors.

Q88 General Awareness and Current Affairs

After receiving recognition as a classical language in 2008, the Centre of Excellence for Studies in Classical Telugu (CESCT) was set up under which institution?

A. Central Institute of Indian Languages, Mysore



B. English and Foreign University, Hyderabad

C. Rashtriya Sanskrit Sansthan, New Delhi

D. American Institute of Tamil Language



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Q89 General Awareness and Current Affairs

The Council of States consists of _____ members, which are nominated by the President on the basis of their excellence in literature, science, art and social service.

A. 10

B. 11

C. 21

D. 12



Q90 General Awareness and Current Affairs

Where is the head office of the Barefoot College, which completed 50 years of community empowerment in 2022, located?

A. Odisha

B. West Bengal

C. Rajasthan



D. Gujarat

Q91 General Awareness and Current Affairs

Who among the following extends the jurisdiction of a High Court to, or excludes it from, any union territory?

A. Legislature of the State in which the High Court is situated

B. The Chief Justice of India

C. The President of India

D. Parliament by law



Q92 General Awareness and Current Affairs

The Sunderbans Biosphere Reserve is located in which of the following states?

A. Sikkim

B. West Bengal



C. Odisha

D. Madhya Pradesh



Q93 General Awareness and Current Affairs

The Microfinance Institutions Network (MFIN) was recognised by the Reserve Bank of India (RBI) as India's first Self-Regulatory Organization (SRO) for Non-Banking Financial Company-Micro Finance Institutions (NBFC-MFI) in _____.

A. 2017

B. 2018

C. 2014



D. 2015

Q94 General Awareness and Current Affairs

In February 2022, who was appointed as the new director of the Vikram Sarabhai Space Centre (VSSC)?

A. S Somnath

B. Dr. S. Unnikrishnan Nair



C. G Ashok Kumar

D. Dr. K Sivan

Q95 General Awareness and Current Affairs

Which of the following is the consumer complaint body of the Advertising Standards Council of India (ASCI)?

A. Consumer Complaints Council (CCC)



B. Consumer Complaints Commission (CCC)

C. Consumer Complaints Company (CCC)

D. Consumer Complaints Committee (CCC)



Q96 General Awareness and Current Affairs

Which of the following states or union territories has zero per cent forest area?

- A. Goa
- B. Lakshadweep
- C. Chandigarh
- D. Haryana



Q97 General Awareness and Current Affairs

From which of the following places was the Polar Satellite Launch Vehicle PSLV-C52 launched with EOS-04 Satellite?

- A. Bhubaneswar
- B. Sriharikota
- C. Thiruvananthapuram
- D. Thumba



Q98 General Awareness and Current Affairs

Which Commission was formed by the Government of India to investigate the Jallianwala Bagh incident of 1919?

- A. Babington Smith Commission
- B. Fraser Commission
- C. Hunter Commission
- D. Butler Commission



Q99 General Awareness and Current Affairs

Which of the following Indian teams won the gold medal at the Commonwealth Games 2022, creating history by winning India's first ever gold in this event at the Commonwealth Games?

- A. Women's tennis team
- B. Women's fours lawn bowls team
- C. Women's hand ball team
- D. Women's rugby sevens team



In the Republic Day Parade 2022, which state's theme of the tableau was based on Anglo-Abor (Adi) wars?

A. Arunachal Pradesh



B. Sikkim

C. Assam

D. Tripura



Mathematics

25 Questions · Answer Key

Q1 Mathematics

The roots of the quadratic equations $6x^2 - 11x + 3 = 0$ are:

A. $\frac{1}{3}, \frac{3}{2}$



B. $\frac{1}{3}, \frac{2}{3}$

C. $\frac{1}{2}, \frac{3}{2}$

D. $\frac{2}{3}, \frac{3}{2}$

Q2 Mathematics

Hema is the mother of Deeksha. 10 years ago, the age of Hema was 3 times the then age of Deeksha. After 10 years, Hema will be twice as old as Deeksha will then be. Find the present age (in years) of Deeksha.

A. 20

B. 30



C. 15

D. 50

Q3 Mathematics

Find the mode of the given frequency distribution.

Marks	Frequency
51	3
29	4
85	6
40	7

A. 51

B. 85

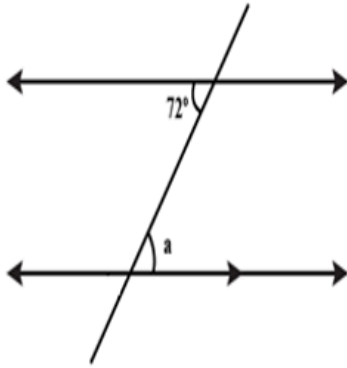
C. 7

D. 40



Q4 Mathematics

In the given figure, a pair of parallel lines are intersected by a transversal. Find the value of angle a.



A. 72°



B. 36°

C. 96°

D. 108°

Q5 Mathematics

One year ago, Praveena was four times as old as her daughter. Six years hence, Praveena's age will exceed twice her daughter's age by 7 years. What is the sum of their present ages?

A. 32 years

B. 35 years

C. 37 years



D. 39 years

Q6 Mathematics

Find the least number which, when divided by 12, 16 and 18, leaves a remainder of 5 in each case.

A. 144

B. 145

C. 147

D. 149



Q7 Mathematics

The selling price of 10 books is equal to the cost price of 15 books. Find the loss or gain percentage.

A. $\frac{100}{3}\%$ Gain

B. 50% Loss

C. $\frac{100}{3}\%$ Loss

D. 50% Gain

**Q8 Mathematics**

In a parallelogram ABCD, if $m\angle A = (3x + 16)^\circ$ and $m\angle B = (2x + 24)^\circ$, then find $m\angle C$.

A. 28°

B. 56°

C. 100°



D. 110°

Q9 Mathematics

A solid metallic cuboid of dimensions $9\text{ cm} \times 32\text{ cm} \times 48\text{ cm}$ is melted and recast into 8 identical cubes. What is the sum of the lateral surface areas (in cm^2) of 5 such cubes?

A. 2160

B. 2880



C. 3600

D. 4320

Q10 Mathematics

The present age of a father is 5 years more than three times the age of his daughter. Four years hence, the father's age will be 8 years more than twice the age of his daughter. The present age of the daughter is:

A. 6 years

B. 7 years



C. 8 years

D. 9 years



Q11 Mathematics

20, 38, 40 and x are in proportion. Find the value of x.

A. 66

B. 70

C. 74

D. 76

**Q12** Mathematics

10 men can dig a well 50 feet deep in 8 days. How many men can dig a well 100 feet deep in 10 days?

A. 18

B. 14

C. 15

D. 16

**Q13** Mathematics

A man's monthly income is ₹50,000. He spends 25% of it on tax, 30% of the remaining income on household expenses, and 10% of the still remaining income on entertainment. He saves the remaining part of his income. How much money will the man save per year, assuming that the above data is same for all 12 months?

A. ₹2,83,050

B. ₹2,38,500

C. ₹2,85,300

D. ₹2,83,500

**Q14** Mathematics

The value of the discriminant of the quadratic equation $9x + 2x^2 = 5$ is:

A. 41

B. 184

C. -176

D. 121



Q15 Mathematics

Simplify the following.

$$\frac{1}{12} + \frac{1}{16} - \frac{1}{8}$$

A. $\frac{13}{48}$

B. $\frac{1}{48}$ ✓

C. $\frac{1}{24}$

D. $\frac{3}{24}$

Q16 Mathematics

The value of $\sin 30^\circ - \cos 60^\circ + \tan 45^\circ + \operatorname{cosec} 60^\circ$ is:

A. $\frac{3 - 2\sqrt{3}}{3}$

B. $\frac{3 + 2\sqrt{3}}{3}$ ✓

C. $\frac{2\sqrt{3}}{3}$

D. 2

Q17 Mathematics

In which of the pairs of numbers below none of the two numbers is a prime number, but the two numbers are co-primes?

A. (11, 17)

B. (8, 25) ✓

C. (21, 35)

D. (19, 27)



Q18 Mathematics

One side of a triangle is 7 metres longer than twice the smallest side. Another side is 5 metres longer than three times the smallest side. If the perimeter of the triangle is 90 metres, find the length of its smallest side.

A. 13 m



B. 10 m

C. 12 m

D. 9 m

Q19 Mathematics

A toy is made of a solid cube and a solid cuboid. Each side of the cube is 5 cm long, and the cuboid has dimensions given as 5 cm × 2 cm × 8 cm. What is the volume of the toy?

A. 205 cm³B. 250 cm³C. 215 cm³D. 225 cm³**Q20** Mathematics

Find the value of $\sqrt{\frac{(0.05)^2 + (0.15)^2 + (0.053)^2}{0.005^2 + 0.015^2 + 0.0053^2}}$.

A. 10

B. 10²C. 10³D. 10⁴**Q21** Mathematics

The cost of a camera is ₹25,000. A leather case costing ₹2,750 was also sold along with this. Arti bought these two items. After using them for few years, she sold them for ₹26,085. What is the loss percentage?

A. 4%

B. 8%

C. 6%



D. 5%



Q22 Mathematics

What time is required for a 150 m long train to cross a 100 m long tunnel, if the train travels at a speed of 25 km/h?

- A. 30 seconds
- B. 25 seconds
- C. 36 seconds
- D. 32 seconds

**Q23** Mathematics

The total amount payable at maturity on a certain sum invested at simple interest at 8% p.a. for $3\frac{1}{2}$ years exceeds the simple interest payable on the same sum at 10.5% p.a. for 12 years by ₹156. The sum (in ₹) is:

- A. 7,500
- B. 7,800
- C. 8,000
- D. 8,200

**Q24** Mathematics

Simplify $(3^{-1} \times 6^{-1})^{-1} + 3^{-1}$

- A. 45
- B. 54
- C. 65
- D. 56

**Q25** Mathematics

In a Lions Club, 70% of the members are young and 30% of the members are old. The average age of the old members is 40 years and that of the young members is 20 years. What is the average age of all the members (in years)?

- A. 26
- B. 24
- C. 28
- D. 22



Q26 General Intelligence and Reasoning

Sneha starts walking 5 m towards the east. She turns right and walks 5 m. Then she takes a left, walks 4 m and again takes a left. She walks 2 m and then again takes a left. She walks 3 m and then takes a right. She walks 2 m, takes a right again and walks 3 m. In which direction is she facing now? (All turns are 90 degree turns only)

A. West

B. North

C. South

D. East

**Q27** General Intelligence and Reasoning

Among six friends A, B, C, D, E and F, each has a different height. Only two people are shorter than B. Only one person is taller than A. E is neither the tallest nor the shortest. C is shorter than E but taller than F. Who is the taller than B but shorter than A?

A. D

B. E



C. C

D. F

Q28 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

MOVEOIFVASKCOSDVINSDINIS

How many such consonants are there each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A. One

B. Two



C. Three

D. Four



Q29 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Dogs are Barks.

Some Barks are Trees.

All Trees are Woods.

Conclusions:

(I) Some Dogs are Trees.

(II) Some Woods are Barks.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows. ☒
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

Q30 General Intelligence and Reasoning

Each of the digits in the number 7639482 is arranged in ascending order from right to left. The position of how many digits will remain unchanged as compared to that in the original number?

- A. None
- B. One
- C. Two ☒
- D. Three

Q31 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$19.99 - 10.01 + 24.99 \times 10.01 = ?$$

- A. 260 ☒
- B. 265
- C. 270
- D. 280



Q32 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

4 8 35 51 176 ?

A. 234

B. 212



C. 226

D. 208

Q33 General Intelligence and Reasoning

All 24 students of a class are standing in a straight row facing north. Amit is 3rd from the right end, while Maria is 3rd from the left end. How many students stand between Maria and Amit?

A. 14

B. 17

C. 16

D. 18



Q34 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word PROUDLY is arranged in alphabetical order?

A. Three

B. Two



C. Four

D. One

Q35 General Intelligence and Reasoning

If each of the letters in the word 'ACQUIRE' is arranged in alphabetical order, then how many letters will be there in the English alphabetical series between the letter that is fifth from the left end and the one that is first from the right end?

A. 2

B. 3



C. 5

D. 4



Q36 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the given sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(8, 5, 12)

(2, 6, 22)

A. (5, 9, 19)

B. (9, 12, 23)

C. (17, 8, 11)

D. (1, 6, 23)



Q37 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3 30 300 3000 ?

A. 3000

B. 300000

C. 30000



D. 3000000

Q38 General Intelligence and Reasoning

In a certain code language, 'FAR' is written as 'SARF' and 'PICK' is written as 'SICKP'. How will 'BLACK' be written in the same code language?

A. SBLACK

B. SKBLAC

C. SLBACK

D. SLACKB



Q39 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statement is true, decide which of the given conclusions logically follow(s) from the statement.

Statement:

Infants born alive before 37 weeks of pregnancy are called Preterm babies.

Conclusions:

I. Babies born before 37 weeks of pregnancy have issues in adjusting properly in the world outside their mother's womb and need to be in a Neonatal Intensive Care Unit for durations varying from a few days to several weeks.

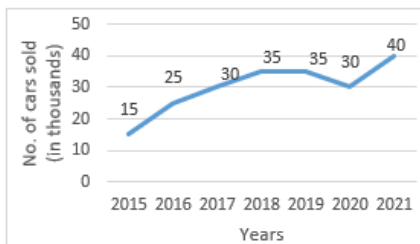
II. Infants born after 37 weeks of pregnancy are called full term babies and are completely healthy.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Both the conclusions follow
- D. Neither conclusion I nor II follows



Q40 General Intelligence and Reasoning

The following line graph shows number of cars sold by company A over the years. Study the graph and answer the question.



What is the respective ratio of the total cars sold by company A in 2015 and 2017 together to the total cars sold in 2019 and 2021 together?

- A. 5 : 3
- B. 3 : 13
- C. 3 : 5
- D. 13 : 3



Q41 General Intelligence and Reasoning

Sudesh starts from point A and drives 9 km towards North. He takes a left turn and drives for 4 km, he then turns right and drives for 2 km. He then turns right and drives for 9 km. He takes a final right turn and drives for 11 km to reach point M. What is the distance between points A and M (all turns are 90 degree turns only)?

A. 4 km

B. 6 km

C. 5 km



D. 2 km

Q42 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. D lives on an odd numbered floor but not on floor number 3. Only two people live between D and A. C lives immediately above A. Only two people live between C and B. F lives on one of the floors below B but not on the lowermost floor. Who lives on floor number 4?

A. F



B. A

C. C

D. E

Q43 General Intelligence and Reasoning

Six colleagues are sitting around a circular table facing the centre. Amrita is sitting second to the left of Kavita. Meagan is sitting second to the right of Sabina. Rohan is an immediate neighbour of both Kavita and Amrita. Rochelle is an immediate neighbour of both Meagan and Sabina. Who is sitting to the immediate right of Meagan?

A. Amrita



B. Rohan

C. Rochelle

D. Sabina

Q44 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

BOOK : YLLP :: NOTE : MLGV :: WORD : ?

A. IWDL

B. DLIW



C. LDWI

D. ILDW



Q45 General Intelligence and Reasoning

Four friends R, S, T and U are sitting at the exact centre of the sides of a rectangular table facing the centre (but not necessarily in the same order). R is sitting to the immediate right of S. T is sitting to the immediate left of U.

Which of the following pairs of friends is sitting opposite to each other?

A. S - U

B. R - U

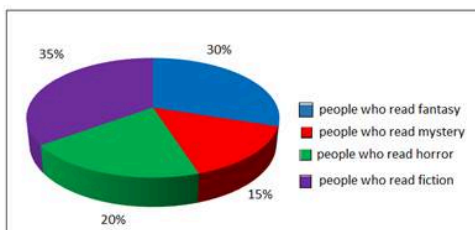


C. R - S

D. T - R

Q46 General Intelligence and Reasoning

According to a survey, the percentage of people who read different genres books is shown in the following pie-chart. Blue represents people who read fantasy, red represents people who read mystery, green represents people who read horror, and purple represents people who read fiction. Study the pie-chart and answer the question.



The survey was conducted on 80% students of a school. How many students read mystery and horror books if the school has 47,500 students overall?

A. 5,700

B. 12,400

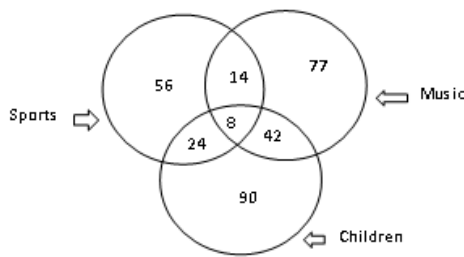
C. 7,600

D. 13,300



Q47 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such children are there who like music but NOT sports?

A. 50

B. 42



C. 56

D. 8

Q48 General Intelligence and Reasoning

P, Q, R, S, T and U are six different cars, each of a different weight. Q is heavier than only one car. S is heavier than Q. R is heavier than P. T is heavier than S. P is heavier than T. Which car among the six is the heaviest?

A. S

B. R



C. T

D. P

Q49 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(5, 315, 21)

(9, 486, 18)

A. (12, 560, 11)

B. (10, 480, 16)



C. (7, 294, 21)

D. (8, 368, 23)



Q50 General Intelligence and Reasoning

Which of the following two numbers should be interchanged to make the given equation correct?

$$3 \times 5 + 20 \div 8 - 17 = 11$$

- A. 17 and 3
- B. 5 and 17
- C. 8 and 17
- D. 5 and 8



Q51 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. R sits third to the right of P. Q is an immediate neighbour of both R and M. M is not an immediate neighbour of P. Exactly four people sit between M and T. If no other person is sitting in the row, what is the total number of people seated in the row?

- A. 9
- B. 10
- C. 11
- D. 12



Q52 General Intelligence and Reasoning

Which of the following alphanumeric-clusters will replace the question mark (?) in the given series to make it logically complete?

SU5, UR7, WO11, YL13, ?

- A. AO17
- B. AN15
- C. AI17
- D. AH19



Q53 General Intelligence and Reasoning

Study the given series and answer the question that follows (all numbers are single digit numbers only).

4 7 2 1 8 6 9 1 2 5 3 1 9 4 7 1 8 3 5 6 8 2 7 1 8 5 6 9

How many such even digits are there each of which is immediately preceded by a perfect square and immediately followed by an odd digit (NOTE: 1 is also a perfect square)?

- A. Two
- B. Three
- C. Four
- D. Five



Q54 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Baskets are Canes.
Some Canes are Woods.
All Woods are Forests.

Conclusions:

(I) All Canes are Forests.
(II) Some Baskets are Woods.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.



Q55 General Intelligence and Reasoning

In this question, a group of numbers/symbols is coded using letters as per the given table and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number / Symbol	\$	3	@	8	%	2	#	&	6	ψ	π	7	5	φ
Code	A	V	L	K	R	M	B	F	N	T	E	C	S	W

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

72π3@6

A. NMEVLC

B. ©MCFL©

C. ©MEVL©



D. CMEVLN

General Science

25 Questions • Answer Key

Q56 General Science

Which of the following statements is correct about litmus solution?

A. Litmus solution is an orange dye, which is extracted from lichen.

B. Litmus solution is an orange dye, which is extracted from moss.

C. Litmus solution is a purple dye, which is extracted from lichen.



D. Litmus solution is a purple dye, which is extracted from moss.

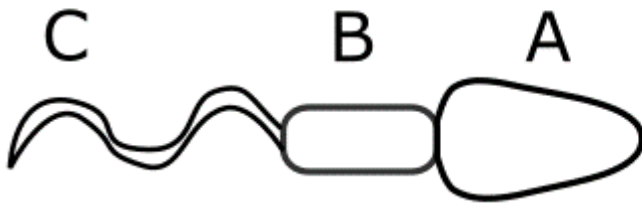


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Q57 General Science

Which part of the human sperm is responsible for determination of sex of the zygote?



A. Part A only



B. Parts A and B

C. Part B only

D. Parts B and C

Q58 General Science

Which of the following is considering as balanced food in itself and good for adolescents?

A. Roti/Rice

B. Pulses

C. Milk



D. Vegetables

Q59 General Science

The photographs taken from a satellite show the sky as dark. This is because:

A. no refraction occurs

B. no reflection occurs

C. no scattering occurs



D. no dispersion occurs

Q60 General Science

In which year Namami Gange Programme is an Integrated Conservation Mission approved as a Flagship Programme by the Union Government?

A. 2014



B. 2013

C. 2015

D. 2016



Q61 General Science

How many carbon atoms are arranged in the shape of a football like structure in fullerene?

A. 60



B. 40

C. 55

D. 30

Q62 General Science

In a room, a magnetic field is applied vertically upwards. Electron and proton beams are released horizontally from south towards the north direction into this field. The directions of deflections of these beams will be _____ and _____, respectively.

A. east, west



B. west, east

C. vertically up, vertically down

D. vertically down, vertically up

Q63 General Science

The device which converts chemical energy to electrical energy is called _____.

A. ammeter

B. voltmeter

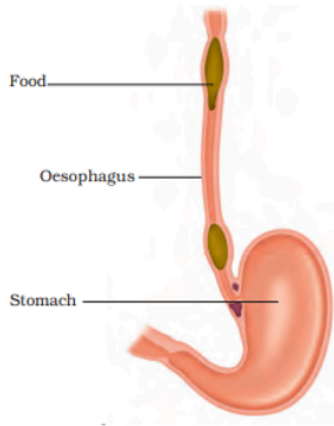
C. resistor

D. voltaic cell



Q64 General Science

The diagram below shows a part of the human alimentary canal. Which process is taking place and how?



- A. Peristalsis, due to rhythmic contraction and relaxation of muscular walls ✓
- B. Digestion, due to enzymes present
- c. Peristalsis, due to enzymes present
- D. Digestion, due to rhythmic contraction and relaxation of muscular walls

Q65 General Science

In a chemical reaction, a substance gains hydrogen. This process is said to be _____.

- A. reduction ✓
- B. chlorination
- C. bromination
- D. oxidation

Q66 General Science

Which group of elements constitutes a triad?

- A. F(19.0), Cl(35.5), Br(79.9)
- B. B(10.8), Al(27.0), Ga(69.7)
- c. Li(6.9), Na(23.0), K(39.1) ✓
- D. N(14.0), P(30.9), As(74.9)



Q67 General Science

Which of the following is NOT an animal-produced nitrogenous waste product?

- A. Urea
- B. Uric acid
- C. Ammonia
- D. Lactic acid



Q68 General Science

The heat produced in an electric circuit is proportional to _____.

- A. current
- B. 1/current
- C. (current)²
- D. 1/(current)²



Q69 General Science

Which of the following is an example of combination reaction?

- A. $\text{HCl(aq)} + \text{NaOH(aq)} \rightarrow \text{NaCl(aq)} + \text{H}_2\text{O(l)}$
- B. $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{H}_2\text{O(l)}$
- C. $2\text{HCl(aq)} + 2\text{Na(s)} \rightarrow \text{NaCl(aq)} + \text{H}_2(\text{g})$
- D. $\text{CH}_4(\text{g}) + 2\text{O}_2(\text{g}) \rightarrow \text{CO}_2(\text{g}) + 2\text{H}_2\text{O(g)}$



Q70 General Science

Which of the following metals has least reactivity?

- A. Gold
- B. Silver
- C. Sodium
- D. Mercury



Q71 General Science

The correct sign conventions for focal length (f) and radius of curvature (R) for the formation of images by spherical mirrors is:

- A. for convex mirror f is negative, R is positive
- B. for concave mirror f is positive, R is negative
- C. for convex mirror f is negative, R is negative
- D. for concave mirror f is negative, R is negative



Q72 General Science

Why were noble gases NOT included in the Newlands law of octaves?

- A. These elements do not follow the octet rule.
- B. These elements do not follow the law of octaves.
- C. These elements were not known at that time.
- D. These elements are inert.



Q73 General Science

In the case of reflection from a concave mirror, if the object distance is 5 cm and the image distance is 2 cm then magnification produced by the mirror is:

- A. $-2/5$
- B. $2/5$
- C. $-5/2$
- D. $5/2$



Q74 General Science

Focal length of the concave lens of power 10 D is:

- A. -0.1 m
- B. 0.1 m
- C. -10 m
- D. 10 m

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



Q75 General Science

In 1987, the United Nations Environment Programme (UNEP) succeeded in forging an agreement to freeze CFC production at _____ levels.

A. 1986



B. 1967

C. 1985

D. 1988

Q76 General Science

A student performed a reaction with zinc and sulphuric acid. zinc sulphate is formed along with a gas. Which gas is evolved?

A. Oxygen

B. Hydrogen



C. Carbon monoxide

D. Carbon dioxide

Q77 General Science

Electric motor works on the principle of _____. It converts _____ energy into _____ energy.

A. Fleming's Right Hand Rule, electrical, mechanical

B. Fleming's Left Hand Rule, electrical, mechanical



C. Fleming's Right Hand Rule, mechanical, electrical

D. Fleming's Left Hand Rule, mechanical, electrical

Q78 General Science

A current flowing through a 10 ohm resistor per second in which 360 J energy is produced is _____.

A. 90 amp

B. 3600 amp

C. 6 amp



D. 36 amp



Q79 General Science

Which of the following pathways correctly shows the transportation of water from soil to leaves?

- A. Soil → root hairs → root cortex → xylem of roots → xylem of stem → xylem of leaf ✓
- B. Soil → root cortex → root hairs → xylem of roots → phloem of roots → phloem of stem → phloem of leaf
- C. Soil → root hairs → xylem of roots → phloem of roots → xylem of leaf
- D. Soil → root hairs → root cortex → xylem of roots → phloem of leaf

Q80 General Science

Which of the following options shows the main waste products produced by plants?

- A. Only CO₂ and O₂
- B. Only O₂ and water vapour
- C. Only CO₂ and water vapour
- D. CO₂, O₂ and water vapour ✓

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Under which Article of the Constitution of India do we consider Hindi in Devanagari script as an official language of India?

- A. Article 336
- B. Article 347
- C. Article 351
- D. Article 343 ✓

Q82 General Awareness and Current Affairs

Launched in May 2020, which of the following scheme unifies all efforts related to digital/online/on-air education to enable coherent multi-mode access to education?

- A. National Digital Education Architecture (NDEAR)
- B. Vidyanjali
- C. PM e-Vidya ✓
- D. Samagra Shiksha



Q83 General Awareness and Current Affairs

How many gold medals were secured by India at the Tokyo Olympics 2020?

- A. One
- B. Two
- C. Three
- D. Four



Q84 General Awareness and Current Affairs

Identify the correct definition of Long Run Marginal Cost (LRMC) from the following.

- A. The change in total expense per unit of change in input.
- B. The change in average expense per unit of change in output.
- C. The change in marginal cost per unit of change in input.
- D. The change in total cost per unit of change in output.



Q85 General Awareness and Current Affairs

The inlet of the Bay of Bengal between south-eastern India and northern Sri Lanka is called:

- A. Palk Strait
- B. Palk Channel
- C. Palk Canal
- D. Palk Passage



Q86 General Awareness and Current Affairs

Delhi generally receives the monsoon showers from the _____ by the end of June (tentative date is 29th of June).

- A. Bay of Bengal branch
- B. Arabian Sea branch
- C. Returning Monsoon
- D. Mediterranean region branch



Q87 General Awareness and Current Affairs

As of April 2022, to avail the scheme of Permanent Residency Status to Foreign Investors, how much investment a foreign investor will have to make within 18 months?

A. ₹15 crore

B. ₹10 crore



C. ₹20 crore

D. ₹25 crore

Q88 General Awareness and Current Affairs

Which of the following forms a part of the State Executive as per the Constitution of India?

A. Attorney-General for India

B. Vice President of India

C. Governor of State



D. Prime Minister of India

Q89 General Awareness and Current Affairs

What is the name of the programme launched by the Ministry of Electronics and Information Technology in 2021 to assist startups in their early stages?

A. ASPIRE

B. Multiplier Grants Scheme

C. Startup India Seed Fund

D. SAMRIDH



Q90 General Awareness and Current Affairs

Which of the following is one of the Central Government's schemes of interest subsidy on educational loans for overseas studies for students belonging to the minority communities?

A. Naya Savera

B. Nai Manzil

C. Padho Pardesh



D. Padho Videsh



Q91 General Awareness and Current Affairs

Which of the following is an indirect tax?

- A. Wealth tax
- B. Income tax
- C. Gift tax
- D. Goods and Services Tax



Q92 General Awareness and Current Affairs

Which of the following teams won the Indian Premier League (IPL) 2022?

- A. Gujarat Titans
- B. Rajasthan Royals
- C. Lucknow Super Giants
- D. Royal Challengers Bangalore



Q93 General Awareness and Current Affairs

Which was the principal source and sector of occupation of the Indian economy on the eve of Independence?

- A. Education
- B. Industry
- C. Services
- D. Agriculture



Q94 General Awareness and Current Affairs

What is the full form of TEDP, which is a structured training programme of the Department of Science and Technology (DST), Government of India?

- A. Technology Based Entrepreneurship Development Programme
- B. Technology and Entrepreneurship Development Programme
- C. Technological Enterprises and Development Programme
- D. Technical and Entrepreneurship Development Programme



Q95 General Awareness and Current Affairs

Where is the Lokrang Utsav celebrated?

- A. Sikkim
- B. Rajasthan
- C. Madhya Pradesh
- D. Nagaland



Q96 General Awareness and Current Affairs

Under Article 243 S of the Constitution of India, there is a provision for constitution of Ward Committees within the territorial area of a Municipality having a population of _____ or more.

- A. one lakh
- B. two lakh
- C. three lakh
- D. four lakh



Q97 General Awareness and Current Affairs

Hinduism encourages full participation in life through the Purusharthas – life goals. Which of the following is NOT one of them?

- A. Sattva
- B. Artha
- C. Kama
- D. Moksha



Q98 General Awareness and Current Affairs

The Articles of the Indian Constitution are grouped into how many different parts?

- A. 8
- B. 12
- C. 22
- D. 395

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).



Q99 General Awareness and Current Affairs

Henry Louis Vivian Derozio was associated with which movement?

A. Young Bengal Movement



B. Theosophical Society

C. Arya Samaj

D. Prarthana Sabha

Q100 General Awareness and Current Affairs

In which one of the following Indian state is Mawsynram located which is at present the wettest place in India, with an average annual rainfall of 11802.4 mm (average of the 1974-2022 period)?

A. Meghalaya



B. Mizoram

C. Tripura

D. Assam



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

Kamal is the father of Vishnu. The sum of their present ages is 60 years. If 6 years ago, Kamal's age was 5 times the then age of Vishnu, then find the present age (in years) of Vishnu.

A. 10

B. 15

C. 20

D. 14



Q2 Mathematics

A show ticket costs ₹7.50 for a parent and ₹3 for a child. If a total of ₹5,925 is collected by selling 952 tickets in all, then find the number of children's tickets sold.

A. 682

B. 300

C. 270

D. 500



Q3 Mathematics

A sum of money triples itself at a certain rate of compound interest in 10 years. In how many years will it amount to 9 times of itself?

A. 15 years

B. 20 years

C. 25 years

D. 30 years



Q4 Mathematics

Vishnu scored X runs in his 10th innings. After scoring those runs, his average per innings increased by 8 runs. If the new average is 28, then find the value of X.

A. 110

B. 105

C. 100

D. 90



Q5 Mathematics

The sum of two numbers is 205. If one of these numbers is reduced by 5% and the other is increased by 10%, the resulting numbers are equal to each other. Find the smaller of the two initial numbers.

A. 95



B. 110

C. 100

D. 105

Q6 Mathematics

Find the area of a triangle whose sides measure 42 cm, 36 cm and 34 cm, respectively.

A. $56\sqrt{110}\text{ cm}^2$



B. $112\sqrt{110}\text{ cm}^2$

C. $28\sqrt{55}\text{ cm}^2$

D. $14\sqrt{55}\text{ cm}^2$

Q7 Mathematics

Find the value of n , when $2^{-7} \times 2^{3n+4} = 2^{11} \div 2^5$.

A. 2

B. 4

C. 5

D. 3

**Q8 Mathematics**

A shopkeeper finds that when he sells one kind of rice at ₹50 per kg he loses 20% and when he sells another kind of rice at ₹72 per kg he gains 20%. If he mixes them in the ratio 3 : 2 and sells the mixture at ₹64 per kg., then what is his overall gain percentage (correct to one decimal place)?

A. 4.1%



B. 4.5%

C. 5.4%

D. 5.6%



Q9 Mathematics

In $\triangle ABC$, $\overline{AD}$ bisects $\angle A$ and D is a point on $\overline{BC}$. If $m(\overline{AC}) = 4.2$ cm, $m(\overline{BD}) = 4$ cm and $m(\overline{BC}) = 7$ cm, then find $m(\overline{AB})$.

A. 5.2 cm

B. 5.6 cm



C. 4.8 cm

D. 4.2 cm

Q10 Mathematics

At present, the difference of the ages of a mother and son is 30 years. 15 years ago, the mother's age was twice the then age of the son. The present age (in years) of the mother is:

A. 75



B. 45

C. 60

D. 90

Q11 Mathematics

A shopkeeper offers a scheme of either selling articles at successive discounts of 30% and 20% or one where a customer can "buy 2, get 1 free". The positive difference in overall nominal percentage discounts offered in the two schemes is:

A. $10\frac{2}{3}\%$



B. $11\frac{2}{3}\%$

C. $10\frac{1}{3}\%$

D. $11\frac{1}{3}\%$

Q12 Mathematics

Train A leaves station M at 6.00 a.m. and reaches station N at 2.00 p.m. on the same day. Train B leaves station N at 8.00 a.m. and reaches station M at 3.00 p.m. on the same day. Find the time when Trains A and B meet.

A. 10.48 a.m.



B. 11.00 a.m.

C. 10.55 a.m.

D. 10.45 a.m.



Q13 Mathematics

The LCM of 62 and 30 is:

- A. 310
- B. 9300
- C. 930
- D. 1860



Q14 Mathematics

Which of the following is divisible by 4?

- A. 2122
- B. 2123
- C. 2124
- D. 2125



Q15 Mathematics

If $\frac{5}{2}$ is a root of the equation $4x^2 - mx + 25 = 0$, then the value of m is:

- A. 20
- B. 25
- C. 50
- D. 10



Q16 Mathematics

Which is the smallest fraction among the options given below?

- A. $\frac{1981}{150}$
- B. $\frac{1981}{153}$
- C. $\frac{1981}{152}$
- D. $\frac{1981}{155}$



Q17 Mathematics

Find the measure of each interior angle of a regular hexagon.

A. 135°

B. 45°

C. 80°

D. 120° ✓

Q18 Mathematics

Find the value of $(3 + 11) \times 4 \div (6 + 1) - 21$.

A. 15

B. -15

C. -13 ✓

D. 13

Q19 Mathematics

In a right-angled triangle ABC, right-angled at B, if $\tan A = \frac{1}{\sqrt{3}}$, the value of

$(\sin A \cos C + \cos A \sin C)$ is:

A. $\frac{1}{4}$

B. $\frac{1}{2}$

C. $\frac{3}{4}$

D. 1 ✓

Q20 Mathematics

The volume of a right circular cylinder is 814 cm^3 . If the radius and the height of the cylinder are equal, find the height (in cm) of the cylinder.

(Use $\pi = \frac{22}{7}$)

A. $\sqrt[2]{259}$

B. $\sqrt[3]{259}$ ✓

C. $\sqrt[3]{295}$

D. $2\sqrt[3]{259}$



Q21 Mathematics

The LCM of two numbers is 14 times their HCF. If one of the numbers is 36 and the sum of the LCM and the HCF is 270, then the other number is:

A. 144

B. 126



C. 252

D. 234

Q22 Mathematics

The sum of a number and its reciprocal is -2 . Find the quadratic equation associated with the situation and also the number.

A. $x^2 + 2x + 1 = 0, x = -1$



B. $x^2 - 2x + 1 = 0, x = -1$

C. $x^2 + 2x + 1 = 0, x = 1$

D. $x^2 + 2x - 1 = 0, x = -1$

Q23 Mathematics

A and B can do a piece of work in 9 days and 12 days, respectively. A starts the work and they work on alternate days. They can finish the work in:

A. 11 days

B. $11\frac{1}{4}$ days

C. $10\frac{2}{7}$ days

D. $10\frac{1}{4}$ days

**Q24 Mathematics**

A sum of ₹150 is divided into two parts. The first part is ₹2 more than three times the second part. Find the second part.

A. ₹113

B. ₹37



C. ₹115

D. ₹35



Q25 Mathematics

If $48 : b :: b : 75$, and $b > 0$, find the value of b .

A. 55

B. 60



C. 65

D. 70

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 94387251, what will be the sum of the first, fifth and last digits in the new number thus formed?

A. 12

B. 10

C. 11



D. 14

Q27 General Intelligence and Reasoning

Given below are two letter-cluster pairs in which the second letter-cluster is related to the first letter-cluster following a certain logic. Select the letter-cluster pair from among the options that follows the same logic.

CPG : PGC

TJM : JMT

A. UQK : KQU

B. UQK : QUK

C. UQK : QKV

D. UQK : QKU

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Q28 General Intelligence and Reasoning

Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement:

During winters, the sky is very clear at night.

Assumptions:

- I. The sun sets early in the winter months.
- II. During winter, it even rains.

- A. Only assumption I is implicit
- B. Only assumption II is implicit
- C. Neither assumptions I nor II is implicit** ✓
- D. Both assumptions I and II are implicit

Q29 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$18.01 \times 3.99 + 9.99 \times 3.99 = ?$$

- A. 92
- B. 112** ✓
- C. 84
- D. 122

Q30 General Intelligence and Reasoning

Seven people (E, F, G, H, I, J and K), are sitting in a straight row, facing north. Only three people sit between E and I. Only two people sit to the right of J. E sits third to the left of J. H is an immediate neighbour of E and G. K is not an immediate neighbour of E. Who sits in the exact middle position of the row?

- A. G** ✓
- B. H
- C. J
- D. I

Q31 General Intelligence and Reasoning

H, N, P, T, W and Y live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. H lives on an odd numbered floor but not on floor number 3. Only two people live between H and N. P lives on an odd numbered floor above N. Only two people live between P and T. Neither T nor W live on the topmost floor. How many people live below T?

- A. More than three
- B. Three
- C. Two
- D. One

**Q32** General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Lipsticks are Red.

Some Red are Pink.

All Lipsticks are Colours.

Conclusions:

(I) Some Lipsticks are Pink.

(II) Some Colours are Red.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

**Q33** General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the blanks below, will complete the letter series.

E _ F G _ E _ F G H E _ G G H _ F G H _

- A. EFHHFH
- B. EGFHFF
- C. EHF FEH
- D. EHFGEH



Q34 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions that follow. The correct combination of codes following the conditions is your answer.

Number /symbol	2	%	4	3	5	\$	@	9	#	+	8	^	7	9
Code Letter	L	D	B	S	G	A	H	K	L	Z	F	X	Q	Y

Conditions:

- (i) If the first element is a symbol and the last element is a number, the codes for these two (the first and the last elements) are to be interchanged.
- (ii) If the first element is an odd number and the last element is an even number, the first and last elements are to be coded as ©.
- (iii) If both the second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What will be the code for \$ 2 3 % 4 ?

A. BLDSA

B. ASLDB

C. ALSDB

D. BLSDA



Q35 General Intelligence and Reasoning

How many such pairs of letters are there in the word **PLATE** (in both forward and backward directions) which have as many letters between them in the word as there are in the English alphabetical order?

A. None



B. One

C. Two

D. Three

Q36 General Intelligence and Reasoning

H, N, P, T, W and Y live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. H lives on one of the floors above floor number 4. Only three people live between H and N. P lives immediately above N. Only three people live between P and T. W lives on one of the odd numbered floors below T. Who lives immediately above Y?

A. T

B. W

C. H



D. N



Q37 General Intelligence and Reasoning

If today is Monday the 22nd of January 2020, then what date and day will it be after 100 days from today?

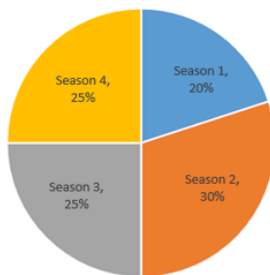
- A. 1 May 2020, Monday
- B. 2 May 2020, Wednesday
- C. 3 May 2020, Thursday
- D. 1 May 2020, Wednesday



Q38 General Intelligence and Reasoning

Study the given pie-chart and answer the following question.

The given pie chart depicts the number of episodes watched of four different seasons (1, 2, 3 and 4). The total number of episodes watched of the four seasons together is 60.



What is the central angle corresponding to the number of episodes watched of season 3?

- A. 90°
- B. 80°
- C. 108°
- D. 84°



Q39 General Intelligence and Reasoning

Six students, A, B, C, D, E and F, participated in one of the International Mathematics Olympiad. Each of them scored different marks. C scored more than D but less than B. E scored less than A. B scored more than A but less than F. C scored less than E. Who scored the maximum marks among the given students?

- A. F
- B. B
- C. A
- D. E



Q40 General Intelligence and Reasoning

In a class test, a certain number of students got different ranks based on their marks. Vivek is ranked 12th from the top and 15th from the bottom. How many total students gave the test?

A. 27

B. 32

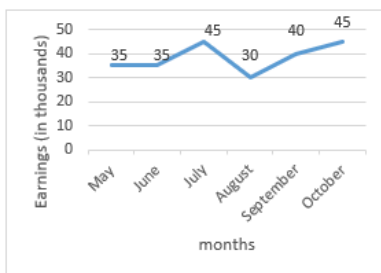
C. 26



D. 35

Q41 General Intelligence and Reasoning

The following graph shows the earnings of Mr. Rajesh from his grocery shop, over the months. Study the graph and answer the question.



What is the respective ratio of the total earnings in May, June and July together to the total earnings in August, September and October together?

A. 1 : 1



B. 2 : 1

C. 11 : 21

D. 1 : 2

Q42 General Intelligence and Reasoning

Vinny starts from Point A and drives 8 km towards the east. He then takes a right turn, drives 9 km, turns left and drives 12 km. He then takes a left turn and drives 17 km. He takes a final left turn, drives 20 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 4 km towards the east

B. 6 km towards the north

C. 8 km towards the south



D. 2 km towards the south



Q43 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) Z & U P # 2 9 ! 3 B @ 7 4 \$ L 5 T 8 5 * X (Right)

If all the numbers are dropped from the series, which of the following will be tenth from the left?

A. L



B. *

C. T

D. \$

Q44 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. EXAMPLE: 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(4, 11, 31)

(3, 9, 25)

A. (5, 13, 29)

B. (7, 11, 35)

C. (6, 15, 43)



D. (2, 8, 19)



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Q45 General Intelligence and Reasoning

A statement is given followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement: $P < Q < R \leq S = T \leq U$

Conclusions:

1) $Q \leq T$

2) $T > U$

3) $Q \leq U$

4) $S \leq U$

A. 1

B. 2

C. 3

D. 4



Q46 General Intelligence and Reasoning

This question is based on the five, three-digit numbers given below.

(Left) 567 243 186 689 427 (Right)

(Example- 123 – First digit = 1, second digit = 2 and third digit = 3)

NOTE - All operations to be done from left to right.

What will be the resultant if the first digit of the second greatest number is added to the third digit of the smallest number?

A. 10

B. 11

C. 12

D. 13



Q47 General Intelligence and Reasoning

Eight friends are sitting around a square table facing the centre. Four of them are sitting at the corners and remaining four are sitting at the exact middle of the four sides. Arhaan is sitting to the immediate left of Sunita. Hari is sitting fourth to the left of Tarini. Tarini is second to the left of Arhaan. Only Daisy is sitting between Tarini and Neelima. Only Prashant is sitting between Hari and Neelima. Yash is sitting fourth to the left of Prashant. Who amongst the following has Tarini and Arhaan as the immediate neighbours?

A. Neelima

B. Yash



C. Daisy

D. Prashant

Q48 General Intelligence and Reasoning

If 2 is multiplied to each odd digit and 1 is added to each even digit in the number 6311624, what will be the difference between the largest of the digits and the smallest of the digits thus formed?

A. 3

B. 4

C. 6

D. 5



Q49 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

2 1.5 1.1 0.8 0.6 ?

A. 0.4

B. 0.5



C. 0.6

D. 0.3

Q50 General Intelligence and Reasoning

Town Q is to the south-east of Town P. Town R is to the south-west of Town Q. Town R is to the south of Town P. Town S is to the west of Town R. What is the direction of Town P with respect to Town S?

A. South-west

B. North

C. South-east

D. North-east



Q51 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

87, 88, 80, 107, 43, ?

A. 168



B. 70

C. 126

D. 98

Q52 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Watches are Clocks.

All Clocks are Towers.

All Towers are Bricks.

Conclusions:

(I) Some Bricks are Watches.

(II) All Clocks are Bricks.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.

C. Both conclusions (I) and (II) follow.



D. Neither conclusion (I) nor (II) follows.

Q53 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

48 : 16 :: 96 : ? :: 108 : 21

A. 20



B. 22

C. 21

D. 23



Q54 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Pots are Mud.

Some Flowers are Mud.

All Mud are Worms.

Conclusions:

(I) Some Flowers are Worms.

(II) Some Pots are Flowers.

- A. Only conclusion (I) follows. ✓
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

Q55 General Intelligence and Reasoning

In a certain code language, 'ANGRY' is coded as 'CKIOA' and 'THINK' is coded as 'VEKKM'. How will 'CROWN' be coded in that language?

- A. FPRUQ
- B. EPRTQ
- C. EOQTP ✓
- D. FOQUP

General Science

25 Questions • Answer Key

Q56 General Science

The ideal waste disposal method in case of metal is:

- A. incineration
- B. composting
- C. recycling ✓
- D. reusing



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Q57 General Science

According to right hand thumb rule, _____ represent(s) the direction of current.

- A. the thumb
- B. the middle finger
- C. the little finger
- D. the fore finger

Q58 General Science

An object is placed in front of a concave lens of focal length 15 cm and an image is formed at 7.5 cm. Then the magnification of the lens is:

- A. 1.25
- B. 0.50
- C. 0.75
- D. 1.5

Q59 General Science

Which of the following acid-base pairs will produce a salt of ammonium chloride?

- A. $\text{HCl} - \text{NaOH}$
- B. $\text{HCl} - \text{NH}_4\text{OH}$
- C. $\text{HNO}_3 - \text{NH}_4\text{OH}$
- D. $\text{H}_2\text{SO}_4 - \text{NH}_4\text{OH}$

Q60 General Science

A perfect pair of sex chromosomes is found in:

- A. snakes
- B. starfish
- C. human women
- D. human men



Q61 General Science

A 12 V battery is connected across an unknown resistor. If a current of 2 mA is flowing through the circuit, the value of the resistance is _____.

- A. 6 ohm
- B. 60 ohm
- C. 600 ohm
- D. 6000 ohm



Q62 General Science

The following is the data for an image formed by a convex mirror:

Object distance = 30 cm,

Size of object = 10 cm,

Size of image = 2.5 cm,

The focal length of this mirror is _____.

- A. 10 cm
- B. 20 cm
- C. 15 cm
- D. 30 cm



Q63 General Science

Regulating the natural flow of a river by building large dams affects agriculture in downstream regions by _____.

- A. lowering the water table due to reduced water flow
- B. blocking annual deposits of mineral rich sediment from floods
- C. making the water salty due to reduced water supply
- D. preventing the recharging of ground water during monsoons



Q64 General Science

Precipitation reactions are a specific class of _____.

- A. Decomposition reactions
- B. double displacement reactions
- C. combination reactions
- D. redox reactions

Q65 General Science

Which of the following statements about carbon is correct?

- A. Carbon is non-metal in nature.
- B. Carbon is metal in nature.
- C. Carbon is metalloid in nature.
- D. Carbon is a noble gas.

Q66 General Science

Frogs have a pair of lungs like human beings but they can also breathe through their:

- A. spiracles
- B. tracheae
- C. slippery and moist skin
- D. gills

Q67 General Science

Arrange the following metals in the correct order of reactivity.

K, Al, Fe, Au, Pb

- A. $K > Al > Pb > Fe > Au$
- B. $K > Fe > Al > Pb > Au$
- C. $K > Al > Fe > Pb > Au$
- D. $K > Al > Fe > Au > Pb$



Q68 General Science

A beam of light after passing through a concave lens appears to diverge from a point 25 cm behind the lens. The power of the lens is

- A. + 4 D
- B. - 0.25 D
- C. - 4 D
- D. + 0.25 D



Q69 General Science

The symbol for resistance (R) is denoted with _____.

- A.
- B.
- C.
- D.



Q70 General Science

An adult human being has only _____ incisors in his/her mouth.

- A. four
- B. eight
- C. ten
- D. twelve



Q71 General Science

Which of the following processes does NOT occur during photosynthesis?

- A. Absorption of light energy
- B. Absorption of oxygen
- C. Reduction of carbon dioxide
- D. Splitting of water molecules



Q72 General Science

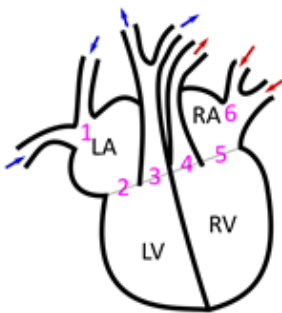
Which of the following statements is/are correct?

- A) Classification is necessary in order to compare the physical and chemical properties of the elements.
- B) Classification is necessary to arrange the same kind of elements in the same group.
- C) Classification is necessary to arrange the different kinds of elements in the same group.

- A. Only A
- B. Only A and B
- C. A, B and C
- D. Only B and C

Q73 General Science

The following figure shows the human heart. LA = left auricle; LV = left ventricle; RA = right auricle; RV = right ventricle. Where are the valves located?



- A. At positions 1, 2, 4 and 6
- B. At positions 2, 3, 4 and 5
- C. At positions 4, 5 and 6
- D. At all positions: 1, 2, 3, 4, 5 and 6

Q74 General Science

The valency of carbon is ____.

- A. 3
- B. 4
- C. 2
- D. 6



Q75 General Science

The resistivity of a material of length 5 m is 1.6×10^{-8} ohm-m. If the length of the material is increased by 10 m, then the value of resistivity is _____.

A. 3.2×10^{-8}

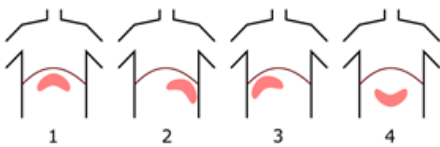
B. 1.6×10^{-8} ✓

C. 0.8×10^{-8}

D. 12.4×10^{-8}

Q76 General Science

Which figure shows the correct location of the liver (shown as the pink shape) in the human body (given that the person is facing you, the reader)?



A. Figure 1

B. Figure 2

C. Figure 3 ✓

D. Figure 4

Q77 General Science

In accordance to Fleming's left hand rule used to find the direction of force on a current carrying conductor placed inside a magnetic field, the centre finger and the index finger represent the directions of _____ and _____, respectively.

A. force, magnetic field

B. magnetic field, force

C. magnetic field, current

D. current, magnetic field ✓



Q78 General Science

According to Newland's Law of Octaves, every _____ element had properties similar to that of the first element

- A. sixth
- B. seventh
- C. eighth
- D. fourth



Q79 General Science

Which gas is produced during electrolysis of brine, that burns with a pop sound?

- A. H_2
- B. Cl_2
- C. N_2
- D. O_2



Q80 General Science

Which of the following statements is/are true regarding the centre of curvature of a spherical mirror?

(S - I) The centre of curvature (C) of a spherical mirror is the centre of the sphere of which the mirror is a cut part.

(S - II) The aperture (D) of a spherical mirror is the diameter of the sphere of which the mirror is a cut part.

(S - III) The principal focus (F) is strictly the mid-point between the pole (P) and the centre of curvature (C) of a spherical mirror.

- A. (S - I) only
- B. (S - I) and (S - II) only
- C. (S - I) and (S - III) only
- D. (S - I), (S - II) and (S - III)



Q81 General Awareness and Current Affairs

In Jainism, who is a Tirthankara?

- A. A person who never believes in God.
- B. A person who believes in one God and one spirit and believes in rebirth.
- C. A group of pilgrims.
- D. A saviour and spiritual teacher of the dharma who teaches the way to moksha, or liberation. ✓

Q82 General Awareness and Current Affairs

Under The National Air Sports Policy 2022 there will be _____-tier governance structure for air sports in India.

- A. Four ✓
- B. Three
- C. Two
- D. Six

Q83 General Awareness and Current Affairs

In February 2022, which service provider announced that it will land its next generation multi-terabit India-Asia-Xpress (IAX) undersea cable system in Hulhumale, Maldives?

- A. Vodafone Idea Limited
- B. Reliance Communications Limited
- C. Reliance Jio Infocomm Limited ✓
- D. Bharti Airtel Limited

Q84 General Awareness and Current Affairs

Which incident intensified British control over India's foreign trade?

- A. Opening of Suez Canal ✓
- B. Building railways
- C. Drainage of Indian wealth
- D. British's monopoly on foreign trade



Q85 General Awareness and Current Affairs

In March 2022, under the project of setting up health clinics in schools, a health clinic at a government school that will focus on the physical and mental well-being of students was inaugurated in which state of India?

- A. West Bengal
- B. Punjab
- C. Delhi
- D. Andhra Pradesh



Q86 General Awareness and Current Affairs

Which of the following events is known as the Calcutta killings?

- A. Bengal satyagraha
- B. Quit India movement
- C. Direct action day
- D. Salt satyagraha



Q87 General Awareness and Current Affairs

The Ministry of Women and Child Development, Government of India, celebrated the International Women's Day week from _____ 2022 as an 'Iconic Week' as a part of 'Azadi Ka Amrit Mahotsav'.

- A. 8 to 15 March
- B. 1 to 8 March
- C. 15 to 22 March
- D. 22 to 28 March



Q88 General Awareness and Current Affairs

Which of the following is NOT one of the determinants of demand?

- A. Price of goods
- B. Future expectation to change in price
- C. Taste and preference of seller
- D. Income of consumer



Q89 General Awareness and Current Affairs

In _____ it was decided by the Indian Government to proclaim Indian Languages meeting certain requirements as “Classical Language”.

A. 2004



B. 2006

C. 2008

D. 2010

Q90 General Awareness and Current Affairs

Which of the following statements is NOT true?

A. In the short run, a firm cannot vary all the inputs.

B. One of the factors cannot be varied, and therefore, remain fixed in the short run.

C. In the long run, all factors of production can be varied.

D. A firm, in order to produce different levels of output in the long run may not vary one of the inputs.



Q91 General Awareness and Current Affairs

Who among the following was one of the recipients of the Major Dhyan Chand Khel Ratna Award 2021?

A. Mary Kom

B. Jwala Gutta

C. Virat Kohli

D. Neeraj Chopra



Q92 General Awareness and Current Affairs

Subject Expert Committee (SEC) on COVID-19, India, has recommended which of the following vaccines for phase II/III clinical trial in the age group 2 to 18 Years in May 2021?

A. Sputnik light vaccine

B. Covaxin



C. Corbevax

D. Covishield



Q93 General Awareness and Current Affairs

Article _____ of the Constitution which enshrines one of the Directive Principles of State Policy, lays down that the State shall take steps to organise village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government.

A. 31

B. 37

C. 40



D. 48

Q94 General Awareness and Current Affairs

Lokapavani and Bhavani are tributaries of the River _____.

A. Cauvery



B. Krishna

C. Mahanadi

D. Godavari

Q95 General Awareness and Current Affairs

Which Five-Year Plan emphasised the setting up of Basic and Heavy Industries so as to establish a strong base for rapid industrialisation, self-reliance, and technological development?

A. Third Five-Year Plan

B. Second Five-Year Plan



C. Fourth Five-Year Plan

D. First Five-Year Plan

Q96 General Awareness and Current Affairs

According to clause (2) of _____ of the Constitution of India, the President of India appoints the Chief Justice of India.

A. Article 118

B. Article 121

C. Article 124



D. Article 127



Q97 General Awareness and Current Affairs

Which of the following statements about fundamental duties of the Indian Constitution is correct?

- A. To make compulsory education to children of 6 to 14 years as our fundamental duty ✓
- B. To obey parents is a fundamental duty
- C. To preserve the biodiversity is a fundamental duty
- D. To save money for future is a fundamental duty

Q98 General Awareness and Current Affairs

Rama Navami is a Hindu spring festival that commemorates God Rama's birthday, which is usually comes in the month of _____.

- A. June
- B. April ✓
- C. July
- D. August

Q99 General Awareness and Current Affairs

What is the habitat of the Musk Deer?

- A. Thar desert
- B. Western Ghat
- C. High alpine environments above altitudes of 2500 m ✓
- D. Plains of the Ganga below altitudes of 500 m

Q100 General Awareness and Current Affairs

Which of the following mountains and states/UT is NOT correct matched?

- A. Kanchenjunga – Sikkim
- B. Nandadevi – Uttarakhand
- C. Saser Kangari – Ladakh
- D. K2 mountain – Himachal Pradesh ✓



Mathematics

25 Questions • Answer Key

Q1 Mathematics

In 10 years A will be twice as old as B was 10 years ago. If A is 9 years older than B, then the present age of A is:

- A. 39 years
- B. 48 years
- C. 13 years
- D. $21\frac{1}{2}$ years



Q2 Mathematics

$\sqrt{8836} + \sqrt{6084} - \sqrt{1849}$ equals:

- A. 121
- B. 129
- C. 162
- D. 126



Q3 Mathematics

The difference between the ages of a father and son is 35 years. Five years from now the father's age would be double that of the son's age. What is the son's present age?

- A. 25 years
- B. 20 years
- C. 15 years
- D. 30 years



Q4 Mathematics

The value of $(x^{\frac{2}{3}} - x^{\frac{-2}{3}})(x^{\frac{4}{3}} + 1 + x^{\frac{-4}{3}})$ is _____.

- A. 0
- B. $\frac{1}{x^2}$
- C. x^2
- D. $x^2 - \frac{1}{x^2}$



Q5 Mathematics

If $a = (0.\overline{29} \div 0.3\overline{2}) \times (0.\overline{2} \div 0.\overline{15}) + 0.\overline{3}$, then the value of a is:

A. $1\frac{1}{3}$

B. $2\frac{1}{3}$

C. $1\frac{2}{3}$ ✓

D. $3\frac{2}{3}$

Q6 Mathematics

A and B are emptying pipes and C is a filling pipe. Pipes A and B can empty a full tank in 15 hours and 18 hours, respectively. When all three pipes are opened together, it takes $1\frac{1}{4}$ hours to empty $\frac{1}{9}$ part of the tank. In how many hours can pipe C alone fill $\frac{2}{3}$ part of the tank?

A. 18

B. 20 ✓

C. 25

D. 30

Q7 Mathematics

Aruna bought 8 bananas for ₹25 and sold 6 bananas for ₹20. What is her profit or loss percentage?

A. $6\frac{1}{3}\%$ loss

B. $6\frac{2}{3}\%$ profit ✓

C. $3\frac{2}{3}\%$ profit

D. $5\frac{2}{3}\%$ loss



Q8 Mathematics

MNOP is a quadrilateral in which each of its angles is a right angle. Side MN equals side PO and side MP equals side NO and its both diagonals do not intersect at 90° . What type of quadrilateral is MNOP?

- A. Kite
- B. Rhombus
- C. Square
- D. Rectangle

**Q9 Mathematics**

The median of the data 9, 12, 11, 8, 16, 18, 10, 14, 15, 13, 17, 20, 2, 24 is x . If 2 and 8 are replaced by 21 and 18 in this data, respectively, then the median of the data so obtained is y . What is the value of $(3x - y)$?

- A. 23.5
- B. 24.5
- C. 25
- D. 26

**Q10 Mathematics**

The LCM of two numbers is 20 times their HCF and their HCF is 213. If one of the two numbers is divided by 225, the quotient is 4 and the remainder is 165. The other number is:

- A. 426
- B. 639
- C. 852
- D. 1065

**Q11 Mathematics**

Pipe A can fill a tank in 8 hours. Pipes B and C can empty the full tank in 20 hours and 15 hours, respectively. Pipes A and B are opened together for 5 hours, and then B is closed, and C is opened instantly. The tank will be full in a total time of:

- A. $10\frac{5}{7}$ hours
- B. $11\frac{2}{7}$ hours
- C. $10\frac{3}{7}$ hours
- D. $15\frac{5}{7}$ hours



Q12 Mathematics

If $4a + 3b = 2c$, then find $(4a)^3 + (3b)^3 + (-2c)^3$.

A. $-72abc$



B. $72abc$

C. 0

D. 1

Q13 Mathematics

Let, $0.\overline{27} \div 3.\overline{2} = x$, where x is a proper fraction in the simplest form. Then the sum of the numerator and the denominator of x is:

A. 296

B. 340

C. 342

D. 346



Q14 Mathematics

Two numbers a and b are such that $a : 24 :: 24 : b$, and $a : b :: b : 192$. Find the value of $(a + b)$.

A. 48

B. 54

C. 60



D. 72

Q15 Mathematics

$\frac{3-4\sin^2\theta}{\cos^2\theta}$ can be simplified as:

A. $3 - \tan^2\theta$



B. $3 + \tan^2\theta$

C. $3\cot^2\theta - \tan^2\theta$

D. $3\cos^2\theta - 4\sec^2\theta$



Q16 Mathematics

A metallic sphere of radius 10.5 cm is melted and then recast into small spheres, each of radius 3.5 cm. Find the number of small spheres thus obtained.

A. 32

B. 30

C. 27



D. 72

Q17 Mathematics

If the interest earned during the 2nd year on a certain sum is ₹2,761, and the rate of interest is 10% per annum compounded annually, then the sum is:

A. ₹21,500

B. ₹26,100

C. ₹25,100



D. ₹25,150

Q18 Mathematics

Which of the numbers given below is divisible by 11?

A. 359247615447536920

B. 359247615447536915



C. 359247615447536923

D. 35924761544753698

Q19 Mathematics

A trader owes a merchant ₹12,500 due in one year. However, the trader wants to settle the amount after 6 months. If the rate of interest is 8% per annum, then how much money should he pay? (Give your answer correct to the nearest whole number value.)

A. ₹12,019



B. ₹10,219

C. ₹12,091

D. ₹10,291



Q20 Mathematics

If the mean and mode of a particular data are 12 and 21, respectively, then using empirical relation, find the median.

- A. 12
- B. 16
- C. 14
- D. 15

**Q21** Mathematics

A starts a business with ₹7,250 and after 3 months, B joins A as his partner. After a year since A started the business, the profit is divided between A and B in the ratio 8 : 9. What is B's contribution in the capital?

- A. ₹10,250
- B. ₹10,500
- C. ₹10,875
- D. ₹10,000

**Q22** Mathematics

Find the total surface area (in square units) of a hollow hemisphere whose outer radius is 10 units and inner radius is 5 units.

- A. 325π
- B. 225π
- C. 425π
- D. 375π

**Q23** Mathematics

The sum of the interior angles of a polygon with 200 sides is:

- A. $35,640^\circ$
- B. $35,460^\circ$
- C. $36,540^\circ$
- D. $35,604^\circ$



Q24 Mathematics

Find the quadratic equation whose roots are $\sqrt{3} + 1$ and $\sqrt{3} - 1$.

A. $x^2 - 2\sqrt{3}x + 4 = 0$

B. $x^2 - 2\sqrt{3}x + 2 = 0$ ✓

C. $x^2 + 2\sqrt{3}x + 2 = 0$

D. $x^2 - \sqrt{3}x + 2 = 0$

Q25 Mathematics

$x^4 - (x^2 - 2)^2 + (2 - x) = 0$ is:

A. a quadratic equation ✓

B. a linear equation

C. just a number

D. a bi-quadratic equation

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

If '×' means '−', '−' means '÷', '÷' means '+', '+' means '×', what will come in place of the question mark (?) in the following equation?

$$27 \div 288 + 2 \times 2 \times 22 - 2 = ?$$

A. 450

B. 550

C. 420

D. 590 ✓



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Q27 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:

No river is a mountain.

Some mountains are lakes.

All lakes are ponds.

Conclusions:

(I) Some lakes are not rivers.

(II) Some lakes are mountains.

(III) Some ponds are mountains.

A. Only conclusion I follows

B. Only conclusion II follows

C. Either conclusion I or conclusion III follows

D. All the conclusions I, II and III follow

**Q28** General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. A sits fourth to the left of D. Only two people sit between P and L. K sits to the immediate left of L. D sits fourth to the left of K. P sits at one of the positions to the right of K. If no other person is sitting in the row, what is the total number of people seated?

A. 13



B. 14

C. 10

D. 12

Q29 General Intelligence and Reasoning

Study the given arrangement of letters and symbols and answer the question that follows:

(LEFT) W & T O ! A L % V E N # J * U D \$ I X @ C ^ (RIGHT)

How many such consonants are there in the arrangement each of which is both immediately preceded by a vowel and immediately followed by a symbol?

A. Two

B. Four



C. Three

D. Five



Q30 General Intelligence and Reasoning

If

P means 'multiplication',

Q means 'subtraction',

R means 'addition', and,

S means 'division',

then $15 \text{ S } 5 \text{ P } 10 \text{ Q } 4 \text{ R } 2 = ?$

A. 28



B. 29

C. 27

D. 26

Q31 General Intelligence and Reasoning

R, S, T, U, V and W are six cousins sitting around a circular dinner table facing the centre of the table. U is seated second to the right of S. T is seated to the immediate right of U. R is an immediate neighbour of both W and T. Who is seated to the immediate right of S?

A. W

B. T

C. R

D. V



Q32 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

PAIN : APNI :: MODE : OMED :: JUST : ?

A. JTUS

B. SUJT

C. UJTS

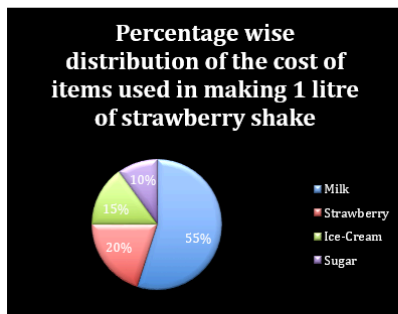


D. TUJS



Q33 General Intelligence and Reasoning

The given pie chart shows the percentage wise distribution of the cost of items used in making 1 litre of strawberry shake. Study the chart and answer the question that follows.



If the total cost in making 3 litres of strawberry shake is ₹1,500, then what is the cost of strawberries in making 1 litre of strawberry shake?

A. ₹120

B. ₹100



C. ₹150

D. ₹180

Q34 General Intelligence and Reasoning

In a certain code language, 'BDSHK' is written as 'GHVJL' and 'FGLRU' is written as 'KKOTV'. How will 'ELPHT' be written in that language?

A. JPTJU

B. JPSJU



C. JPSJV

D. JPTJV



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Q35 General Intelligence and Reasoning

The given table shows the use of chemicals (in litres) in three science laboratories of a school from 2002 to 2006. Study the table and answer the question that follows.

Year	Laboratory		
	Biology	Physics	Chemistry
2002	52	61	47
2003	81	56	51
2004	67	49	57
2005	91	67	69
2006	93	73	72

What is the ratio of the total use of chemicals (in litres) in the Biology laboratory to the total use of chemicals (in litres) in the Chemistry laboratory from 2002 to 2006?

A. 48 : 37



B. 37 : 48

C. 96 : 71

D. 71 : 96

Q36 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the fourth number is related to the third number and the second number is related to the first number.

139 : 150 :: 73 : 84 :: 17 : ?

A. 28



B. 32

C. 44

D. 25

Q37 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) S 3 F X # 7 M T & 8 R 9 Y Z * 2 C G 6 A (Right) .

If all numbers are dropped from the series, which of the following will be sixth from the right?

A. Y



B. R

C. M

D. &



Q38 General Intelligence and Reasoning

Amongst six friends, A, D, E, F, K and Z, each has a different height. Only two friends are taller than D. Only four friends are shorter than Z. K is taller than Z. F is immediately shorter than E. A is the shortest among all. Who is the second tallest among all the friends?

A. Z



B. K

C. D

D. E

Q39 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement : $C > N = R \geq H > Q < S$

A. $S > Q$

B. $C > R$

C. $N \geq H$

D. $C \geq H$



Q40 General Intelligence and Reasoning

Five friends, A, B, C, D and E appeared for the same exam and each scored differently. B scored higher than only two of her friends. C did not score the highest, but scored more than B. E scored higher than only D. Who scored the second highest in the exam?

A. C



B. A

C. B

D. E



Q41 General Intelligence and Reasoning

Five boxes containing different fruits, namely strawberry, apple, litchi, cherry and pear, are kept one above the other, not necessarily in the same order. The strawberry box is in the exact middle of the stack. The pear box is immediately below the litchi box. Only the apple box is in between the cherry and strawberry boxes. The box at the bottom most position contains pears. Which box is second from the top?

A. Litchi

B. Apple



C. Cherry

D. Pear

Q42 General Intelligence and Reasoning

The positions of the first and fourth letters in the word 'QUIRKY' are interchanged. Similarly the positions of the second and fifth letters are interchanged and in the same pattern the positions of the third and sixth letters are interchanged. If all letters are counted from left to right, then which letter will be the fourth letter from the right in the word so formed?

A. Y



B. Q

C. K

D. R

Q43 General Intelligence and Reasoning

A statement is given followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

A celebrity applies for a gun licence for self-protection after receiving death threats.

Arguments:

(I) A popular singer was recently found shot dead immediately after a week of him receiving a death threat letter.

(II) Celebrities are known to misuse their power and many have been convicted for wrongful killing of endangered animals.

A. Argument (I) weakens, while argument (II) strengthens the statement.

B. Argument (II) weakens, while argument (I) strengthens the statement.



C. Both arguments (I) and (II) weaken the statement.

D. Both arguments (I) and (II) strengthen the statement.



Q44 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Mice are Rabbits.
All Rabbits are Carrots.
Some Carrots are Oranges.

Conclusions:

(I) Some Mice are Carrots.
(II) All Rabbits are Oranges.

- A. Only conclusion (I) follows. ✓
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

Q45 General Intelligence and Reasoning

In a certain code language, 'DFGLM' is written as 'EHJPR' and 'HBEKS' is written as 'IDHOX'. How will 'TECKO' be written in that language?

- A. UGEOS
- B. UGFPT
- C. UGFOT ✓
- D. UGDOS

Q46 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

392 : 7 :: 1452 : ? :: 810 : 9

- A. 10
- B. 15
- C. 12
- D. 11 ✓



Q47 General Intelligence and Reasoning

In the word 'DECORATING', if each vowel is changed to the letter immediately following it and each consonant is changed to the letter immediately following it in the English alphabetical order, then how many vowels will be there in the group of letters thus formed?

A. Three



B. Two

C. One

D. None

Q48 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

H 16, K 22, N 28, Q 34, T 40, ?

A. V 46

B. W 44

C. V 44

D. W 46



Q49 General Intelligence and Reasoning

A, B, C, D, E and F are sitting around a circular table facing the centre. A is sitting second to the left of C. F is sitting to the immediate right of C. D is an immediate neighbour of both A and E. Who is sitting third to the right of E ?

A. B



B. D

C. A

D. C

Q50 General Intelligence and Reasoning

Yash was facing towards the north and moves 10 m to his right from his home. After that, he turns left and moves 20 m. Then he turns left and move 20 m, and then turns left again and moves 10 m. After that, he again turns left and moves 10 m, and then turns right and moves 10 m. In which direction is he facing now? (All turns are 90 degree turns only)

A. East

B. South



C. North

D. West



Q51 General Intelligence and Reasoning

If '+' means '×', '-' means '+', '×' means '÷', and '÷' means '-', what will come in place of the question mark (?) in the following equation?

$$4 + 22 \times 2 + 4 - 9 = ?$$

A. 59

B. 110

C. 99

D. 49



Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

549, 508, 467, 426, 385, ?

A. 289

B. 320

C. 276

D. 344



Q53 General Intelligence and Reasoning

Rekha started walking from her office in the west direction. On traveling a distance of 5 m, she turns to the right and travels a distance of 2 m. She further turns to the right and travels a distance of 7.5 m. She then turns right at 135° and travels a distance of 15 m. In which direction is she facing now?

A. North

B. South

C. North-West

D. South-West



Q54 General Intelligence and Reasoning

Select the number from among the given options that can replace the question mark (?) in the following series.

32, 57, 93, 142, 206, ?

A. 216

B. 287



C. 26

D. 213



Q55 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Ponds are Fishes.

Some Rivers are Fishes.

All Fishes are Tanks.

Conclusions:

(I) Some Rivers are Tanks.

(II) Some Ponds are Rivers.

- A. Only conclusion (I) follows. ✓
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.

General Science

25 Questions • Answer Key

Q56 General Science

The resistance of a conductor is directly proportional to its _____.

- A. area of cross section
- B. length ✓
- C. temperature
- D. volume

Q57 General Science

Why did Mendel study seven different characters?

- A. To uncover the universal principles of inheritance ✓
- B. To create many new varieties of pea plants
- C. To find out which plants were the best
- D. To produce enough peas for his monastery



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Q58 General Science

A light ray passing through the _____ of a lens passes without any deviation.

- A. edges
- B. $2F$ (twice of focal length)
- C. Focus
- D. optical centre



Q59 General Science

Which of the following products is formed by the electrolytic decomposition of brine?

- A. Calcium hydroxide
- B. Sodium hydroxide
- C. Bleaching powder
- D. Potassium hydroxide



Q60 General Science

Which among the following elements possesses greater tendency to gain electrons?

- A. Carbon
- B. Nitrogen
- C. Oxygen
- D. Fluorine



Q61 General Science

Select the correct example of double displacement reaction.

- A. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$
- B. $\text{CuSO}_4 + \text{H}_2\text{S} \rightarrow \text{CuS} + \text{H}_2\text{SO}_4$
- C. $2\text{AgBr} \rightarrow 2\text{Ag} + \text{Br}_2$
- D. $2\text{NaCl} \rightarrow 2\text{Na} + \text{Cl}_2$



Q62 General Science

Which of the following components of blood promotes immunity and helps the body fight against germs?

A. Red blood cells

B. White blood cells



C. Blood platelets

D. Blood plasma

Q63 General Science

Which of the following elements is more reactive than copper?

A. Gold

B. Platinum

C. Silver

D. Zinc



Q64 General Science

In the human heart, the pulmonary vein is connected to the _____.

A. left ventricle

B. right ventricle

C. left auricle



D. right auricle

Q65 General Science

What is the primary difference between domestic and industrial solid waste?

A. The former is smaller in quantity.

B. The former is heterogeneous in composition.



C. The latter is seasonal in nature.

D. The latter is a source of pollutants.



Q66 General Science

When Blue light and Red light are mixed in equal amounts, they will produce light of colour:

- A. Cyan
- B. Yellow
- C. Magenta
- D. White



Q67 General Science

Insects have a network of air tubes for gas exchange. These are called _____.

- A. arteries
- B. capillaries
- C. tracheae
- D. spiracles



Q68 General Science

Which of the following is NOT a carbon compound?

- A. CHCl_3
- B. CH_4
- C. C_2H_6
- D. $\text{Co}(\text{NO}_3)_2$



Q69 General Science

Bleaching powder is produced by the action of chlorine on:

- A. $\text{Ca}(\text{OH})_2$
- B. NaOH
- C. CaCO_3
- D. CaO



Q70 General Science

If the length of a conductor is doubled and the area of cross section is halved, the resistance will be _____.

- A. four times of its original value
- B. half of its original value
- C. unaltered
- D. eight times of its original value

Q71 General Science

The direction of the induced current when the conductor is moving in the region of magnetic field is given by:

- A. Fleming's right-hand rule
- B. Fleming's left-hand rule
- C. Right-hand thumb rule
- D. Maxwell's corkscrew rule

Q72 General Science

The compass needle gets deflected when it is brought near to a bar magnet because it _____.

- A. carries current
- B. is an iron rod
- C. is a tiny magnet
- D. is a conductor

Q73 General Science

Who among the following sacrificed her life along with 363 others for the protection of 'khejri' trees in Khejrali village near Jodhpur in Rajasthan?

- A. Medha Patkar
- B. Vandana Shiva
- C. Soumya Swaminadhan
- D. Amrita Devi Bishnoi



Q74 General Science

The unit Watt can be expressed as _____.

- A. 1 Watt = 1 Volt/1 Ampere
- B. 1 Watt = 1 Volt $\times$ 1 Ampere
- C. 1 Watt = 1 Volt/1 Coulomb
- D. 1 Watt = 1 Volt $\times$ 1 Coulomb

Q75 General Science

Which of the following chemical equations is INCORRECT?

- A. $2 \text{Mg (s)} + \text{O}_2\text{(g)} \longrightarrow 2\text{MgO (g)}$
- B. $3\text{Fe (s)} + 4\text{H}_2\text{O (l)} \longrightarrow \text{Fe}_3\text{O}_4\text{ (s)} + 2\text{H}_2\text{ (l)}$
- C. $\text{CO (g)} + \text{H}_2\text{(g)} \longrightarrow \text{CH}_2\text{O (l)}$
- D. $\text{CO (g)} + 2\text{H}_2\text{(g)} \longrightarrow \text{CH}_3\text{OH (l)}$

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q76 General Science

If a 10.0-cm-tall object is kept at a distance 40.0 cm from a 20.0-cm-radius concave mirror, and all the distances are measured on the principal axis from the pole as origin, then the image position and image height, respectively, are:

- A. -13.3 cm and 0.33 cm
- B. +13.3 cm and 0.33 cm
- C. +26.6 cm and 0.66 cm
- D. -26.6 cm and 0.66 cm

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q77 General Science

Use Mendeleev's periodic table to select the correct formula for the oxides of Ba and K.

- A. BaO and KO
- B. BaO₂ and K₂O
- C. BaO and KO₂
- D. BaO and K₂O



Q78 General Science

Identify the true statement.

- A. Sperms containing X chromosome have 23 chromosomes but sperms containing Y chromosome have 22 chromosomes.
- B. Sperms containing X chromosome have 22 chromosomes but sperms containing Y chromosome have 23 chromosomes.
- C. Sperms containing X chromosome have 23 chromosomes and sperms containing Y chromosome also have 23 chromosomes. ☒
- D. Sperms containing X chromosome have 22 chromosomes and sperms containing Y chromosome also have 22 chromosomes.

Q79 General Science

Breakdown of pyruvate using oxygen takes place in the:

- A. cytoplasm
- B. mitochondria ☒
- C. nucleoplasm
- D. chloroplast

Q80 General Science

In the following table, the direction of incident ray of light and the direction of reflected ray of light are given in two different columns: Choose the correct match of column I to column II.

<u>Column I</u>	<u>Column II</u>
<u>Direction of ray of light before reflection</u>	<u>Direction of ray of light after reflection</u>
A) Incident ray passing through or directed on to the principal focus	P) Will pass through or appear to diverge from the principal focus
B) Incident ray passing through or directed on to the center of curvature	Q) Reflected ray is on the other side of the principal axis making same angle with respect to the incident ray
C) Incident ray passing parallel to principal axis	R) Reflected ray will propagate parallel to the principal axis
D) Incident ray directed on to the pole of the mirror making an angle with the principal axis	S) Reflected ray will retrace the path of incidence in the opposite direction

- A. A–P, B–S, C–Q, D–R
- B. A–R, B–S, C–P, D–Q ☒
- C. A–R, B–S, C–Q, D–P
- D. A–R, B–Q, C–P, D–S



Q81 General Awareness and Current Affairs

The Development Fund for MFI's is managed by the _____.

- A. NABARD
- B. Reserve Bank of India
- C. State Bank of India
- D. Ministry of Finance, Govt of India

Q82 General Awareness and Current Affairs

The Ballari-Chitradurga-Chikkamagaluru-Tumakuru belt in Karnataka is famous for reserves of which mineral from following?

- A. Monazite
- B. Lead and Zinc
- C. Iron-ore
- D. Copper

Q83 General Awareness and Current Affairs

In India, which institution pioneered the first alternative to corneal transplantation?

- A. AIIMS
- B. JIPMER
- C. NIT Tiruchirappalli
- D. IIT Hyderabad

Q84 General Awareness and Current Affairs

The cost that a firm incurs to employ fixed inputs is called:

- A. total fixed cost
- B. total variable cost
- C. average variable cost
- D. average fixed cost



Q85 General Awareness and Current Affairs

Which of the following units is considered as the foundation of the Panchayat Raj System to perform functions and powers entrusted to it by the State Legislatures?

A. Panchayat Samiti

B. Gram Sabha



C. Zila Parishad

D. Nagarpalika

Q86 General Awareness and Current Affairs

The _____ is a strong, dusty, gusty, hot and dry summer wind from the west which blows over the western Indo-Gangetic Plain region of North India.

A. Sameer

B. Uttrayan

C. Loo



D. Kaal Baisakhi

Q87 General Awareness and Current Affairs

Brihadaranyaka, Mundaka and Taittiriya are some examples of which of the following categories of religious texts?

A. Epics

B. Upanishads



C. Puranas

D. Jataka Stories

Q88 General Awareness and Current Affairs

Which festival is known as Magh Bihu in Assam?

A. Dussehra

B. Makar Sankranti



C. Holi

D. Raksha Bandhan



Q89 General Awareness and Current Affairs

As of April 2022, what is the FDI limit in the insurance sector in India?

- A. up to 26%
- B. up to 36%
- C. up to 46%
- D. up to 74%



Q90 General Awareness and Current Affairs

In which year was the Protection of Children from Sexual Offences Act passed?

- A. 2013
- B. 2012
- C. 2011
- D. 2014



Q91 General Awareness and Current Affairs

In the year 2021, who among the following was one of the five coaches who received Dronacharya Award for life-time achievement?

- A. Sajjan Singh
- B. Abhijeet Kunte
- C. Sarkar Talwar
- D. Davinder Singh Garcha



Q92 General Awareness and Current Affairs

As of August 2022, who among the following is the Chairman of Tata Trusts?

- A. Ratan Tata
- B. Noel Tata
- C. Neville Tata
- D. Leah Tata



Q93 General Awareness and Current Affairs

Under one of the provisions of Article 89 of the Indian Constitution, who shall be the ex-officio Chairman of the Council of States?

- A. The President of India
- B. The Vice-President of India
- C. The senior most member of the Council of States
- D. The Union Minister of Parliamentary Affairs

Q94 General Awareness and Current Affairs

Which of the following Articles of the Constitution of India deals with the uniform civil code for the citizens?

- A. 42
- B. 43
- C. 44
- D. 45

Q95 General Awareness and Current Affairs

Which of the following states of India are related to the term 'Mango Showers'?

- A. Kerala and Karnataka
- B. Punjab and Haryana
- C. Gujarat and Madhya Pradesh
- D. Meghalaya and Assam

Q96 General Awareness and Current Affairs

In February 2022, Ministry of Social Justice and Empowerment launched the SMILE (Support for Marginalised Individuals for Livelihood and Enterprise) scheme in how many cities?

- A. 8
- B. 9
- C. 10
- D. 11



Q97 General Awareness and Current Affairs

In which of the following years was Wipro Ltd incorporated ?

A. 1945



B. 1947

C. 1952

D. 1959

Q98 General Awareness and Current Affairs

What is the revised timeline to apply online for cash award schemes for sportspersons from the last date of closing of the particular sports event?

A. One year

B. One and a half year

C. Six months



D. Three months

Q99 General Awareness and Current Affairs

Identify the name of the fellowship that is launched by the Department of Science and Technology (DST), Government of India, to recognise, encourage and support translational research by Indian nationals.

A. Vikram Sarabhai Technology Innovation National Fellowship

B. CV Raman Technology Innovation National Fellowship

C. Abdul Kalam Technology Innovation National Fellowship



D. Dr. Homi Jahangir Bhabha Technology Innovation National Fellowship

Q100 General Awareness and Current Affairs

Which of the following is NOT an example of a classical language in India as declared by the Government of India?

A. Malayalam

B. Bengali



C. Odia

D. Kannada



Mathematics

25 Questions • Answer Key

Q1 Mathematics

If the surface area of a sphere is 1144 cm^2 , then find its diameter (in cm).

(Use $\pi = \frac{22}{7}$)

A. $2\sqrt{95}$

B. $\sqrt{91}$

C. $2\sqrt{91}$ ✓

D. 19

Q2 Mathematics

The area of a triangle is 81 cm^2 and its base is double the corresponding height. This height (in cm) of the triangle is:

A. 18

B. 9 ✓

C. 81

D. 10

Q3 Mathematics

The lengths of two sides of a triangle are 24 cm and 26 cm. Which of the following can be the measure of the third side?

A. 52 cm

B. 48 cm ✓

C. 55 cm

D. 54 cm

Q4 Mathematics

The difference between the compound interest and the simple interest, compounded annually, on a certain sum of money for 4 years at 8% per annum is ₹20. Find the sum. [Give your answer correct to 2 decimal places.]

A. ₹463.83

B. ₹473.83

C. ₹483.83

D. ₹493.96 ✓



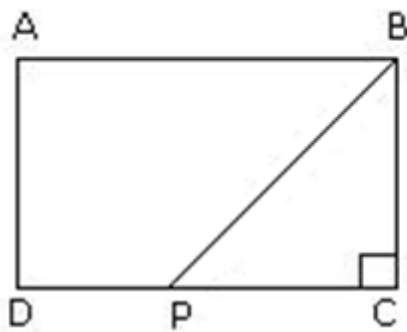
Q5 Mathematics

The sum of the ages of 4 boys born at intervals of 5 years each is 42 years. What is the age of the youngest boy?

- A. 6 years
- B. 5 years
- C. 4 years
- D. 3 years

**Q6 Mathematics**

Find the area of ABPD if $AB = DC = 4$ m, $AD = BC = 2.5$ m, and $PC = 1$ m.



- A. 6.25 m^2
- B. 8.75 m^2
- C. 7.85 m^2
- D. 9.00 m^2

**Q7 Mathematics**

A quadratic equation whose roots are m and n , is:

- A. $x^2 - (m - n)x + mn = 0$
- B. $x^2 - (m + n)x + mn = 0$
- C. $x^2 - (m + n)x - mn = 0$
- D. $x^2 + (m + n)x + mn = 0$



Q8 Mathematics

Raja is the father of Vikram. Raja is now 13 times as old as Vikram. After 10 years, Raja's then age will be 3 times the then age of Vikram Find the present age (in years) of Vikram.

A. 4

B. 1

C. 2



D. 3

Q9 Mathematics

Find the value of $(6 \times 16 - 9 \div 3) + 17 - 12$.

A. 89

B. 98



C. 76

D. 67

Q10 Mathematics

The LCM and the HCF of two numbers, x and y , are 286 and 2, respectively. If the sum of these two numbers is 48, then the value of $\frac{1}{x} + \frac{1}{y}$ is:

A. $\frac{12}{143}$ B. $\frac{48}{571}$ C. $\frac{24}{167}$ D. $\frac{572}{48}$ **Q11 Mathematics**

A study centre has 5 classes with 50, 60, 25, 40 and 70 students. The pass percentage of these 5 classes are 20%, 25%, 20%, 10%, 30%, respectively. Find the average number of students per class in the centre who passed.

A. 11



B. 12

C. 10

D. 55



Q12 Mathematics

Arun bought 38 kg of rice for ₹1,710. He sold it at a profit equal to the selling price of 8 kg of it. What is the selling price of 5 kg of rice?

A. ₹280

B. ₹285



C. ₹290

D. ₹295

Q13 Mathematics

The value of $\frac{505}{\cot^2 \theta} - \frac{505}{\cos^2 \theta} + \frac{15 \tan \theta \cos \theta}{\sin \theta}$ is

A. 520

B. 490

C. -520

D. -490



Q14 Mathematics

677 NCC cadets wanted to participate in a parade. To participate in the said parade the cadets had to be arranged in a rectangular pattern where the number of rows is equal to the number of columns. What is the minimum number of NCC cadets who wanted to participate in the parade but had to be left out of the same?

A. 1



B. 2

C. 3

D. 4

Q15 Mathematics

If a milkman sells milk at ₹50 a litre, he loses ₹2,000. If he sells it at ₹60 a litre, he gains ₹1,500. The total quantity of milk (in litres) he sells is:

A. 350



B. 150

C. 200

D. 400



Q16 Mathematics

Ravi travels from City A to City B. If Ravi drives his car at two fifth of his normal speed, then he reaches City B 30 minutes late. Find the time (in minutes) that Ravi would have taken to travel from City A to City B if he drove at his normal speed.

A. 18

B. 15

C. 20



D. 22

Q17 Mathematics

Find the value of $3 \times 6 + 5 - 6 \div 2 - 9 + 72 \div (3 \times 4) + 42$.

A. 59



B. 149

C. 72

D. 85

Q18 Mathematics

Express $2.\overline{6}$ as an improper fraction.

A. $\frac{8}{3}$ B. $\frac{7}{3}$ C. $\frac{22}{9}$ D. $\frac{20}{9}$ **Q19** Mathematics

The sum of three distinct prime numbers is 40. What is the product of these prime numbers?

A. 310

B. 434



C. 682

D. 722



Q20 Mathematics

What is the sum of $7xy + 5yz - 3zx$, $4yz + 9zx - 4y$, $-3xy + 5x - 2xy$?

- A. $5x - 4y + 2xy + 9yz + 6zx$ ✓
- B. $5x - 4y + 6xy + 9yz - 6zx$
- C. $5x - 4y - 2xy - 9yz + 6zx$
- D. $5x - 4y + 6xy + 9yz + 6zx$

Q21 Mathematics

Simplify:

$$[65 + \{31 - (45 \text{ of } 3 \div 5)\} \times 4]$$

- A. 81 ✓
- B. 80
- C. 102
- D. 79

Q22 Mathematics

In $\triangle ABC$, $\overline{DE}$ is parallel to $\overline{BC}$, where D is a point on $\overline{AB}$ and E is a point on $\overline{AC}$, and $m(\overline{AD}) : m(\overline{DB})$ is 2 : 5. If $m(\overline{AC})$ is 8.4 cm, find $m(\overline{AE})$.

- A. 1.2 cm
- B. 1.4 cm
- C. 2.4 cm ✓
- D. 2.8 cm

Q23 Mathematics

If a number is divisible by 4, then which of the following statements is true?

- A. The sum of the digits in the number is divisible by 4.
- B. The number will be divisible by 2 and 6.
- C. The number formed by its last two digit is divisible by 4. ✓
- D. The unit place in the number is 0.



Q24 Mathematics

Kamal is now four times as old as his son now is. After 18 years his son will be half as old as Kamal would then be. Find the present age (in years) of the son.

A. 10

B. 24

C. 36

D. 9

**Q25** Mathematics

A man travelled a certain distance by bus at the rate of 40 km/h and returned walking at the rate of 5 km/h via the same route. If the two-way journey took him a total of 4 hours 30 minutes, the total distance covered by him in this 4.5 hour was:

A. 25 km

B. 20 km

C. 30 km

D. 40 km

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Riya walks 25 m towards north. Then she turns right and walks 30 m, then turns right and walks 40 m. She then turns left and walks 15 m. Finally, she turns left and walks 15 m. In which direction and at a distance of how many metres is she now from the starting point? (All turns are 90° turns only)

A. 15 m, south

B. 45 m, east



C. 45 m, west

D. 15 m, north



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Q27 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some animals are plants.
2. Some plants are birds.
3. No duck is an animal.

Conclusions:

- (I) Some ducks are birds
(II) No bird is an animal.
(III) Some animals are birds.

- A. Only conclusion III follows.
- B. Only conclusion II follows.
- C. Both conclusions I and III follow.
- D. None of the conclusions follow. 

Q28 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

TRK52, AYR46, HFY40, OMF34, ?

- A. VTM28 
- B. UTN28
- C. VTM30
- D. UTN30

Q29 General Intelligence and Reasoning

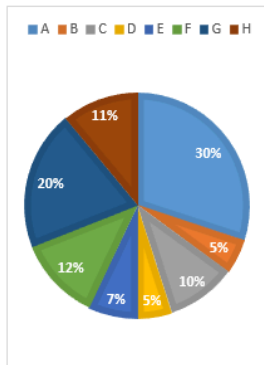
A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 6. A lives on floor number 5. Only two people live between A and C. Neither D nor B lives on the topmost floor. E lives immediately below C. B does not live on an even-numbered floor. Who lives on floor number 3?

- A. A
- B. C
- C. B 
- D. D



Q30 General Intelligence and Reasoning

The given pie chart shows the percentage of earnings in different families. Study the chart and answer the question.



What is the central angle for the total earnings of families A, C, D, F, G and H?

A. 234.8°

B. 316.8° ✓

C. 310.7°

D. 302.9°

Q31 General Intelligence and Reasoning

In a certain code language, 'BOUTS' is written as '54%8#' and 'ULTRA' is written as '%38@9'. How will 'BLARE' be written in that language?

A. 534#2

B. 593#2

C. 543@%

D. 539@2 ✓

Q32 General Intelligence and Reasoning

Seven boxes M, N, O, P, Q, R and S are kept one over the other but not necessarily in the same order. Only three boxes are kept above P. Only two boxes are kept between P and M. Only R is kept between S and Q. Only N is kept between O and M. Neither Q nor M is at the top most position. Which box is kept between Q and O?

A. S

B. N

C. R

D. P ✓



Q33 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

All Buildings are Cements.

All Cements are Powders.

All Powders are Detergents.

Conclusions:

(I) All Powders are Buildings.

(II) Some Detergents are Cements.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.



C. Both conclusions (I) and (II) follow.

D. Neither conclusion (I) nor (II) follows.

Q34 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 6.

B lives immediately below C. C lives on an even numbered floor but not on the topmost floor. Only three people live between B and D. A lives immediately above F. Who lives on floor number 4?

A. F

B. C

C. B

D. A



Q35 General Intelligence and Reasoning

What time will it be in 58 minutes from now, if the time is 1:20 p.m.?

A. 2:15 p.m.

B. 2:00 p.m.

C. 2:18 p.m.



D. 2:10 p.m.



Q36 General Intelligence and Reasoning

Study the given number, symbol series and answer the question that follows.

2 \$ 3 @ 4 * 7 8 5 3 # 9 1 > 5 & 4 @ 3 \$ # 5 * 6 ! 8 2 & 9 < 4 6 # 3 % 2 = 7 8 * 4 > 7

How many such odd numbers are there which are immediately preceded by a prime number and immediately followed by a symbol?

A. None

B. One



C. Two

D. Three

Q37 General Intelligence and Reasoning

Archit starts from Point A and drives 6 km towards the east. He then takes a left turn, drives 24 km, turns right and drives 8 km. He then takes a right turn and drives 12 km. He takes a final right turn, drives 14 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 14 km towards the east

B. 12 km towards the north

C. 16 km towards the south

D. 12 km towards the south



Q38 General Intelligence and Reasoning

Refer to the following five 3-letter words and answer the question.

MAY JUG TEN FOR CAN

If in each of the words, each letter is changed to the immediate previous letter in the English alphabetical order, how many words thus formed will have at least one vowel? (Note – A is changed to Z)

A. 4

B. 5

C. 2



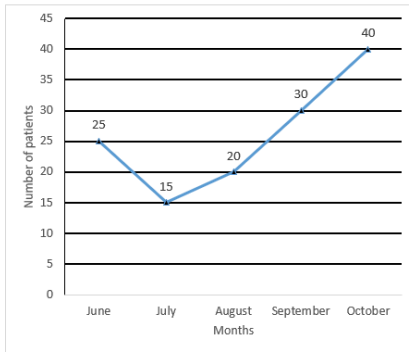
D. 3



Q39 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of patients admitted in five months.



What is the total number of patients admitted in the given five months?

A. 120

B. 135

C. 130



D. 140

Q40 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(75, 16, 67)

(33, 14, 26)

A. (28, 72, 64)

B. (40, 56, 96)

C. (88, 54, 76)

D. (29, 6, 26)



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Q41 General Intelligence and Reasoning

This question is based on the five three-digit numbers given below.

573 136 357 442 814

(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)

If 2 is added to the second digit of every number, in how many numbers thus formed will the second digit be exactly divisible by the third digit?

A. None

B. One

C. Two

D. Three



Q42 General Intelligence and Reasoning

Select the triad that follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

L J – HF – DB

WU – SQ – OM

A. US – QO – MK

B. SV – XV – TR

C. TR – QS – GI

D. ZW – OR – FC



Q43 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of question mark (?) in the following equation?

$$29.99 + 15.01 + 44.99 \times 15.01 = ?$$

A. 720

B. 725

C. 735

D. 745



Q44 General Intelligence and Reasoning

If the numbers given below are arranged in descending order, then what is the difference between the number which is fifth from the right and the number which is fourth from the left?

Left 202, 323, 266, 182, 315, 285, 193, 217, 231, 186 Right

A. 29

B. 37

C. 49



D. 27

Q45 General Intelligence and Reasoning

In a certain code language, 'MONKS' is written as 'LMMIR' and 'PRICE' is written as 'OPHAD'. How will 'FROCK' be written in that language?

A. ENPAJ

B. EPNAJ



C. EMPAK

D. EMPAL

Q46 General Intelligence and Reasoning

Q, R, S, T, U and V are six family members sitting around a circular table, facing the centre in a restaurant. U is seated to the immediate left of S. V is seated third to the left of Q and is the immediate neighbour of U. R is seated second to the right of S. Who is seated second to the left of U?

A. Q

B. R

C. T



D. V



Q47 General Intelligence and Reasoning

Three statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide

which of the conclusions logically follow(s) from the statements.

Statements:

All trees are plants.

All leaves are trees.

All greens are leaves.

Conclusions:

I. All plants are greens.

II. All trees are leaves.

III. Some plants are leaves.

A. Only conclusion I follows

B. Only conclusion III follows



C. Only conclusions I and II follow

D. Only conclusions II and III follow

Q48 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

7 : 40 :: 9 : 50 :: 12 : ?

A. 70

B. 65



C. 105

D. 120

Q49 General Intelligence and Reasoning

Seven people - A, C, G, K, M, R and V are sitting in a straight line facing North. As many people sit to the left of A as to the right of A. C sits second to the right of A. Only three people sit between C and G. K is not an immediate neighbour of G. M sits second to the right of K. R does not sit at any of the extreme ends of the line. How many people sit between V and R?

A. More than three

B. Three

C. Two

D. One



Q50 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1.6 2.5 3.6 ? 6.4 8.1

A. 8.1

B. 4.8

C. 2.5

D. 4.9



Q51 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. B is taller than F but shorter than E. Only one person is shorter than D. Only three people are taller than C. F is not the shortest. Who is the shortest among all the friends?

A. D

B. A

C. C

D. B



Q52 General Intelligence and Reasoning

Each of the digits in the number 56137428 is arranged in ascending order from left to right. The position of how many digits will remain unchanged as compared to that in the original number?

A. None

B. One

C. Two

D. Three



Q53 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement.

Statement:

Restaurant X sold more pizzas than burgers in the last month.

Conclusion:

I. Pizzas are better than burgers

II. In Restaurant X, pizza seems to be more popular among buyers than burgers.

A. Only conclusion I follows

B. Only conclusion II follows



C. Neither conclusion I nor II follows

D. Both conclusions I and II follow

Q54 General Intelligence and Reasoning

Select the number that will replace the question mark (?) in the given series.

1 9 22 32 47 ? 76 90 109

A. 64

B. 72

C. 69

D. 59



Q55 General Intelligence and Reasoning

In an examination, Raman scored more marks than Prince. Robin scored less marks than Keshav and Deepak. Abhishek scored more marks than Deepak but less marks than Prince. Deepak scored more marks than Keshav. Who scored the third highest marks in the exam?

A. Robin

B. Prince

C. Abhishek



D. Deepak



Q56 General Science

Dihybrid cross between two traits in Mendel's experiments resulted in the ratio of:

- A. 1 : 3 : 9 : 3
- B. 9 : 3 : 3 : 1
- C. 9 : 1 : 3 : 3
- D. 9 : 4 : 2 : 1

Q57 General Science

Which of the following represents material in the increasing order of their resistance?

- A. Conductors, alloys, insulators
- B. Alloys, conductors, insulators
- C. Insulator, alloys, conductors
- D. Insulators, conductors, alloys

Q58 General Science

Which of the following statements is FALSE with respect to CNG and LPG

- A. CNG and LPG can be piped to homes.
- B. CNG and LPG are labelled as 'clean fuels'.
- C. CNG and LPG are both carbon-based fuels.
- D. CNG and LPG do not contain carbon particles.

Q59 General Science

Which of the following raw materials is used to make washing soda?

- A. NaOH
- B. NaHCO₃
- C. NaCl
- D. MgCO₃



Q60 General Science

Which of the following two elements contain the same number of valence electrons?

- A. N and C
- B. F and Cl
- C. H and He
- D. B and Br



Q61 General Science

Small carnivores or the secondary consumers come at _____ level.

- A. first trophic
- B. second trophic
- C. third trophic
- D. fourth trophic



Q62 General Science

The filament of an electric bulb is made up of which of the given materials?

- A. Copper
- B. Gold
- C. Nichrome
- D. Tungsten



Q63 General Science

Redox reaction is the reaction in which _____.

- A. only oxidation occurs
- B. only reduction occurs
- C. oxidation and reduction occur simultaneously
- D. neither oxidation nor reduction occur



Q64 General Science

At what position of an object placed in front of a concave mirror is a diminished image formed?

- A. Beyond centre of curvature
- B. Between focus and centre of curvature
- C. Between pole and focus
- D. At focus

Q65 General Science

The members of homologous series differ by _____.

- A. CH_2 unit
- B. CH unit
- C. C_2H unit
- D. C_2H_2 unit

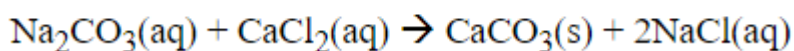
Q66 General Science

A student got a stain on his shirt while doing an activity in the science laboratory. Which chemical should he use to remove the stain?

- A. Sodium carbonate
- B. Sodium hydrogencarbonate
- C. Sodium hydroxide
- D. Sodium chloride

Q67 General Science

What is the given reaction an example of?



- A. Combination and decomposition reaction
- B. Displacement and combination reaction
- C. Double displacement and precipitation reaction
- D. Only displacement reaction



Q68 General Science

The refractive index of a diamond is 2.42. Then the speed of light in the diamond is:

A. 3×10^8 m/s



B. 2.48×10^8 m/s

C. 1.72×10^8 m/s

D. 1.24×10^8 m/s

Q69 General Science

Which element is NOT present in the VIII group and first series of the fourth period in Mendeleev's periodic table?

A. Fe

B. Co

C. Ni

D. Cu



Q70 General Science

Bowman's capsule encloses _____.

A. nephrons

B. the glomerulus



C. neurons

D. platelets

Q71 General Science

The power of an electric fan is 10 Watt when it is connected to 20 V source. What is the current flowing through the fan?

A. 0.5 amp



B. 200 amp

C. 2 amp

D. 0.005 amp



Q72 General Science

When carbon dioxide is dissolved in an aqueous solution of sodium hydroxide, the mixture reacts to give aqueous sodium carbonate and liquid water. The correct balanced equation for this reaction is:

- A. $2\text{CO}_2(\text{aq}) + \text{NaOH}(\text{aq}) \rightarrow 2\text{Na}_2\text{CO}_3(\text{aq}) + \text{H}_2\text{O}(\text{l})$
- B. $\text{CO}_2(\text{aq}) + 2\text{NaOH}(\text{aq}) \rightarrow \text{NaCO}_3(\text{aq}) + \text{H}_2\text{O}(\text{l})$
- C. $2\text{CO}_2(\text{aq}) + \text{NaOH}(\text{aq}) \rightarrow 2\text{NaCO}_3(\text{aq}) + \text{H}_2\text{O}(\text{l})$
- D. $\text{CO}_2(\text{aq}) + 2\text{NaOH}(\text{aq}) \rightarrow \text{Na}_2\text{CO}_3(\text{aq}) + \text{H}_2\text{O}(\text{l})$ ✓

Q73 General Science

What happens when plants are kept in dark room for three days?

- A. Plants utilize protein reserves
- B. Plants starch resources get used up ✓
- C. Plants oil reserves get used up
- D. Plants hibernate for those 3 days

Q74 General Science

From the following, identify the correct properties of magnetic field lines.

- (a) Magnetic field lines are closed loops.
- (b) Magnetic field lines are from north pole of magnet to its south pole, outside the magnet.
- (c) Magnetic field lines intersect each other.
- (d) If magnetic field lines are crowded, the magnetic field strength in that region is high.
- (e) The number of magnetic field lines per unit area is called magnetic flux.

- A. (a), (b), (d) ✓
- B. (b), (c), (e)
- C. (a), (c), (d)
- D. (a), (b), (c) and (d)



Q75 General Science

Mendel did two experiments: (1) Pollen from tall plants was taken to fertilise ovules of short plants, and (2) pollen from short plants was taken to fertilise ovules of tall plants. If we compare the plants produced from these two experiments, we will see that _____.

- A. experiment 1 will produce tall plants and experiment 2 will produce short plants
- B. experiment 1 will produce short plants and experiment 2 will produce tall plants
- C. experiment 1 will produce tall plants and experiment 2 will also produce tall plants ✓
- D. experiment 1 will produce short plants and experiment 2 will also produce short plants

Q76 General Science

A convex lens has the radius of curvature as 40 cm. The power of the lens is:

- A. +2.5 D
- B. -2.5 D
- C. +5.0 D ✓
- D. -5.0 D

Q77 General Science

An adult human urine consists of:

- A. 95% water, 2.5% urea and 2.5% other waste products ✓
- B. 85% water, 2.5% urea and 2.5% ammonia
- C. 85% water, 2.0% urea and 2.0% creatinine
- D. 95% water, 2.0% urea and 2.0% ammonia

Q78 General Science

Magnetic field lines are _____.

- A. straight lines
- B. open loops
- C. closed curves ✓
- D. Dots



Q79 General Science

Suppose Raghu has kept an object in front of a concave mirror of focal length (f) at various distances (u) and he has measured the corresponding image distances (v). From such an experiment, Raghu is able to plot a graph of u against $1/\text{magnification}$, i.e. u vs. $1/m$. Which of the following options is true?

- A. It is a straight line with slope $+f$, and x intercept -1 and y intercept $+f$ ✓
- B. It is a straight line with slope $+f$, and x intercept $+1$ and y intercept $-f$
- C. It is a straight line with slope $1/f$, and x intercept -1 and y intercept $+f$
- D. It is a straight line with slope $-1/f$, and x intercept $+1$ and y intercept $-f$

Q80 General Science

Some fishes breathe by gulping water. These fish gulp water _____.

- A. more times per minute than an animal breathing air ✓
- B. less times per minute than an animal breathing air
- C. more rapidly when they are near the surface of the water
- D. less rapidly when they live in a turbulent river

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following combinations of hills and the states in which they are located is correct?

- A. Mahadeo Hills – Kerala
- B. Cardamom Hills – Odisha
- C. Kaimur Hills – Bihar ✓
- D. Garhjat Hills – Madhya Pradesh

Q82 General Awareness and Current Affairs

In March 2022, the Union Ministry for Road Transport and Highways, inaugurated the first of its kind pilot project for hydrogen based advanced Fuel Cell Electric Vehicle (FCEV), known as _____.

- A. Toyota Mirai ✓
- B. Hyundai NEXO
- C. Honda FCX Clarity
- D. Honda Clarity Fuel Cell



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Q83 General Awareness and Current Affairs

As on 4th February 2022 which one of the following scheme caters to primary needs of women in difficult circumstances – women and girls rendered homeless due to family discord, crime, violence, mental stress, social ostracism or are being forced into prostitution and are in moral danger?

- A. Swadhar Greh Scheme ✓
- B. Ujjawala Scheme
- C. One Stop Centres (OSCs)
- D. National Social Assistance Programme (NSAP)

Q84 General Awareness and Current Affairs

India's first-ever mosque 'Cheraman Juma Masjid' was in the news due to its restoration after renovation in the year 2021. It is located in which of the following states?

- A. Kerala ✓
- B. Uttar Pradesh
- C. West Bengal
- D. Rajasthan

Q85 General Awareness and Current Affairs

Which Indian football player broke legendary footballer Pele's record during a match against the Maldives in the 2021 SAFF Championship at Male in October 2021?

- A. Bhaichung Bhutia
- B. Sandesh Jhingan
- C. Sunil Chhetri ✓
- D. Jeje Lalpekhlua

Q86 General Awareness and Current Affairs

Who was the most expensive player at the Indian Premier League (IPL) auction 2022?

- A. Ishan Kishan ✓
- B. Deepak Chahar
- C. Shreyas Iyer
- D. Avesh Khan



Q87 General Awareness and Current Affairs

When was IFCI (Industrial Finance Corporation of India Ltd.) set up as a statutory corporation to provide medium and long-term finance to the industry?

A. 1948



B. 1954

C. 1969

D. 1975

Q88 General Awareness and Current Affairs

Which of the following is the major river that flows across the western part of Rajasthan?

A. Chambal

B. Luni



C. Banas

D. Ghaggar

Q89 General Awareness and Current Affairs

Which of the following financial institutions was set up by the Indian government to promote sustainable agriculture and rural development in the country?

A. RBI

B. SIDBI

C. NABARD



D. PNB

Q90 General Awareness and Current Affairs

Who among the following Prime Ministers constituted the Swaran Singh Committee, which recommended the incorporation of the Fundamental Duties in the Indian Constitution?

A. Lal Bahadur Shastri

B. Morarji Desai

C. Indira Gandhi



D. Jawaharlal Nehru



Q91 General Awareness and Current Affairs

What is significant about the Easter festival for the Christians?

- A. It is celebrated as a birthday of Jesus Christ.
- B. It marks the resurrection of Jesus Christ from the dead. ✓
- C. It marks the new year of the Christians.
- D. It is celebrated as an Autumn festival in Europe and North America.

Q92 General Awareness and Current Affairs

Which of the following festivals is also known as 'peerla panduga'?

- A. Lailat al-Qadr
- B. Bakrid
- C. Ramadan
- D. Muharam ✓

Q93 General Awareness and Current Affairs

Rashtriya Sanskrit Vidhyapeetha, Tirupati elevated to the status of a Central University in _____.

- A. 2018
- B. 2020 ✓
- C. 2021
- D. 2022

Q94 General Awareness and Current Affairs

The State Governor may be transferred from one state to another by the _____ of India.

- A. Prime Minister
- B. Lok Sabha
- C. Rajya Sabha
- D. President ✓



Q95 General Awareness and Current Affairs

Short Run Average Cost is equal to _____.

- A. Average Variable Cost – Average Fixed Cost
- B. $\frac{\text{Average Variable Cost}}{\text{Average Fixed Cost}}$
- C. Average Variable Cost + Average Fixed Cost ✓
- D. Average Variable Cost $\times$ Average Fixed Cost

Q96 General Awareness and Current Affairs

In the Financial Year 2020-21, which state registered the highest coal production?

- A. Bihar
- B. Uttar Pradesh
- C. Chhattisgarh ✓
- D. Madhya Pradesh

Q97 General Awareness and Current Affairs

Which telecom company became the first one in India to demonstrate the operation of the 5G network?

- A. Reliance Jio
- B. Airtel ✓
- C. Vi
- D. BSNL

Q98 General Awareness and Current Affairs

Which of the following institutions/bodies is NOT included in the three-tier of the Panchayati Raj system?

- A. Tehsil Parishad ✓
- B. Gram Panchayat
- C. Panchayat Samiti
- D. Zila Parishad



Q99 General Awareness and Current Affairs

Who formed the Swaraj Party in 1923?

- A. Motilal Nehru and Chittaranjan Das ✓
- B. Jawaharlal Nehru and Mahatma Gandhi
- C. Subhash Chandra Bose and Bal Gangadhar Tilak
- D. Motilal Nehru and Maulana Azad

Q100 General Awareness and Current Affairs

Select the correct statement.

- A. The Second Five-Year Plan was based on the PC Mahalanobis model. ✓
- B. The First Five-Year Plan was based on the PC Mahalanobis model.
- C. Jawaharlal Nehru was the first deputy chairman of the planning commission.
- D. The Second Five-Year Plan was based on the Russian model introduced by Joseph Stalin.



Mathematics

25 Questions • Answer Key

Q1 Mathematics

$\sec \theta + \tan \theta = p$, then find $4 \sec \theta$.

A. $\frac{(1+p^2)}{p}$

B. $\frac{2(1+p^2)}{p}$ ✓

C. $\frac{(1+p^2)}{2p}$

D. $\frac{2(1-p^2)}{p}$

Q2 Mathematics

Factorise: $y^3 - xy^2 - x^2y + x^3$

A. $(y-x)^2(y-x)$

B. $(y-x)^2(y+x)$ ✓

C. $(y-x)(y^2+x^2)$

D. $(y+x)^2(y-x)$

Q3 Mathematics

$(x+2y-3z)^2$ is equal to:

A. $x^2 + 4y^2 - 9z^2 + 4xy - 12yz - 6xz$

B. $x^2 + 4y^2 + 9z^2 + 4xy - 12yz - 6xz$ ✓

C. $x^2 + 4y^2 + 9z^2 + 4xy + 12yz - 6xz$

D. $x^2 + 4y^2 + 9z^2 + 4xy - 12yz + 6yz$



Q4 Mathematics

The age of Raghu 8 years ago was thrice the then age of Mohan. Eight years hence, Raghu's age will be twice of Mohan's age. Find the ratio of the present ages of Mohan and Raghu, respectively.

A. 3 : 7



B. 4 : 5

C. 6 : 7

D. 3 : 5

Q5 Mathematics

Which of the options below represents a Pythagorean triplet?

A. 15, 224, 223

B. 12, 143, 150

C. 20, 99, 101



D. 10, 99, 111

Q6 Mathematics

If $ax^2 - 8x - 8$ is divided by $(x + 2)$, then the remainder is 24. Find the value of a .

A. 1

B. 4



C. 3

D. 2

Q7 Mathematics

Straight lines l and m are parallel to each other. Points A and B lie on the line l , points C and D lie on the line m , and E is a point that lies between the straight lines l and m , all in such a manner that $m\angle EAB = 50^\circ$ and $m\angle ECD = 70^\circ$. Find the measure of $\angle AEC$ if points A and C lie on the same side of point E.

A. 100°

B. 60°

C. 70°

D. 120°



Q8 Mathematics

There are three pipes A, B and C in a tank. The first pipe A can fill the empty tank in 8 hours, the second pipe B can fill the empty tank in 10 hours, and the third pipe C can empty the completely filled tank in 20 hours. If the three pipes are opened together when the tank is completely empty, then in how many hours will the tank be completely filled?

A. $\frac{30}{7}$ hours

B. $\frac{40}{7}$ hours



C. $\frac{20}{11}$ hours

D. $\frac{25}{11}$ hours

Q9 Mathematics

If the mean and the mode of a data set are 5 and 8, respectively, then, using the relevant empirical relation, find the median of the same data set.

A. 3.5

B. 7

C. 6



D. 14

Q10 Mathematics

The LCM of two numbers is 10 times their HCF and the sum of the LCM and the HCF is 451. If the sum of the numbers is 287, then one of the two numbers is:

A. 41

B. 82



C. 123

D. 164



Q11 Mathematics

The median of the following data is 28.5. The total frequency is 60. The values of x and y , respectively, are:

Age in years	0-10	10-20	20-30	30-40	40-50	50-60	Total
No. of patients	5	x	20	15	y	5	60

A. $x = 8, y = 7$



B. $x = 7, y = 8$

C. $x = 9, y = 6$

D. $x = 6, y = 9$

Q12 Mathematics

The perimeter of a regular pentagon whose each side is $2a$ cm long is:

A. $10a$ cm



B. $10a^2$ cm

C. $5a$ cm

D. $5a^5$ cm

Q13 Mathematics

The simple interest for 6 years, at a certain rate of interest per annum, is one-sixth of the principal. At the same rate of simple interest, what sum of money will amount to ₹6,000 total in 3 years?

[Give your answer correct to 2 decimal places.]

A. ₹5,538.46



B. ₹6,539.65

C. ₹5,565.39

D. ₹6,565.39



Q14 Mathematics

If the cost price of 63 articles is equal to the selling price of 54 articles, then what is the percentage gain or loss?

- A. $16\frac{2}{3}\%$ loss
- B. $16\frac{2}{3}\%$ gain
- C. $15\frac{1}{3}\%$ loss
- D. $15\frac{1}{3}\%$ gain

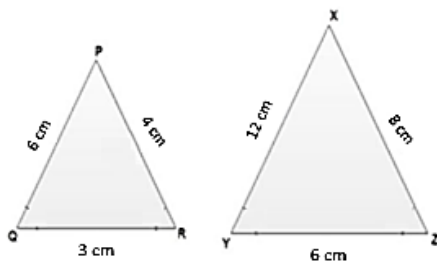
Q15 Mathematics

If 5 is subtracted from x , then the resulting number is exactly divisible by 18, 16, 24 and 32. The smallest value of x is:

- A. 293
- B. 283
- C. 288
- D. 581

Q16 Mathematics

In the given figures (figures drawn are not to scale), by which of the following similarity criteria $\triangle PQR$ is similar to $\triangle XYZ$, where S – side and A - Angle?



- A. SSS
- B. SAS
- C. AAA
- D. AAS



Q17 Mathematics

If 2 and 5 are the roots of a quadratic equation, then the quadratic equation is given by:

A. $x^2 + 7x + 10 = 0$

B. $2x^2 + 7x + 10 = 0$

C. $x^2 + 3x + 7 = 0$

D. $x^2 - 7x + 10 = 0$ ✓

Q18 Mathematics

There are three pipes K, L and M. Pipe K can fill a tank in 45 minutes and pipe L can fill the same tank in one hour. Pipe M can empty the same tank, when filled, in 1 hour 45 minutes. If all three pipes are opened together when the tank is empty, then the tank will be filled in:

A. $24\frac{3}{37}$ minutes

B. $34\frac{2}{37}$ minutes ✓

C. $44\frac{5}{37}$ minutes

D. $54\frac{9}{37}$ minutes

Q19 Mathematics

Two sides of a triangular field are 41 m and 28 m. If its perimeter is 84 m, then what is the length of the smallest altitude of the triangle? [Give your answer correct to two places of decimal.]

A. 7.15 m

B. 7.12 m

C. 6.12 m

D. 6.15 m ✓

Q20 Mathematics

During a sale, a trader allows a 25% cash discount followed by a 10% trade discount. If the list price of an item is ₹800, then its selling price is:

A. ₹280

B. ₹540 ✓

C. ₹275

D. ₹510



Q21 Mathematics

Find the smallest number from the options given below, by which 242 should be divided so as to make the quotient a perfect square.

A. 1

B. 4

C. 3

D. 2

**Q22** Mathematics

If the product of the ages of M and N is 486 years and the ratio of their ages is 3 : 2, what is the sum of their ages?

A. 45 years

B. 60 years

C. 65 years

D. 70 years

**Q23** Mathematics

Simplify the following.

$$(-2)^4 \div (-2)^6$$

A. -4

B. $-\frac{1}{4}$

C. 4

D. $\frac{1}{4}$ **Q24** Mathematics

The sum of the numerator and the denominator of a fraction is 13. If 6 is added to both the numerator and the denominator, then the fraction becomes $\frac{8}{17}$. Find the absolute difference between the numerator and the denominator of the given fraction.

A. 12

B. 8

C. 9

D. 10



Q25 Mathematics

The ratio of the income of A to that of B is 3 : 5 . The expenditure of A is $\frac{7}{12}$ of his income, and the expenditure of B is $\frac{8}{15}$ of his income. The positive difference between their expenditures is ₹14,300 . Find A's income.

A. ₹78,000

B. ₹46,800 ☒

C. ₹16,800

D. ₹48,300

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

A statement is given followed by two possible conclusions numbered I and II. You have to assume everything in the statement to be true and on the basis of it, decide which of the conclusions logically follow(s).

Statement:

Playing with mud and butterflies in a garden is more beneficial for small children than watching academic videos on computers or mobile phones.

Conclusions:

I. Mobile phones and computers are harmful for small children.

II. Real experiences are more beneficial than virtual experiences for children's development.

A. Only conclusion I follows

B. Only conclusion II follows ☒

C. Both the conclusions follow

D. Neither conclusion follows

Q27 General Intelligence and Reasoning

In a certain code language, 'PROOF' is written as 'OPLKA' and 'BONES' is written as 'AMKAN'. How will 'MINKS' be written in that language?

A. LGKGN ☒

B. LKGKN

C. LHKHO

D. LKHGO



Q28 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

57 : 39 :: 82 : ? :: 89 : 71

A. 64



B. 66

C. 62

D. 67

Q29 General Intelligence and Reasoning

Seven friends are sitting in a row on a bench facing the north direction. Only Dan is between Leo and Ben. Leo is sitting at the extreme left end of the bench. Harry is third from the right end. Only Peter is sitting between Tim and Harry. Flint is sitting in the exact middle of the row. Who is sitting to the immediate left of Flint?

A. Harry

B. Dan

C. Ben



D. Peter

Q30 General Intelligence and Reasoning

Vimal starts from Point A and drives 6 km towards North. He then takes a right turn, drives 7 km, turns right and drives 19 km. He then takes a right turn and drives 7 km. He then takes a right turn and drives 8 km, turns right, drives 13 km. He then turns left, drives 5 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 9 km towards South

B. 13 km towards West



C. 6 km towards East

D. 8 km towards South

Q31 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

176, 168, 160, 152, 144, ?

A. 138

B. 136



C. 142

D. 132



Q32 General Intelligence and Reasoning

Study the given bar-graph and answer the question that follows.

The bar-graph depicts the number of applications received for two courses (BA and MA) in 2001 and 2003.



The number of applications received for BA from females in 2001 and 2003 was 73 and 101, respectively. What was the total number of applications received for BA from males in 2001 and 2003 together?

A. 124

B. 116

C. 126



D. 128

Q33 General Intelligence and Reasoning

N, R, S, W, X and Z live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. N lives on floor number 2. No one lives between N and R. Only three people live between R and S. W lives immediately above X. On which floor number does Z live?

A. 6



B. 5

C. 3

D. 1

Q34 General Intelligence and Reasoning

Which two numbers from amongst the given options should be interchanged to make the given equation correct?

$$382 + 9 \div 4 - 39 \times 172 = 74$$

A. 9 and 172



B. 382 and 39

C. 9 and 4

D. 4 and 172



Q35 General Intelligence and Reasoning

Refer to the following number and symbol series and answer the question.

(Left) 8 # 7 * 3 \$ 9 6 2 @ 7 & 9 % 4 3 7 % & 2 5 ^ 6 (Right)

How many such symbols are there in the series which are immediately preceded by an odd number and also immediately followed by an even number?

A. Two



B. Three

C. Four

D. Five

Q36 General Intelligence and Reasoning

A group of numbers/symbols is coded using letters as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Number/symbol	1	&	2	9	*	7	3	\$	8	5	6	4	@	#
Code	B	F	I	K	A	V	S	U	E	Q	C	P	X	T

Conditions:

- (i) If the first element is a symbol and the second element is an even number, the first and the second elements are to be coded as €
- (ii) If both the first and the last elements are numbers, the codes for these two (the first and the last elements) are to be interchanged
- (iii) If last element is a symbol, the element is to be coded as β

5 @ & 2 7

A. QXFIV

B. VFXIV

C. VXFIQ



D. FXIQV

Q37 General Intelligence and Reasoning

Suresh starts from Point A and drives 7 km towards the east. He then takes a left turn, drives 4 km, turns right and drives 5 km. He then takes a right turn and drives 10 km, takes a right turn and drives 8 km. He then takes right turn and drives 13 km. He takes a final left turn, drives 4 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 5 km towards the north

B. 7 km towards the south



C. 3 km towards the south

D. 7 km towards the west



Q38 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(32, 166, 19)

(49, 230, 17)

A. (37, 186, 21)

B. (36, 186, 20)

C. (36, 186, 21)



D. (36, 187, 21)

Q39 General Intelligence and Reasoning

A, B, C, D, E, F, G and H live on eight different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 8.

D lives on an even numbered floor but does not live on floor number 4 or 2. Only five persons live between D and A. C lives immediately above A. H lives on floor number 1. Only B lives between the floors of F and D. E does not live on an even numbered floor. How many people live above E's floor?

A. 1

B. 4

C. 3



D. 2

Q40 General Intelligence and Reasoning

Six friends L, M, N, O, P and Q live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6.

Only O lives on the floor between the floors of M and Q. Only N lives on the floor between the floors of L and P. Q lives on one of the floors above the floor of L. On which floor does O live?

A. 3rd

B. 2nd

C. 5th



D. 4th



Q41 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

Y A B U Y H I R J S B R X M P Q S D I R A Y E F G

How many such consonants are there each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A. 1

B. 2

C. 3



D. 4

Q42 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

All lilies are daisies.

All roses are lilies.

All petunias are lilies.

Conclusions:

I. Some daisies are petunias.

II. Some roses are petunias.

A. Only conclusion I follows



B. Only conclusion II follows

C. Neither conclusion I nor II follows

D. Both conclusions I and II follow



Q43 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

All Umbrellas are Raincoats.
All Raincoats are Frogs.
Some Raincoats are Water.

Conclusions:

(I) Some Frogs are Water.
(II) All Umbrellas are Frogs.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow. ✓
- D. Neither conclusion (I) nor (II) follows.

Q44 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

YRF : UNB
GLS : CHO

- A. TDU : GWF
- B. MPL : ILH ✓
- C. RJM : TSY
- D. OKA : LPZ

Q45 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement : $L > D = W \geq K > Q < C \leq P$

- A. $D \leq Q$ ✓
- B. $K \leq D$
- C. $L > W$
- D. $P > Q$



Q46 General Intelligence and Reasoning

Each vowel in the word INTERNAL is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order. If each letter thus formed is arranged in alphabetical order, which letter will be the fifth from the right?

A. K



B. M

C. J

D. F

Q47 General Intelligence and Reasoning

A statement is given followed by four conclusions as options. Select which conclusion is true based on the given statement.

Statement: $R > M = N < Q < P = J$

A. $R < Q$

B. $J > M$



C. $M > P$

D. $P < M$

Q48 General Intelligence and Reasoning

What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and also '×' and '÷' are interchanged?

$$100 \times 25 - 10 \div 5 + 24 = ?$$

A. 54

B. 40

C. 30



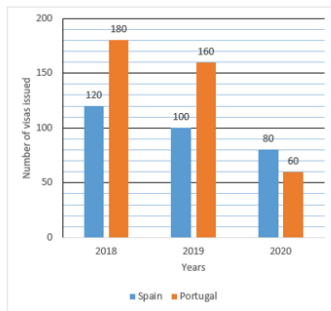
D. 24



Q49 General Intelligence and Reasoning

Study the given bar graph and answer the following question.

The given bar graph depicts the number of visas issued for Spain and Portugal in 2018, 2019 and 2020



What is the respective ratio between the total number of visas issued for both the countries in 2018 and the number of visas issued for Portugal in 2020?

A. 5 : 2

B. 3 : 2

C. 3 : 1

D. 5 : 1

**Q50** General Intelligence and Reasoning

If the numbers given below are arranged in ascending order, then which number is third from the right?

Left 11, 3, 2, 6, 14, 9, 7, 5, 2 Right

A. 3

B. 7

C. 11

D. 9

**Q51** General Intelligence and Reasoning

D, E, H, K, M, R, S and W are sitting around a square table facing the centre of the table. Some of them are sitting at the corners while some are sitting at the exact centre of the sides.

D sits at one of the corners of the table. E sits second to the left of D. Only three people sit between E and H. Only one person sits between H and M. S sits to the immediate left of M. W is not an immediate neighbour of D. K sits second to the right of R.

As per the given arrangement, ___ sits to the immediate left of R.

A. E

B. D

C. H

D. M



Q52 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some roses are geraniums.
2. Some roses are daisies.
3. Some lilies are geraniums.

Conclusions:

I-Some geraniums are daisies.

II-Some lilies are roses.

- A. Only conclusion I follows.
- B. Only conclusion II follows.
- C. Both conclusions I and II follow.
- D. Neither conclusion I nor II follows. ✓

Q53 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

K H U _ H K _ U S G K H U S _ _ H U S E

- A. H S K F
- B. S S F K
- C. S H F K ✓
- D. H F H K

Q54 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

11, 12, 14, 18, 26, ?

- A. 56
- B. 34
- C. 42 ✓
- D. 48



Q55 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) S Q 8 J & L N 9 % * K T # 6 2 V 4 @ 5 Z 7 (Right)

How many such symbols are there which are immediately preceded by a number and also immediately followed by a number?

A. Four

B. Three

C. Two

D. One



General Science

25 Questions • Answer Key

Q56 General Science

The ratio of currents flowing through two electric circuits is 1: 4. If the ratio of resistances is 2: 1, what is the ratio of their powers?

A. 8: 1

B. 1: 32

C. 1: 8

D. 32: 1



Q57 General Science

For a given concave mirror of focal length 0.5 m if the object distance is 0.6 m, then the magnification produced is:

A. 0.5

B. -0.5

C. 5

D. -5



Q58 General Science

When two resistors are connected in series, their total effective resistance is $120\ \Omega$. When the same two resistors are connected in parallel then their effective resistance is $30\ \Omega$. The resistances of the two resistors are:

A. $90\ \Omega$ and $30\ \Omega$

B. $60\ \Omega$ and $60\ \Omega$ each

C. $70\ \Omega$ and $50\ \Omega$

D. $80\ \Omega$ and $40\ \Omega$



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Q59 General Science

The SI unit of electric power is _____.

- A. Joule
- B. Calorie
- C. Newton
- D. Watt



Q60 General Science

The correct relation between refractive index (μ), speed of light in air (c) and speed of light in the medium (v) is:

- A. $c = \frac{\mu}{v}$
- B. $v = \frac{\mu}{c}$
- C. $\mu = \frac{c}{v}$
- D. $\frac{1}{\mu} = \frac{c}{v}$



Q61 General Science

In an electric motor, the forces acting on the arms of the armature of the motor that are perpendicular to the direction of magnetic field are:

- A. equal in magnitude and opposite in direction
- B. unequal in magnitude and along same direction
- C. equal in magnitude and in the same direction
- D. unequal in magnitude and in the opposite direction



Q62 General Science

What is the basic difference in food intake by Amoeba and Paramecium?

- A. Amoeba takes up food through specific spot while paramecium can take up from 2 spots
- B. Both of them can take up through the entire cell surface
- C. Amoeba can take up through entire cell surface and paramecium through 4 spots on its cells surface
- D. Amoeba can take up food from entire cell surface
Paramecium only through specific spot



Q63 General Science

Which of the following provides proteins for growth?

- A. Apple
- B. Leafy vegetables
- C. Cereals
- D. Pulses



Q64 General Science

Which of the following compounds on treatment with chlorine produces bleaching powder?

- A. Slaked lime
- B. Quicklime
- C. Calcium carbonate
- D. Calcium bicarbonate



Q65 General Science

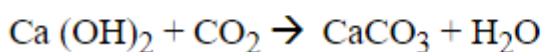
Formation of carbon monoxide from carbon dioxide and oxygen is an example of ____.

- A. neutralisation reaction
- B. decomposition reaction
- C. combination reaction
- D. displacement reaction

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q66 General Science

How many atoms of oxygen are on the left side of the given chemical equation?



- A. 4
- B. 3
- C. 2
- D. 1



Q67 General Science

The image produced by a concave mirror when an object is kept at the centre of the curvature of the mirror is:

- A. real and erect
- B. real and inverted
- C. virtual and erect
- D. virtual and inverted

Q68 General Science

Match the columns.

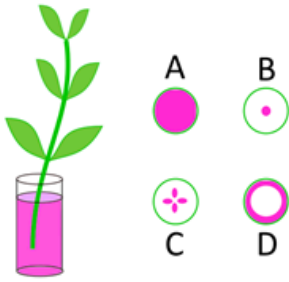
Group-I	Group-II
I. Solid waste	A. Composting
II. Organic waste	B. Open dumping
III. Hospital waste	C. Incineration

- A. I-C; II-A; III-B
- B. I-C; II-B; III-A
- C. I-B; II-C; III-A
- D. I-B; II-A; III-C



Q69 General Science

A cut twig is placed in coloured water as shown in the diagram below. After a few hours, when the twig is cut, how will it look (where will we find the coloured tissue)?



A. Like figure A

B. Like figure B



c. Like figure C

D. Like figure D

Q70 General Science

Which of the following organisms break down food material outside the body and then absorb the digested food?

A. Mushroom



B. Lice

C. Amoeba

D. Deer

Q71 General Science

Which reaction occurs when a student adds a few drops of lemon in milk?

A. Combination reaction

B. Hydrolysis

c. Precipitation reaction



D. Displacement reaction



Q72 General Science

The presence of a magnetic field can be determined by _____.

- A. an ammeter
- B. a voltmeter
- C. a galvanometer
- D. a magnetic needle



Q73 General Science

Unsaturated hydrocarbons that contain one or more double bonds are known as _____.

- A. ketones
- B. alkenes
- C. Alkanes
- D. Acids



Q74 General Science

How will you diagnose if a person is infected with HIV a year ago?

- A. By low blood cell count
- B. By loss of weight and fatigue
- C. By anti-HIV antibodies in the blood
- D. Persistent fever (over a month)



Q75 General Science

Which of the following is used for removing permanent hardness of water?

- A. CaOCl_2
- B. $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
- C. NaCl
- D. NaHCO_3



Q76 General Science

What types of waste products are stored in Old Xylem?

- A. Growth promoting substances
- B. Ammonia, urea and amino acids
- C. Resins and gums
- D. Uric acid



Q77 General Science

The phenomena of scattering of light by colloidal particles gives rise to _____.

- A. refraction of light
- B. Tyndall effect
- C. dispersion
- D. Total internal reflection



Q78 General Science

What is the atomic number and valency of sulphur, respectively?

- A. 16 and 2
- B. 14 and 4
- C. 15 and 3
- D. 17 and 1



Q79 General Science

Which of the following can lead to sustainable management of forest resources?

- A. Making forests off-limits to human beings and their livestock
- B. Using money from safari tourists to protect forests from logging
- C. Adjusting the harvest of wood depending on the rate of growth of forests
- D. Applying fertilisers and growth promoters to enhance the growth of trees



Q80 General Science

What is the position of zinc in the Modern Periodic Table?

- A. Group 11, Period 3
- B. Group 12, Period 3
- C. Group 11, Period 4
- D. Group 12, Period 4



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following best defines the Fiscal Deficit in Indian budget?

- A. Capital expenditure minus capital receipts
- B. Revenue expenditure plus capital expenditure minus revenue receipts
- C. Total expenditure minus total receipt other than borrowing
- D. Total expenditure plus total receipt including borrowing



Q82 General Awareness and Current Affairs

Which of the following Articles vests the executive powers of the State in the Governor?

- A. Article 146
- B. Article 154
- C. Article 176
- D. Article 181



Q83 General Awareness and Current Affairs

Which of the following is NOT a scheme or initiative run by Ministry of Youth Affairs and Sports?

- A. Khelo India Scheme
- B. National Sports Awards
- C. National Sports Development Fund
- D. Shyama Prasad Mukherjee National Sports Welfare Fund



Q84 General Awareness and Current Affairs

The Fundamental Duties in the Indian Constitution were added by which amendment to the Constitution?

- A. 40th
- B. 41st
- C. 42nd
- D. 43rd



Q85 General Awareness and Current Affairs

Which of the following statements about the Rann of Kutch is NOT correct?

- A. It is a salt marsh in the Thar Desert in the Kutch District of Gujarat.
- B. This famous desert of white salt is visible after the monsoon season.
- C. It is famous for the wild ass.
- D. It is located in the Eastern Ghat in Odisha state.



Q86 General Awareness and Current Affairs

Which of the following Acts of Constitution, seeks to provide a common framework for the structure and mandate of urban local bodies to enable them to function as effective democratic units of Local Self Government?

- A. 70th Amendment Act, 1990
- B. 74th Amendment Act, 1992
- C. 4th Amendment Act, 1956
- D. 10th Amendment Act, 1966



Q87 General Awareness and Current Affairs

The Indian Councils Act of 1909 is also termed as the _____.

- A. Quit India Movement
- B. Simon Commission
- C. Morley-Minto Reforms
- D. Chauri Chaura incident



Q88 General Awareness and Current Affairs

Amdavad Municipal Transport Service is India's largest Municipal Transport Service for local conveyance. R.T.A issued the permit to manage 29 routes for the bus-service to Municipality of Amdavad in January _____.

A. 1941

B. 1947



C. 1950

D. 1952

Q89 General Awareness and Current Affairs

A receipt that does NOT lead to a claim on the government is known as a _____.

A. revenue receipt



B. capital receipt

C. redeemable receipt

D. claimed receipt

Q90 General Awareness and Current Affairs

Centre for Excellence in Artificial Intelligence is an initiative by which organisation?

A. INFLIBNET

B. Indian Space Research Organisation

C. National Informatics Centre



D. Indian Institute of Science

Q91 General Awareness and Current Affairs

Which ministry launched a special campaign namely Kanya Shiksha Pravesh Utsav launched on 7th March, 2022 to re-enroll out of school adolescent girls (OoS AG) in the age group of 11-14 years?

A. Ministry of Women and Child Development



B. Ministry of Education

C. Ministry of Home Affairs

D. Ministry of Health and family Welfare



Q92 General Awareness and Current Affairs

Select the correct statement.

- A. The amount collected by the government in the form of interest, fees, and dividends is known as tax revenue receipt.
- B. An annual statement of the government's fiscal revenue and fiscal expenditure known as fiscal budget.
- C. Capital budget is not a part of government budget.
- D. A fiscal deficit is a shortfall in a government's income compared with its spending. ✓

Q93 General Awareness and Current Affairs

Who among the following was the First Vice Chancellor of Maulana Azad National Urdu University?

- A. Prof. Abdul Jaleelkhan M.Pathan
- B. Prof. Mohammad Miyan
- C. Prof. Mohammed Shamim Jairajpuri ✓
- D. Dr. Mohammad Aslam Parvaiz

Q94 General Awareness and Current Affairs

Padma Shri 2022 awardee para-javelin thrower Sumit Antil belongs to which of the following states?

- A. Rajasthan
- B. Uttarakhand
- C. Haryana ✓
- D. Karnataka

Q95 General Awareness and Current Affairs

The Basilica of Bom Jesus is a Roman Catholic basilica located in the state of _____ and is a UNESCO World Heritage Site.

- A. Andhra Pradesh
- B. Meghalaya
- C. Kerala
- D. Goa ✓



Q96 General Awareness and Current Affairs

On 1 March 2022, how many teachers across India were bestowed the National Information and Communication Technology (ICT) Awards 2022 by the Union Minister of State for Education Annpurna Devi?

A. 49



B. 59

C. 69

D. 79

Q97 General Awareness and Current Affairs

Which of the following Articles of the Indian Constitution says that no child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment?

A. Article 24



B. Article 25

C. Article 26

D. Article 27

Q98 General Awareness and Current Affairs

Which Indian state celebrates Rongali Bihu, a spring dramatic-cultural festival?

A. Assam



B. Meghalaya

C. West Bengal

D. Tripura

Q99 General Awareness and Current Affairs

Nandadevi Biosphere Reserve is located in:

A. Ladakh

B. Himachal Pradesh

C. Sikkim

D. Uttarakhand



The Narmada or Nerbudda is a river in central India that empties into the Arabian Sea in the state of _____.

- A. Rajasthan
- B. Maharashtra
- C. Karnataka
- D. Gujarat



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Which of the following numbers is divisible by both 6 and 9?

A. 4256

B. 2156

C. 5186

D. 3186



Q2 Mathematics

If $x - y = 9$ and $xy = 16$, find the value of $x^2 + y^2$.

A. 113

B. 49

C. 32

D. 115



Q3 Mathematics

The ages of K and M are in the ratio of 7 : 5 and the sum of their ages is 72 years. What will be the ratio of the ages of K and M, in the mentioned order, after 9 years?

A. 9 : 8

B. 13 : 11

C. 12 : 9

D. 17 : 13



Q4 Mathematics

If $u - v = 4$ and $uv = 20$, then the value of $u^3 - v^3$ is:

A. 64

B. 224

C. 304

D. 176



Q5 Mathematics

A and B together can complete a piece of work in 5 days. They started working together but after 3 days, B left. If the work is completed after 3 more days, B alone could do the entire work in:

- A. 6.5 days
- B. 15 days
- C. 13 days
- D. 7.5 days

Q6 Mathematics

A and B have undertaken to do a piece of work for ₹800. A alone can do it in 6 days, while B alone can do it in 8 days. With the help of C, they can finish it in 3 days. What is the share (in ₹) of A in the total amount received for completing the work?

- A. 450
- B. 350
- C. 400
- D. 300

Q7 Mathematics

The average temperature on Monday, Tuesday and Wednesday was 32°C , and the average temperature on Sunday, Monday and Tuesday was 36°C . If the temperature on Sunday was 39°C , then find the temperature on Wednesday.

- A. 34°C
- B. 27°C
- C. 26°C
- D. 28°C

Q8 Mathematics

Which of the following statements is true?

- A. 1 is a prime number.
- B. All prime numbers except the number 2 are odd numbers.
- C. There are seven prime numbers between 1 and 20.
- D. If number x is prime, then number $x+1$ is always prime.



Q9 Mathematics

Kamal has two children, Vishnu and Deeksha. At present, Kamal is 3 times as old as Vishnu. Deeksha is 3 years younger than Vishnu. 3 years ago, the sum of the then ages of all three of them was 63 years. Find the present age (in years) of Kamal.

A. 20

B. 54

C. 46

D. 45 ✓

Q10 Mathematics

Find the value of $7 \times 8 + 11 - (17 - 5)$.

A. 55 ✓

B. 45

C. 57

D. 47

Q11 Mathematics

The product of two consecutive odd numbers is 1155. Represent the situation in the form of a quadratic equation, if x is smaller of the two numbers.

A. $x^2 - 2x - 1155 = 0$ B. $x^2 + 2x + 1155 = 0$ C. $x^2 + 2x - 1155 = 0$ ✓D. $x^2 + x + 1155 = 0$ **Q12 Mathematics**

If $\cot\theta - \operatorname{cosec}\theta = -\frac{1}{3}$, find $\frac{(1+\cos\theta)}{\sin\theta}$.

A. 1

B. 2

C. 3 ✓

D. 4



Q13 Mathematics

Let n be the least number which when divided by 15, 18, 20 and 27, the remainder in each case is 3 and n is divisible by 53. What is the sum of the digits of n ?

- A. 9
- B. 10
- C. 12
- D. 13



Q14 Mathematics

Goods are sold such that when 5% discount is allowed, a profit of 33% is made. By what percentage is the list price more than the cost price?

- A. 40%
- B. 30%
- C. 35%
- D. 25%



Q15 Mathematics

Two numbers, whose LCM is 416 and HCF is 2, are in the ratio 13 : 16. Find the greater of these two numbers.

- A. 32
- B. 42
- C. 26
- D. 34



Q16 Mathematics

The discriminant of the quadratic equation $bx^2 + cx + a = 0$; $b \neq 0$, is given by the expression:

- A. $b^2 - 4ac$
- B. $b^2 + 4ac$
- C. $a^2 - 4ab$
- D. $c^2 - 4ab$



Q17 Mathematics

If the volume of a sphere is $\frac{792}{7} \text{ cm}^3$, then find the radius of the sphere.

(Use $\pi = \frac{22}{7}$ for calculation)

A. 3 cm



B. 2 cm

C. 2.5 cm

D. 3.5 cm

Q18 Mathematics

If $x = 2$, then the value of $(-x)^2 \times (-x)^3$ is:

A. -32



B. 32

C. $(-2)^1$

D. $(-2)^6$

Q19 Mathematics

If the areas of two similar triangles are in the ratio 361:529. What would be the ratio of the corresponding sides?

A. 23:19

B. 19:23



C. 361:529

D. 15:23

Q20 Mathematics

The perimeter of a right-angled triangle is 80 cm. If the length of its hypotenuse is 34 cm, find the lengths of its other two sides.

A. 16 cm, 30 cm



B. 20 cm, 26 cm

C. 18 cm, 28 cm

D. 14 cm, 32 cm



Q21 Mathematics

Find the value of $18 \div \{(7 \text{ of } 3 - 12)\} \times 9 \times (11 - 7)$.

A. 27

B. 58

C. 64

D. 72

**Q22** Mathematics

Find the value of 'y' in the equation given below.

$$3\frac{1}{2} + 2\frac{5}{7} \times y - \frac{1}{2} \div 2 = 4\frac{1}{4}$$

A. $\frac{19}{7}$

B. 0

C. $\frac{7}{19}$



D. $\frac{7}{5}$

Q23 Mathematics

Find the volume of a sphere whose surface area is 5544 cm^2 .

A. 9261 cm^3

B. 10888 cm^3

C. 38808 cm^3



D. 96621 cm^3



Q24 Mathematics

A bank offers 7.5% compound interest per annum calculated on a half-yearly basis. A customer deposits ₹3,600 each on 1 January and 1 July of a year. At the end of the year, the amount he would have gained by way of interest is _____.
[Give your answer correct to 2 decimal places.]

A. ₹272.25

B. ₹405.06

C. ₹410.06 ☒

D. ₹415.06

Q25 Mathematics

The least value of x so that the number $478265475x + 25481459x$ is divisible by 8, is given by:

A. $x = 1$ B. $x = 3$ C. $x = 4$ D. $x = 2$ ☒**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Seven people - N, O, P, S, W, X and Y are sitting in a straight line facing North. N sits fourth to the right of O. Neither N nor O sit at any of the extreme ends of the line. Only one person sits between N and P. S sits third to the right of P. W sits fourth to the right of X. Who sits to the immediate right of Y?

A. O

B. P ☒

C. X

D. N

Q27 General Intelligence and Reasoning

Six children – 1, 2, 3, 4, 5 and 6 – are in a room, each child having a different height. Only three children are taller than 4. 1 is taller than 3 but shorter than 4. 5 is taller than 2 but not the tallest in the group. Who is the second tallest person among the six children?

A. 6

B. 5 ☒

C. 2

D. 3



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Q28 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) T S A B N U V T D Q S N M L A L E (Right)

How many such consonants are there, each of which is immediately preceded by a vowel and also immediately followed by a vowel?

A. 3

B. 6

C. 4

D. 1



Q29 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

4 12 76 292 804 ?

A. 1000

B. 1804

C. 2000

D. 2804



Q30 General Intelligence and Reasoning

Amongst six friends P, Q, R, S, T and U, each has a different height. R is taller than only one friend. Q is taller than only three friends. T is taller than R but shorter than U. U is not the tallest. U is taller than S. Who is the second tallest among all the friends?

A. R

B. T

C. Q

D. U



Q31 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. All sandals are shoes.
2. Some heels are boots.
3. Some sandals are boots.

Conclusions:

I-Some heels are sandals.

II-Some boots are shoes.

A. Only conclusion I follows.

B. Only conclusion II follows. 

C. Both conclusions I and II follow.

D. Neither conclusion I nor II follows.

Q32 General Intelligence and Reasoning

P, Q, R, S, T and U live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on till the topmost floor is numbered 6. Only two people live between P and S. S lives immediately below T. P lives on an even-numbered floor but not on floor number 2. R lives on the topmost floor. Q lives immediately below R. Who lives on floor number 3?

A. P

B. U 

C. Q

D. T

Q33 General Intelligence and Reasoning

In a certain code language, 'TEMPLE' is written as 'QHJSIH' and 'MOSQUE' is written as 'JRPTRH'. How will 'SUPREME' be written in the same code language?

A. PRMOBJB

B. PRMUBPB

C. PXMUBPB 

D. PRMOBJH



Q34 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.

8 : 65 :: 12 : 145 :: 13 : ?

A. 169

B. 170



C. 171

D. 133

Q35 General Intelligence and Reasoning

Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement:

A new holiday-special train has been introduced from Chennai to Patna to cater to the increased demand from passengers during the festival season. This will run on all Wednesdays in the months of September and October.

Assumptions:

I. More people are expected to travel from Chennai to Patna in September and October.

II. The existing trains from Chennai to Patna have been cancelled.

A. Only assumption I is implicit



B. Only assumption II is implicit

C. Neither assumption I nor II is implicit

D. Both assumptions I and II are implicit

Q36 General Intelligence and Reasoning

Study the given arrangement of letters and answer the question that follows:

(LEFT) N C A H L M W U V G L I Q S P O Z (RIGHT)

How many consonants are there in this arrangement which are immediately preceded by a vowel?

A. Four



B. Six

C. Two

D. Five



Q37 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

6, 9, 12, 16, 20, 25, ?

A. 30



B. 35

C. 31

D. 29

Q38 General Intelligence and Reasoning

If numbers 8452, 6327, 7524, 4598 and 5691 are arranged in descending order from left to right, then what will the product of third digit of the second number from the right end and second digit of the third number from the left end? (Example- 697 – First digit from left = 6, second digit from left = 9 and third digit from left = 7)

A. 54

B. 48

C. 27



D. 26

Q39 General Intelligence and Reasoning

If at 8:45 am, the minute hand of a clock is pointing towards the north, then in which direction will it point at 9:00 pm?

A. North

B. South

C. East



D. West

Q40 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6.

Only one person lives above E. D lives in an odd numbered floor. Only one person lives between E and C. C lives immediately above F. B does not live below A. Who lives on floor number 1 ?

A. F

B. D



C. C

D. B



Q41 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

$$77 : 28 :: 89 : ? :: 134 : 47$$

A. 32



B. 34

C. 31

D. 35

Q42 General Intelligence and Reasoning

Five friends live on five different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 5. Sanjay lives on the floor immediately above Namrata. Anshika lives on the third floor. Heena lives on the lowermost floor. Namrata lives on the floor immediately above Anshika. Manvir lives on the floor immediately above Heena. Who lives on the topmost floor?

A. Heena

B. Manvir

C. Namrata

D. Sanjay

**Q43** General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$15.32 \div 4.37 + 2.11 \times 14.47 = ?$$

A. 50

B. 16

C. 61

D. 32

**Q44** General Intelligence and Reasoning

In a certain code language, 'ISSUE' is coded as 'NPXRJ' and 'PAINT' is coded as 'UXNKY'. How will 'MEDIA' be coded in that language?

A. PZGDD

B. PBGFD

C. RBIFF

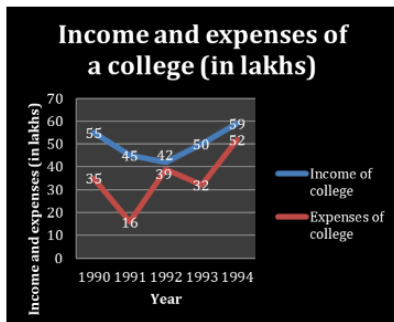


D. RZIDF



Q45 General Intelligence and Reasoning

The given line graph shows the income and expenses of a college for different years. Study the graph and answer the question that follows.



What is the percentage increase in income from 1992 to 1993?

A. 19.04%



B. 23.82%

C. 14.03%

D. 38.52%

Q46 General Intelligence and Reasoning

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).

Statements:

Some pens are scooters.

Some crowns are hats.

All balloons are globes.

Conclusions:

(I) All scooters are pens.

(II) Some crowns are globes.

(III) Some balloons are hats.

A. Only conclusion I follows

B. Only conclusion II follows

C. Either conclusion I or conclusion III follow

D. None of the conclusions follow



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Q47 General Intelligence and Reasoning

If ‘+’ means ‘-’, ‘-’ means ‘×’, ‘×’ means ‘÷’, ‘÷’ means ‘+’, what will come in place of the question mark (?) in the following equation?

$$102 \div 15 \times 5 - 7 + 10 \times 2 = ?$$

A. 116

B. 117

C. 118



D. 119

Q48 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) T M % A 8 ? 4 D & S R # Y 7 Z * E 9 = 5 C (Right)

How many such symbols are there which are immediately preceded and immediately followed by a number?

A. None

B. One

C. Two



D. Three

Q49 General Intelligence and Reasoning

Which of the following terms will replace the question mark (?) in the given series to make it logically complete?

BGH 17, FKL 14, JOP 11, NST 8, ?

A. QVW 5

B. RVW 7

C. RWX 5



D. SWX 9



Q50 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

GKV : IMX

PLR : RNT

- A. UKM : TPJ
- B. EMH : VXR
- C. JWO : LYQ
- D. Wdz : JAP



Q51 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Fairies are Angels.

Some Fairies are Witches.

All Witches are Brooms.

Conclusions:

(I) Some Brooms are Fairies.

(II) Some Witches are Angels.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows.



Q52 General Intelligence and Reasoning

How many such pairs of letters are there in the word HORIZON (in both forward and backward directions) which have as many letters between them as there are in the English alphabetical order?

- A. One
- B. Two
- C. Three
- D. Four



Q53 General Intelligence and Reasoning

A, B, C, D, E, F, G and H are sitting around a square table facing the centre of the table. Some of them are sitting at the corners while some are sitting at the exact centre of the sides. A sits in the middle of one of the sides. B sits third to the right of A. Only three people sit between B and H. C sits second to the left of H. D sits to the immediate right of G. E is not an immediate neighbour of B.

Who sits second to the left of F?

A. E

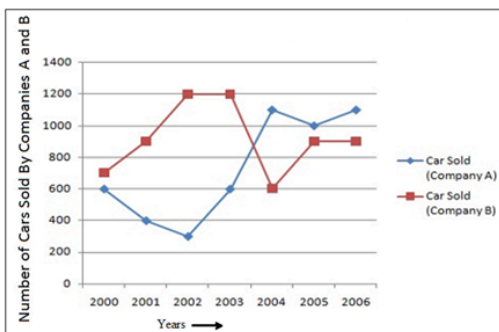
B. D

C. H

D. A

Q54 General Intelligence and Reasoning

The following graph shows the number of cars sold by two companies A and B over the years. Study the graph and answer the question that follows.



During the year 2003-2004, the sales of cars of Company B declined drastically. Calculate the decrease in the number of cars sold by Company B in year 2004 as compared to the previous year.

A. 400

B. 500

C. 600

D. 700

Q55 General Intelligence and Reasoning

Sunny starts from Point A and drives 17 km towards the east. He then takes a right turn, drives 12 km, turns right and drives 8 km. He then takes a right turn and drives 7 km. He takes a final left turn, drives 9 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

A. 5 km towards the north

B. 3 km towards the north

C. 5 km towards the south

D. 7 km towards the south



Q56 General Science

Which of the following is a sexually transmitted viral disease?

- A. Jaundice
- B. Gonorrhoea
- C. Syphilis
- D. AIDS



Q57 General Science

If one sees some marbles that are immersed in water, he/she will observe them as enlarged. This is because water acts as a:

- A. plano-concave lens
- B. concave lens
- C. convex lens
- D. plane mirror



Q58 General Science

Sunil made a paste of rice flour and added a drop of iodine solution to the paste. What will he see?

- A. Formation of small bubbles (effervescence)
- B. The paste turns sky blue
- C. The rice flour emits brown fumes
- D. The paste turns blue-black



Q59 General Science

Which of the following reactions occurs, - when the exchange of two ions takes place?

- A. Combination reaction
- B. Decomposition reaction
- C. Displacement reaction
- D. Double displacement reaction



Q60 General Science

Which of the following elements has three valence electrons?

A. Al



B. Mg

C. N

D. Ca

Q61 General Science

How many double bonds are present in propanone?

A. 0

B. 1



C. 3

D. 2

Q62 General Science

In a plant cell, the act of respiration to take in oxygen and release energy and carbon dioxide from food occurs in the _____.

A. peroxisomes

B. vacuoles

C. mitochondria



D. chloroplasts and mitochondria

Q63 General Science

Which method of contraception can prevent the transmission of HIV?

A. Oral contraceptives

B. Copper T

C. Copper T and condoms

D. Barrier methods only



Q64 General Science

Our body works within the pH range of:

A. 7 to 7.8



B. 7.8 to 8.0

C. 6 to 7

D. 8 to 8.7

Q65 General Science

Which of the following compounds of carbon does NOT exist?

A. CH_6



B. CH_4

C. C_2H_6

D. C_6H_6

Q66 General Science

A football player got fractured while playing football. He went to the hospital. The doctor took 'X' substance and mixed it with water for supporting the fractured bones in the right position.

What is the name of substance 'X'?

A. Gypsum

B. Plaster of Paris



C. Calcium sulphate

D. Sodium hydroxide



Q67 General Science

Which of the following is/are the correct conclusion(s) from Oersted's experiment?

- (a) A magnetic compass needle placed along the side of a current carrying conductor deflects
- (b) A current carrying conductor will produce magnetic field around it.
- (c) The direction of deflection of the compass needle placed along the side of a current carrying conductor does not change with reversal in the direction of current.

A. Only (a) and (b) are correct



B. Only (b) and (c) are correct

C. Only (c) and (a) are correct

D. (a), (b) and (c) are correct

Q68 General Science

An electric lamp of $40\ \Omega$, a toaster of resistance $200\ \Omega$ and a water filter of resistance $400\ \Omega$ are connected in parallel to a 220 V source. Suppose an electric iron when connected to a 220 V source draws the same current as that of the three appliances in the above, then the resistance and current flowing through the iron are:

A. $30.77\ \Omega$ and 7.15 A , respectively



B. $20.77\ \Omega$ and 9.15 A , respectively

C. $40.77\ \Omega$ and 5.15 A , respectively

D. $50.77\ \Omega$ and 4.15 A , respectively

Q69 General Science

Which of the following statements is true?

A. The resistance of a material is directly proportional to its length.



B. The resistance of a material is directly proportional to the area of cross section.

C. The resistance of a material is directly proportional to the radius of the wire.

D. The resistance of a material is inversely proportional to the length of the wire.



Q70 General Science

The coal that we use now comes from plants that lived around _____ years ago

- A. 1,000
- B. 10,000
- C. 100,000
- D. 10,000,000



Q71 General Science

Suppose a magic mirror is placed in front of a boy. As a result, the boy observes that the image of his head is of the same size, the middle portion of his body is smaller and that of his legs is bigger. Hence, from top to bottom, the magic mirror displays which of the following images?

- A. Plane, concave and convex
- B. Plane, convex and concave
- C. Concave, plane and convex
- D. Convex, concave and plane



Q72 General Science

Newlands arranged the then known elements in the order of _____.

- A. increasing atomic masses
- B. decreasing atomic masses
- C. increasing atomic radius
- D. decreasing atomic radius



Q73 General Science

A 12 V battery is connected across a resistor of resistance R. If a current of 2.4 mA flows through the circuit, then the value of R is _____ ohm.

- A. 2×10^{-4}
- B. 2×10^{-4} milli
- C. 5000
- D. 5000 milli



Q74 General Science

Identify the non-biodegradable substance that is generated in a kitchen.

- A. Paper bag
- B. Milk bag
- C. Vegetable peel
- D. Tea leaves



Q75 General Science

The line joining the two foci of a lens is called _____.

- A. principal axis
- B. Focal length
- C. radius of curvature
- D. paraxial ray



Q76 General Science

Normally, in a healthy adult, the initial filtrate in the kidneys is about _____ daily.

- A. 180 L
- B. 150 L
- C. 160 L
- D. 130 L



Q77 General Science

Who among the following was the first to blend his knowledge of science and mathematics to keep count of individuals exhibiting a particular trait in each generation

- A. Gregor Johann Mendel
- B. Charles Robert Darwin
- C. JBS Haldane.
- D. Stanley L Miller



Q78 General Science

The gas used to prevent the oxidation of chips is:

- A. nitrogen
- B. hydrogen
- C. oxygen
- D. argon



Q79 General Science

The circumference of magnetic field lines _____ as we move away from a current carrying a straight conductor.

- A. increases
- B. Decreases
- C. become zero
- D. remains the same



Q80 General Science

Suppose a doctor has prescribed a corrective lens of power +2.5 D. The focal length of the lens is:

- A. +30 cm
- B. -30 cm
- C. +40 cm
- D. -40 cm



General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Who among the following sportspersons won two consecutive Olympic medals for India?

- A. Sania Mirza
- B. PV Sindhu
- C. Deepika Kumari
- D. Babita Phogat



Q82 General Awareness and Current Affairs

When the MP is positive but declining, it means _____

- A. TP increases at an increasing rate
- B. TP increases at a constant rate
- C. TP increases at a decreasing rate ✓
- D. TP is decreasing

Q83 General Awareness and Current Affairs

_____ is the first of the 24 Tirthankaras of Jainism.

- A. Sumatinatha
- B. Rishabhanatha ✓
- C. Sambhavanatha
- D. Padmaprabha

Q84 General Awareness and Current Affairs

The Indian player Sunil Chhetri, who received the Major Dhyan Chand Khel Ratna Award 2021, is associated with which of the following sports?

- A. Kabaddi
- B. Hockey
- C. Football ✓
- D. Cricket

Q85 General Awareness and Current Affairs

The first language which was given the status of a classical language in India is:

- A. Telugu
- B. Kannada
- C. Tamil ✓
- D. Hindi



Q86 General Awareness and Current Affairs

In July 2022, the Ministry of Women and Child Development implemented a scheme called _____ – formerly known as Child Protection Services (CPS) Scheme since 2009-10 – for the welfare and rehabilitation of children.

- A. Mission Bachpan
- B. Mission Mamta
- C. Mission Vatsalya
- D. Mission Matritv



Q87 General Awareness and Current Affairs

Who was the main proponent of the Young Bengal Movement whose followers cherished the ideals of the French Revolution (1789 AD) and the liberal thinking of Britain?

- A. Henry Louis Vivian Derozio
- B. Annie Beasant
- C. Swami Vivekananda
- D. Ishwar Chandra Vidyasagar



Q88 General Awareness and Current Affairs

Macroeconomics can be defined as:

- A. a branch of economics that studies the individuals mode of investments
- B. a branch of economics that studies the methods of profits
- C. a study of individuals, households and firms' behaviour in decision making and allocation of resources
- D. a branch of economics that studies the behaviour and performance of an economy as a whole



Q89 General Awareness and Current Affairs

Select the correct statement.

- A. Dhupgarh is the highest peak of the Eastern Ghat.
- B. Dhupgarh is the highest peak of the Satpura Range.
- C. Mahendragiri mountain is the highest peak of the Satpura Range.
- D. Panchachuli peak is the highest peak in the Indian Himalayas.



Q90 General Awareness and Current Affairs

Which of the following states is NOT located in the Indian Himalayan region?

- A. Uttarakhand
- B. Sikkim
- C. Mizoram
- D. Bihar



Q91 General Awareness and Current Affairs

In which year was the National Policy on Electronics and Software Products enacted, with the goal of propelling India's rise as a Software Product Nation and collaborating with the IT/ITES sector?

- A. 2019
- B. 2020
- C. 2021
- D. 2022



Q92 General Awareness and Current Affairs

The quantity of a commodity that a consumer is willing to buy and is able to afford, given prices of goods and consumers' tastes and preferences is called _____ for the commodity.

- A. utility
- B. supply
- C. value
- D. demand



Q93 General Awareness and Current Affairs

What was the main focus of the First Five-Year Plan?

- A. The establishment of higher education institution
- B. Development of the service sector
- C. Development of defence equipment
- D. The agricultural development of the country



Q94 General Awareness and Current Affairs

The first Finance Commission was established in:

- A. 1949
- B. 1950
- C. 1951
- D. 1952



Q95 General Awareness and Current Affairs

Select the correct order of Panchayat Institution titles according to the given sequence of their respective designation.

Chairperson of Gram Panchayat, Chairperson of Panchayat Samiti, Chairperson of Zila Parishad

- A. Mukhiya, Adhyaksha, Pramukh
- B. Pramukh, Mukhiya, Adhyaksha
- C. Adhyaksha, Mukhiya, Pramukh
- D. Mukhiya, Pramukh, Adhyaksha



Q96 General Awareness and Current Affairs

The Ram Navami festival in India is celebrated as a Hindu festival on the _____ which marks the birth of Lord Ram.

- A. ninth day of Chaitra Navratri
- B. ninth day of Sharad Navratri
- C. ninth day of Phalguna month of Vikram Sambat Calendar
- D. ninth day of Sawan month of Vikram Sambat Calendar



Q97 General Awareness and Current Affairs

In the cases of the Fundamental Rights violations, the Supreme Court of India can be directly petitioned under which of the following Articles of the Constitution of India?

- A. Article 32
- B. Article 33
- C. Article 34
- D. Article 35



Q98 General Awareness and Current Affairs

Which state has become India's first State Assembly to implement the National e-Vidhan Application (NeVA) programme to become paperless in March 2022?

- A. Maharashtra
- B. Madhya Pradesh
- C. Nagaland
- D. Kerala



Q99 General Awareness and Current Affairs

Which of the following is the largest mangrove forest in the world?

- A. Pichavaram mangrove forest
- B. The Sundarbans reserve forest
- C. Bhitarkanika mangroves
- D. Godavari Krishna mangroves



Q100 General Awareness and Current Affairs

Which company developed CoviSelf, a self-testing kit for the COVID-19 infection?

- A. SII
- B. Johnson & Johnson
- C. Mylab
- D. Cipla



Mathematics

25 Questions • Answer Key

Q1 Mathematics

If the 13 - digit number 3458762341x98 is divisible by 11, then the value of x is _____.

A. 1

B. 4

C. 2



D. 7

Q2 Mathematics

The area of a trapezium is 160 cm^2 . If the lengths of the parallel sides are 20 cm and 12 cm, respectively, then the perpendicular distance (in cm) between the parallel sides is:

A. 10



B. 11

C. 12

D. 8

Q3 Mathematics

The diagonals of rhombus are 12 cm and 16 cm. The length of the side of rhombus is:

A. 10 cm



B. 8 cm

C. 16 cm

D. 12 cm

Q4 Mathematics

Simplify the following.

$$-2 - [3 - \{3 - (4 - 5)\}]$$

A. -2

B. -1



C. -3

D. 1



Q5 Mathematics

If a and b are the roots of the quadratic equation $(x - m)(x - n) = k$, then the roots of the equation $(x - a)(x - b) = -k$ are:

A. a, n

B. $a + 1, b + 1$

C. m, n



D. m, b

Q6 Mathematics

50 identical units are purchased at a total price of ₹550 and $\frac{1}{5}$ of these units are sold at a loss of 10%. Find the per unit selling price of the remaining units to gain 20% on the whole transaction.

A. ₹12.250

B. ₹13.650

C. ₹14.025



D. ₹15.175

Q7 Mathematics

Study the data set given below and find its mode, median and mean, in the order mentioned:

8, 9, 8, 5, 9, 8, 9, 7, 9

A. 9, 9, 9

B. 9, 8, 8



C. 8, 9, 8

D. 8, 9, 9

Q8 Mathematics

How many integers lie between 891^2 and 892^2 ?

A. 1782



B. 892

C. 1784

D. 900



Q9 Mathematics

Rajesh's daughter's age is $\frac{1}{3}$ of Rajesh's wife's age. Rajesh's wife's age is $\frac{3}{4}$ of Rajesh's age, and Rajesh's age is $\frac{3}{5}$ of Rajesh's father's age. Find the age of Rajesh's daughter if Rajesh's father's age is 60 years.

- A. 7 years
- B. 11 years
- C. 9 years
- D. 13 years

**Q10 Mathematics**

If $\triangle ABC$ and $\triangle DEF$ are similar and $AB = 6$ cm, $DE = 8$ cm, $EF = 10$ cm and $FD = 14$ cm, then the perimeter of $\triangle ABC$ is:

- A. 24 cm
- B. 20 cm
- C. 16 cm
- D. 14 cm

**Q11 Mathematics**

Simplify $\sqrt{\frac{1+\cos x}{1-\cos x}}$, $0^\circ < x < 90^\circ$.

- A. $\cot x + \operatorname{cosec} x$
- B. $\tan x + \operatorname{cosec} x$
- C. $\sec x + \tan x$
- D. $\cot x + \tan x$

**Q12 Mathematics**

What is the median of the data 8.1, 4.2, 6.8, 9.9, 7.5, 11.2, 10.8, 13.5?

- A. 8.7
- B. 9
- C. 8.1
- D. 9.9



Q13 Mathematics

Pipe P can fill a tank in 28 minutes and pipe Q can fill it in 35 minutes. If pipes P and Q are opened simultaneously when the tank is empty and pipe P is closed after 12 minutes, then how much more time will it take pipe Q to fill the remaining tank by itself?

- A. 12 minutes
- B. 16 minutes
- C. 14 minutes
- D. 8 minutes



Q14 Mathematics

In a two-digit number, the digit in the tens' place is twice the digit in the units' place. If the digits are interchanged, then the number thus formed is 9 less than the original number. Find the original number.

- A. 21
- B. 42
- C. 63
- D. 12



Q15 Mathematics

The HCF of two numbers is 47. If the product of the two numbers is 6627, then the larger number among these two numbers is:

- A. 94
- B. 235
- C. 141
- D. 188



Q16 Mathematics

A man took a loan from a bank at the rate of 14% per annum simple interest. After 5 years he had to pay ₹7,000 as interest. Find the principal amount of the loan.

- A. ₹7,500
- B. ₹10,000
- C. ₹12,500
- D. ₹15,000



Q17 Mathematics

If $8 : 9 :: 24 : y$, then find the value of y .

- A. 6
- B. 12
- C. 18
- D. 27



Q18 Mathematics

Simplify $(x + 1)(x - 1)(x^2 + 1)$.

- A. $x^4 - 1$
- B. $x^4 + 1$
- C. $x^2 - 1$
- D. $x^4 + x^3 + x - 1$



Q19 Mathematics

Two successive discounts of 5% and 12% are offered on the sale of an article whose marked price is ₹1,500. The selling price of the article is:

- A. ₹1,234
- B. ₹1,254
- C. ₹1,253
- D. ₹1,264



Q20 Mathematics

The perimeter of a rhombus is 146 cm and one of its diagonals is 55 cm. Find the area of the rhombus.

- A. 2460 cm^2
- B. 2640 cm^2
- C. 1320 cm^2
- D. 1325 cm^2



Q21 Mathematics

Which of the following is a quadratic equation?

A. $(x + 1)^2 = (x - 1)^2$

B. $(x + 1)^2 = (x - 1)^3$

C. $(x + 1)^2 = 2(x - 1)$



D. $3x^2 + 2x + 5 = 8x + 3 + 3x^2$

Q22 Mathematics

Simplify the following.

$$\left(\frac{(xy^2z)^{-3}}{y^{-3}} \right)^2$$

A. $\frac{1}{x^6y^6z^6}$



B. $x^6y^6z^6$

C. $x^6y^{18}z^6$

D. $\frac{1}{x^6y^{18}z^6}$

Q23 Mathematics

The ratio of the numbers of ₹10 notes, ₹20 notes and ₹50 notes in a box is given as 3 : 5 : 7. The total amount of cash in the box is ₹3,360. Find the number of ₹20 notes in that box.

A. 45

B. 35



C. 25

D. 15



Q24 Mathematics

Pipe K can fill a water tank in 10 hours. Pipe K is opened alone when the water tank is empty. When half of the water tank is filled by pipe K, then 4 more identical pipes are opened. What will be the total time taken to fill the water tank?

- A. 6 hours
- B. 6 hours 45 minutes
- C. 7 hours 15 minutes
- D. 6 hours 15 minutes

Q25 Mathematics

If $u + v = -2$ and $u^2 + v^2 = 16$, then the value of $(u - v)^2$ is:

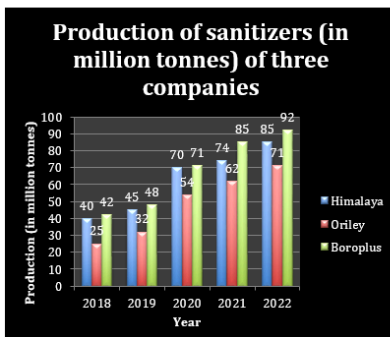
- A. 8
- B. 16
- C. 14
- D. 28

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

The given bar graph shows the production (in million tonnes) of three different companies making hand sanitizers (Himalaya, Oriley, Boroplus) for 5 years. Study the graph and answer the question that follows.



What is the percentage of increase in the production of sanitizers of company Himalaya from 2018 to 2020?

- A. 70%
- B. 75%
- C. 80%
- D. 95%



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Q27 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

12, 60, 65, 325, 330, ?

A. 1670

B. 1680

C. 1600

D. 1650



Q28 General Intelligence and Reasoning

Select the option that is related to the fifth letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster and the fourth letter-cluster is related to the third letter-cluster.

VIP : SFM :: TAC : QXZ :: GOD : ?

A. DJA

B. CLA

C. DLA

D. EJA



Q29 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some bats are parrots.

All crows are parrots.

All sparrows are parrots.

Conclusions:

I. Some sparrows are bats.

II. Some crows are sparrows.

A. Only conclusion I follows

B. Only conclusion II follows

C. Neither conclusion I nor II follows

D. Both conclusions I and II follow



Q30 General Intelligence and Reasoning

If counted from the left, How many letters in the word 'HYDROMAGNETIC' holds the same position in the word as its position in the English alphabetical order?

- A. One
- B. Two
- C. None
- D. Three



Q31 General Intelligence and Reasoning

Read the given statement and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement.

Statement:

The girls team won 12 out of 17 matches in hockey, but lost 11 out of 19 matches in cricket.

Conclusions:

- I. The girls team should play more cricket matches.
- II. Girls like hockey more than cricket.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow



Q32 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2, and so on till the topmost floor is numbered 6.

C lives immediately below F. C lives on one of the floors above floor number 3. Only two people live between C and B. Only one person lives between E and D. E lives on one of the floors above B. Who lives on floor number 5?

- A. A
- B. C
- C. F
- D. E



Q33 General Intelligence and Reasoning

Study the given series and answer the question that follows (all numbers are single digit numbers only).

5 8 2 7 4 5 9 1 6 3 7 5 6 2 3 9 8 6 1 4 8 1 3 6

How many such even digits are there each of which is immediately preceded by a perfect square and immediately followed by an even digit (NOTE: 1 is also a perfect square)?

A. One

B. Two



C. Three

D. Four

Q34 General Intelligence and Reasoning

Vikas starts from Point A and drives 8 km towards the south. He then takes a right turn, drives 3 km, turns right and drives 12 km. He then takes a right turn and drives 5 km. He takes a final right turn, drives 4 km and stops at Point P. What is the distance between Point A and Point P? (All turns are 90° turns only)

A. 2 km



B. 3 km

C. 5 km

D. 4 km

Q35 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Only two people sit between R and S. P sits to the immediate left of R. T sits second to the right of S. Q sits second to the left of P. U sits second to the right of T. If no other person is sitting in the row, what is the total number of persons seated?

A. 12

B. 10

C. 11



D. 9



Q36 General Intelligence and Reasoning

Six persons (Ram, Tom, Bob, Joy, Sam and Hob) are sitting around a circular table facing the centre. Ram is sitting third to the left of Sam. Joy is sitting third to the left of Tom. Bob is an immediate neighbour of Ram and Joy. Hob is an immediate neighbour of Sam and Tom. If Ram is sitting to the immediate left of Bob, who is sitting third to the right of Ram?

A. Bob

B. Hob

C. Sam



D. Joy

Q37 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

56 66 59 69 62 ?

A. 72



B. 82

C. 74

D. 55

Q38 General Intelligence and Reasoning

If '+' means '÷', '÷' means '-', '-' means '×', '×' means '+', what will come in place of the question mark (?) in the following equation?

$$27 + 3 \div 39 \times 5 - 29 = ?$$

A. 131

B. 119

C. 141

D. 115



Q39 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(3, 261, 29)

(5, 360, 24)

A. (8, 218, 13)

B. (4, 218, 26)

C. (3, 188, 28)

D. (7, 231, 11)

**Q40** General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement : $H < U \leq W = P > Y > E \geq N$

A. $U \leq P$

B. $E < P$

C. $P > N$

D. $H \leq P$

**Q41** General Intelligence and Reasoning

One early morning, Mona and Shreya were talking while facing each other. Mona's shadow was directly falling on Shreya. In which direction was Shreya facing towards?

A. North

B. South

C. East



D. West



Q42 General Intelligence and Reasoning

If '+' means '÷', '÷' means '+', '-' means '×', '×' means '-', what will come in place of the question mark (?) in the following equation?

$$32 + 16 \div 24 - 8 \times 180 = ?$$

A. 14



B. 17

C. 13

D. 19

Q43 General Intelligence and Reasoning

Refer to the following number, symbol series and answer the question.

(Left) 9 7 5 4 8 2 4 7 4 1 % 3 2 1 ^ 5 6 3 8 7 2 3 5 7 * 2 4 5 9 3 (Right)

How many even numbers are there between the symbols ^ and *, and what is their total if added together?

A. 3, 16



B. 2, 12

C. 4, 10

D. 2, 13

Q44 General Intelligence and Reasoning

H, I, J, K, L, and M are six people sitting around a circular table facing the centre of the table for a group discussion. H is seated second to the right of J. L is seated third to the left of H. M is not the immediate neighbour of K. K is the immediate neighbour of L. Who is seated second to the right of L?

A. I

B. H

C. M



D. K

Q45 General Intelligence and Reasoning

In a certain code language, 'LFDCN' is written as 'QJGEO' and 'OGRTV' is written as 'TKUVW'. How will 'DHLRW' be written in that language?

A. ILOTX



B. IMPTX

C. ILPTY

D. ILOTY



Q46 General Intelligence and Reasoning

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

V37E, P27H, J19L, ?

A. D13Q



B. E15R

C. C11P

D. E11R

Q47 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(9, 25, 49)

(121, 169, 225)

A. (966, 104, 128)

B. (81, 121, 169)



C. (64, 88, 72)

D. (8, 27, 64)

Q48 General Intelligence and Reasoning

If 3 is added to each odd digit and 2 is subtracted from each even digit in the number 8456514, what will be the sum of the digits which are second from the left and third from the right?

A. 8

B. 10



C. 9

D. 11



Q49 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) T # 6 2 V 4 @ Z 5 7 K * % 9 N L & J 8 Q S (Right)

If all the symbols are dropped from the series, which of the following will be eleventh from the left?

A. N



B. 9

C. L

D. J

Q50 General Intelligence and Reasoning

A statement is given followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement: $A = B > C \geq D > E < F = G$

Conclusions:

1) $A \geq F$

2) $E < G$

3) $B > E$

4) $C > E$

A. 1



B. 2

C. 3

D. 4



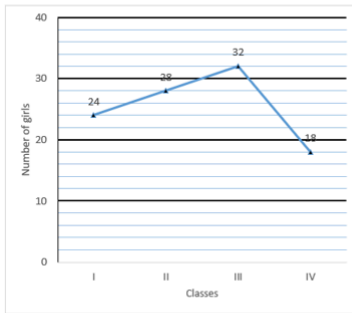
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Q51 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of girls in four classes (I, II, III and IV).



If the total number of boys in classes I, II and IV is 27 more than the total number of girls in the same classes, what is the total number of boys in classes I, II and IV?

A. 97



B. 87

C. 94

D. 85

Q52 General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. T sits second to the right of Q. Exactly four people sit between T and A, towards the right of T. D is an immediate neighbour of A and E. If E is second to the right of A and no other person is sitting in the row, what is the total number of people seated in the row?

A. 10



B. 11

C. 12

D. 9



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Q53 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

All cheetahs are monkeys.

All monkeys are bears.

All bears are jungles.

Conclusions:

(I) Some jungles are cheetahs

(II) All monkeys are cheetahs

(III) No monkey is a cheetah

A. Only conclusion I follows



B. Only conclusion II follows

C. Either conclusion I or III follows

D. None of the conclusions follow

Q54 General Intelligence and Reasoning

In a certain code language, 'ACQUIRE' is written as 'QCAUEIR'. How will 'DECLINE' be written in the same code language?

A. CEDLEIN



B. CEDELIN

C. CDELEIN

D. CEDLENI



Q55 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

Some Pens are Blues.

Some Blues are Plastics.

Some Plastics are Inks.

Conclusions:

(I) Some Plastics are Pens.

(II) Some Blues are Inks.

- A. Only conclusion (I) follows.
- B. Only conclusion (II) follows.
- C. Both conclusions (I) and (II) follow.
- D. Neither conclusion (I) nor (II) follows. ☒

General Science

25 Questions • Answer Key

Q56 General Science

The induced emf developed in a conductor when it is moved in a direction parallel to the magnetic field is _____.

- A. Infinity
- B. Maximum
- C. Minimum
- D. Zero ☒



Q57 General Science

What will happen when an acid or base is mixed with water?

- i) Increase in the concentration of ions per unit volume.
- ii) Decrease in the concentration of ions per unit volume.
- iii) The solution will become diluted.
- iv) The solution will become more concentrated.

- A. Only (i)
- B. Only (ii)
- C. Only (i) and (iv)
- D. Only (ii) and (iii) ✓

Q58 General Science

Mendel's law of independent assortment was based on parent pea plants differing in how many traits?

- A. One
- B. Two ✓
- C. Three
- D. Four

Q59 General Science

Which of the following statements is correct with respect to displacement reaction?

- A. A chemical reaction in which a single compound is formed.
- B. A more reactive metal displaces a less reactive metal from its aqueous solution. ✓
- C. A less electronegative non-metal displaces a less electronegative metal from its aqueous solution.
- D. A less reactive metal displaces a more reactive metal from its aqueous solution.



Q60 General Science

Which of the following is a disadvantage of using contraceptive pills?

- A. Both partners in a couple must take pills.
- B. The effect of the pills is irreversible.
- C. They may produce hormonal imbalance. ✓
- D. They can cause menopause.

Q61 General Science

There are many methods adopted to prevent transmission of HIV/AIDS. Which of the stated ones is INCORRECT?

- A. Transmission by way of drug abuse specially through sharing of needles must be prevented
- B. Adopting responsible sexual behaviour.
- C. The instruments used for ear piercing, acupuncture, etc., must be sterilised before use.
- D. Prevent HIV infected mosquito bite by using mosquito net. ✓

Q62 General Science

An example of a series circuit is _____.

- A. car head lights
- B. the wiring system at home
- C. Street lights
- D. decoration lights ✓

Q63 General Science

Carrots have a high content of vitamin A. How does eating carrots help a child?

- A. It will strengthen the child's vision. ✓
- B. It will make the child's bones strong.
- C. It will give the child a good amount of energy.
- D. It will help the child resist many diseases.



Q64 General Science

Select the correct order of Chlorine, Bromine and Iodine for Dobereiner's Law of Triads.

- A. Iodine, Bromine, Chlorine
- B. Bromine, Iodine, Chlorine
- C. Chlorine, Iodine, Bromine
- D. Chlorine, Bromine, Iodine



Q65 General Science

The total energy consumed for 30 days by an air cooler rated 300 watt operating 12 hours per day is _____.

- A. 108 Wh
- B. 108 KWh
- C. 108 joule
- D. 108 joule-second



Q66 General Science

The power of an electric bulb in which a current of 2 amp flows when it is connected to a 220 V generator is _____.

- A. 120 joule
- B. 120 watt
- C. 440 joule
- D. 440 watt



Q67 General Science

Litmus is an natural acid–base indicator which is extracted from:

- A. Lichen
- B. turmeric
- C. rose petals
- D. lemon grass



Q68 General Science

The number of covalent bonds involved in the formation of a nitrogen molecule is:

- A. one
- B. two
- C. three
- D. four



Q69 General Science

Which of the following are at the first trophic level?

- A. Secondary consumers
- B. Producers
- C. Primary consumers
- D. Tertiary consumers



Q70 General Science

According to Mendeleev, the properties of elements are the periodic function of their:

- A. atomic masses
- B. atomic number
- C. atomic radius
- D. reactivity of elements



Q71 General Science

We know that if rain water has a pH value less than 5.6 it is called 'Acid Rain'. What happens when this acidic water flows into rivers?

- A. The river water becomes more healthy to drink.
- B. The water becomes slightly alkaline.
- C. The pH of the river water lowers.
- D. The number of fishes in the river water increases.



Q72 General Science

Which of the following is not a non-renewable source of energy:

- A. Petroleum
- B. Coal
- C. Natural gas
- D. Wind



Q73 General Science

Which of the following is a famous Tiger Reserve in Assam?

- A. Kaziranga Tiger Reserve
- B. Sonitpur Tiger Reserve
- C. Dibrugarh Tiger reserve
- D. Tinsukia Tiger reserve



Q74 General Science

The difference in molecular masses between the pair C_3H_8 and C_5H_{12} is:

- A. 14
- B. 28
- C. 42
- D. 56



Q75 General Science

For an electric generator, which of the following statement(s) are true:

- (i) Induced current can be increased by increasing the number of turns in the coil
- (ii) Induced current can be increased by increasing the speed of the coil
- (iii) Induced current can be increased by decreasing the applied magnetic field

- A. Only (i)
- B. Only (ii)
- C. Both (i) and (ii)
- D. Both (ii) and (iii)



Q76 General Science

Ram has a corrective lens of power -6.5 D. The focal length of the lens is:

- A. -15.38 cm
- B. 15.38 cm
- C. -13.76 cm
- D. $+13.76$ cm

Q77 General Science

As the object is moved from the pole towards the focus of a concave mirror, the corresponding image moves from _____ and the image is _____.

- A. pole to infinity, virtual and erect
- B. infinity to pole, real and inverted
- C. pole to Infinity, real and inverted
- D. infinity to pole, virtual and erect

Q78 General Science

What is the reason that the lungs have alveoli?

- A. To increase the surface area
- B. To provide pumping action for the lungs
- C. To increase the volume of the lungs
- D. To give mechanical support to the lungs

Q79 General Science

What makes the xylem vessels waterproof?

- A. Lignin
- B. Cutin
- C. Cellulose
- D. Suberin

Q80 General Science

Which of the following statements is/are true regarding the center of curvature of a spherical mirror?

- (I) A ray of light passing through the center of curvature of a spherical mirror retraces its path in opposite direction.
- (II) An image formed at the center of curvature of a spherical mirror is of the same size as that of the object.
- (III) An image formed at the center of curvature of a spherical mirror is real and inverted.

- A. Only (I)
- B. Only (I) and (II)
- C. Only (I) and (III)
- D. (I), (II) and (III) ✓

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following indicates the borrowing needs of the Government?

- A. Fiscal deficit ✓
- B. Revenue deficit
- C. Capital deficit
- D. Current account deficit

Q82 General Awareness and Current Affairs

The formation of 'Ward Committees' in the area of a municipality is required under the Indian Constitution. The population of such a municipality should be _____.

- A. one lakh or more
- B. two lakhs or more
- C. three lakhs or more ✓
- D. five lakhs or more

Q83 General Awareness and Current Affairs

In January 2022, in which of the following countries was a pig's heart transplanted to a human?

- A. England
- B. USA ✓
- C. Germany
- D. China



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Q84 General Awareness and Current Affairs

Giving and receiving dowry in India is a criminal offence. As of August 2022, the criminal proceeding of enquiry and investigation by the police and magistrate for the offence is done under which Sections of the Code of Criminal Procedure, 1973?

A. Sections 174 and 176



B. Sections 182 and 185

C. Sections 163 and 169

D. Sections 154 and 158

Q85 General Awareness and Current Affairs

On which day do Christians commemorate Jesus Christ's crucifixion?

A. Easter

B. Good Friday



C. Halloween

D. Christmas

Q86 General Awareness and Current Affairs

On 10th February 2022, who was appointed as Chief Justice of Madras High Court?

A. Justice Munishwar Nath Bhandari



B. Justice M Duraishwamy

C. Justice Gita Mittal

D. Justice T Raja



Q87 General Awareness and Current Affairs

The _____ ARISE-ANIC program is a national initiative to promote research and innovation by the Department of Space (DoS), Government of India.

A. Aatmanirbhar Bharat



B. Apna Bharat

C. Saksham Bharat

D. Samarth Bharat

Q88 General Awareness and Current Affairs

By the provision of which of the following Acts was the East India Company liquidated and Indian territories of Britain were to be governed in the name of the British Queen?

A. British Rule Act, 1905

B. The Government of India Act, 1858



C. The Government of India Act, 1890

D. British Rule Act Amendment, 1919

Q89 General Awareness and Current Affairs

Government of India signed an agreement on 17th November, 1955, with Associated Electrical Industries (AEI), UK, for the establishment of a factory at _____ for the manufacture of heavy electrical equipment in India. The company was registered as Heavy Electricals (India) Limited (HE (I) L) in the Public Sector.

A. Lucknow

B. Bhopal



C. Ahmedabad

D. Hyderabad

Q90 General Awareness and Current Affairs

Which of the following options best describes the independence of Judiciary?

A. The executive and legislative organs of the government must restrain the functioning of the judiciary.

B. The executive and legislature organs should interfere with the decision of the judiciary.

C. Absence of accountability in the judiciary system

D. Judges must be able to perform their functions without fear or favour.



Q91 General Awareness and Current Affairs

Which of the following is an economic situation in which all-available labour resources are being used in the most efficient way possible?

- A. Over full employment
- B. Under employment
- C. Full employment
- D. Null employment



Q92 General Awareness and Current Affairs

India is bounded by the Hindukush mountain range in the _____.

- A. north
- B. north-east
- C. north-west
- D. south



Q93 General Awareness and Current Affairs

In which sporting event did Saurav Ghosal win Bronze in Commonwealth Games 2022?

- A. Squash
- B. Badminton
- C. Lawn Tennis
- D. Table Tennis



Q94 General Awareness and Current Affairs

How many official languages does India have as per the 8th Schedule of the Constitution as on 30th June 2022?

- A. 26
- B. 22
- C. 28
- D. 30



Q95 General Awareness and Current Affairs

Which of the following groups of major river systems formed the Northern Plains of India?

- A. Cauvery, Ganga and Tapi
- B. Narmada, Ganga and Brahmaputra
- C. Indus, Ganga and Godavari
- D. Indus, Ganga and Brahmaputra



Q96 General Awareness and Current Affairs

Which Indian state celebrates the Moatsu festival?

- A. Manipur
- B. Mizoram
- C. Nagaland
- D. Arunachal Pradesh



Q97 General Awareness and Current Affairs

Article 21 of Indian Constitution deals with:

- A. right to equality
- B. cultural and educational rights
- C. protection of life and personal liberty
- D. right to constitutional remedies



Q98 General Awareness and Current Affairs

Who among the following introduced the 'Anti-Doping Bill' on 17 December 2021 in Lok Sabha?

- A. Anurag Thakur
- B. Nisith Pramanik
- C. Kiren Rijiju
- D. RS Rathore



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Q99 General Awareness and Current Affairs

The mandatory contributions levied on individuals or corporations by a government entity is known as:

- A. tax ☒
- B. expenditure
- C. investment
- D. debt

Q100 General Awareness and Current Affairs

Madhya Pradesh does NOT share its boundaries with which of the following states?

- A. Uttar Pradesh
- B. Chhattisgarh
- C. Bihar ☒
- D. Maharashtra



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Mathematics

25 Questions • Answer Key

Q1 Mathematics

A capsule is in the shape of a sphere of diameter 3.5 mm. Find the amount of medicine required to fill the capsule (in mm^3). [Use $\pi = \frac{22}{7}$, and give your answer correct to 2 places of decimal.]

A. 22.41

B. 22.46



C. 22.42

D. 22.43

Q2 Mathematics

A sum of ₹7,250 is lent under simple interest at the beginning of a year at a certain rate of interest per annum. After 6 months, a sum of ₹3,625 more is lent under simple interest but at a rate that is twice the former. At the end of the year, ₹335 is earned as interest from both the loans taken together. What was the rate of interest per annum at which the initial ₹7,250 was lent? [Give your answer correct to 2 decimal places.]

A. 3.10%

B. 3.00%

C. 3.08%



D. 3.12%

Q3 Mathematics

Simplify the following.

$$(y^2x)^4 \times (y^2x)^{-4}, x \neq 0, y \neq 0.$$

A. $(y^2x)^8$

B. 1

C. $(y^2x)^{-16}$

D. 0



Q4 Mathematics

Simplify the following.

$$1\frac{1}{2} \times 22 + 10 \div 5 - 2 \times 8$$

A. $-\frac{613}{44}$

B. 17

C. 19



D. $-\frac{13}{2}$

Q5 Mathematics

The present age of Arun is $\frac{1}{3}$ of his uncle's age. After 5 years, the sum of their ages will be 86 years. The present age of Arun is:

A. 21 years

B. 23 years

C. 25 years

D. 19 years

**Q6 Mathematics**

If the sum of a number and its reciprocal is 7, then which of the options below can be such a number?

A. $\frac{3-7\sqrt{5}}{2}$

B. $\frac{3+7\sqrt{5}}{2}$

C. $\frac{7+3\sqrt{5}}{2}$



D. $\frac{-7+3\sqrt{5}}{2}$



Q7 Mathematics

10 women can do a piece of work in 8 days. 8 men can complete the same work in 12 days. What is the ratio of the amounts of work that can be done in a day by a man and a woman?

A. 3 : 2

B. 4 : 3

C. 2 : 1

D. 5 : 6

**Q8 Mathematics**

During a sale, a TV shop owner offers four different types of successive discounts for any consumer to choose from. Which of the following options will give the best possible price to the shop owner as a percentage of the marked price of an item?

A. 25% and 15%

B. 30% and 10%

C. 35% and 5%

D. 20% and 20%

**Q9 Mathematics**

Shyam and Sundar can do a piece of work in 16 days and 24 days, respectively. Shyam started the work alone and after 10 days Sundar joined him and the duo worked together till the completion of the work. What was the total time taken for the work to be completed?

A. $10\frac{3}{5}$ days

B. $12\frac{3}{5}$ days

C. $13\frac{3}{5}$ days



D. $15\frac{3}{5}$ days



Q10 Mathematics

The mean of the first 7 prime numbers is:

A. $\frac{75}{7}$

B. $\frac{58}{7}$ ✓

C. $\frac{50}{7}$

D. $\frac{63}{7}$

Q11 Mathematics

Ujwal has ₹5,250 in currency notes of denominations ₹50, ₹100 and ₹200. The number of notes of each denomination are equal. How many notes in total does Ujwal have?

A. 15

B. 30

C. 45 ✓

D. 60

Q12 Mathematics

If A is an acute angle, then $\frac{1 + \tan^2 A}{1 + \cot^2 A}$ is equal to:

A. $\tan^2 A$ ✓

B. $\sec^2 A$

C. $\sin^2 A$

D. $\cos^2 A$

Q13 Mathematics

If the HCF of 408 and 1032 is expressed as $516m - 252 \times 4$, then m is:

A. -2

B. 2 ✓

C. 6

D. -6



Q14 Mathematics

If the sum of two numbers is 25 and the product is 136, then the sum of their cubes is:

A. 4525

B. 4524

C. 5524

D. 5425

**Q15** Mathematics

Simplify the following.

$$1 - 2 \times \{[-2(2 + 3) \times 20] \div 2\}$$

A. 201



B. -50

C. $-\frac{1}{50}$

D. -200

Q16 Mathematics

If $144 : y :: y : 225$, and $y > 0$, find the value of y .

A. 120

B. 130

C. 180



D. 210

Q17 Mathematics

A dishonest merchant claims to sell his items at cost price, but gives 200 kg of an item instead of the 250 kg he charges for. What is his percentage of profit in this transaction?

A. 20%

B. 15%

C. 25%



D. 10%



Q18 Mathematics

If $x - \frac{1}{x} = 2$, then find the value of $x^4 + \frac{1}{x^4}$.

A. 36

B. 34

C. 16

D. 24

Q19 Mathematics

If $y : 196 :: 196 : 784$, then what is the value of y ?

A. 4

B. 7

C. 49

D. 16

Q20 Mathematics

If a transversal cuts two parallel lines, then which of the options below is necessarily true?

A. the adjacent angles formed are equal

B. the interior alternate angles are equal

C. the interior opposite angles on the same side of the transversal are equal

D. the vertically opposite angles are supplementary

Q21 Mathematics

The variable X takes values 3 and 7, with frequencies of K and $K - 2$, respectively. If the arithmetic mean of X is 4, then the value of K is:

A. 3

B. 5

C. 4

D. 6



Q22 Mathematics

3 solid hemispheres of radius 2 unit each are melted and recast into a single sphere. Find the radius (in given units) of the newly cast single sphere.

A. $\sqrt[3]{15}$

B. 3

C. $\sqrt[3]{10}$

D. $\sqrt[3]{12}$ ✓

Q23 Mathematics

The length of a rectangle is 5 cm more than its width. If the area of the rectangle is 215 cm^2 , then the equation to find the width (w) of the rectangle is:

A. $w^2 + 5w - 215 = 0$ ✓

B. $w^2 - 5w - 215 = 0$

C. $w^2 + 5w + 215 = 0$

D. $2w^2 + 5w - 215 = 0$

Q24 Mathematics

If a and b are two co-prime numbers, then their LCM is:

A. $a \times b$ ✓

B. $a + b$

C. $a - b$

D. $\frac{a - b}{a + b}$

Q25 Mathematics

The interior angles of an 8-sided polygon are in the ratio 1 : 3 : 4 : 6 : 7 : 11 : 13 : 15. Find the measure of the largest interior angle in this polygon.

A. 300°

B. 288°

C. 234°

D. 270° ✓



Q26 General Intelligence and Reasoning

In a certain code language, 'BLAME' is written as '4%5@2' and 'MEDIA' is written as '@2Ω95'. How will 'DELTA' be written in that language?

A. 92SΩ5

B. 2Ω%53

C. Ω2%35



D. 92%35

Q27 General Intelligence and Reasoning

Select the combination of letters that when placed from left to right in the blanks of the given series will complete the series.

MN _ LMM _ PLM _ NP _ MMNN _ M

A. NNNNMNLPL

B. NPNNMNLPL



C. NPNNMNLPP

D. MPNNMNLPL

Q28 General Intelligence and Reasoning

Ram is to the south-west of Abhishek. Arjun is to the north of Ram as well as to the west of Abhishek. Pooja is to the west of Arjun. What is the position of Pooja with respect to Abhishek?

A. West



B. North-East

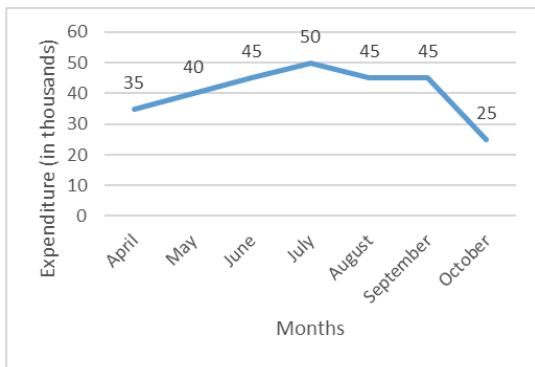
C. South-West

D. East



Q29 General Intelligence and Reasoning

The following graph shows the expenditure of a family over different months. Study the graph and answer the question.



What is the approximate average of the total expenditure in April, May, June, August, September and October (in thousands)?

A. 84

B. 16

C. 26

D. 39

**Q30** General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding / subtracting / multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(2, 6, 22)

(4, 13, 47)

A. (23, 41, 77)

B. (29, 35, 68)

C. (7, 4, 36)

D. (9, 5, 33)

**Q31** General Intelligence and Reasoning

A certain number of people are sitting in a row, facing north. Only Q sits exactly between W and Z. G sits sixth to the right of W. Only three people sit to the right of G. Z sits at the extreme left end of the row.

If no other person is sitting in the row, what is the total number of people seated?

A. 10

B. 12

C. 13

D. 14



Q32 General Intelligence and Reasoning

Six students, Madhu, Anshul, Avani, Aarav, Priti, and Shikha, gave their presentations on different days in the month of March. The presentation was from 11th March to 16th March.

Anshul presented on 14th March and Shikha presented immediately before Anshul. Only one person presented between Shikha and Priti. Shikha presented after Priti but before Avani. Avani presented immediately before Madhu. Who presented on 15th March?

A. Aarav

B. Madhu

C. Priti

D. Avani



Q33 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is NOT true based on the given statement.

Statement : $Y < V = X \leq L < A > C \geq H$

A. $L \geq V$

B. $A > H$

C. $X > Y$

D. $X > A$



Q34 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) S = N 4 & % L A * 6 T & C @ 4 B % 2 X L (Right)

How many such numbers are there which are immediately preceded by a letter and also immediately followed by a symbol?

A. 4

B. 3

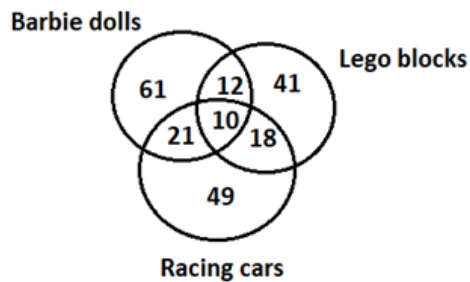
C. 6

D. 1



Q35 General Intelligence and Reasoning

Study the given Venn diagram carefully and answer the question that follows. The numbers in different sections indicate the number of children who play with a particular toy at a day care.



How many such children are there, who play neither with barbie dolls nor with racing cars?

A. 41



B. 53

C. 67

D. 82

Q36 General Intelligence and Reasoning

In this question, a group of letters is coded using numbers/symbols as per the table given below and the conditions which follow. The correct combination of codes following the conditions is your answer.

Letters	E	O	L	Y	A	W	N	S
Numbers/Symbols	5	%	7	#	1	4	@	\$

Conditions:

- (i) If a word has a vowel at the end, the vowel present at the end will be coded as 6.
- (ii) If a word has more than 2 vowels, all the vowels will be coded as 8.
- (iii) If a letter is present exactly twice in a word, it will be coded as 2 in both such places

What will be the correct code for YELLOW?

A. #577%4

B. #577%6

C. #522%4



D. #82284



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Q37 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

$$8.99 + 17.99 - 3.99 \times 2.99 = ?$$

A. 24

B. 9

C. 32

D. 15



Q38 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Few oxen are peacocks

All peacocks are cheetahs

All cheetahs are horses

Conclusions:

(I) Some horses are peacocks

(II) Some cheetahs are peacocks

(III) All peacocks are horses

A. Only conclusion I follows

B. Only conclusion II follows

C. Either conclusion I or III follows

D. All conclusions I, II and III follow



Q39 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

9.6 8.4 7.2 6 ?

A. 4.8

B. 3.6

C. 5.4

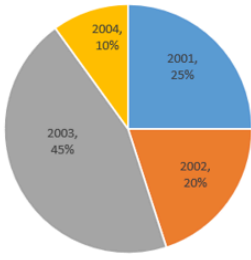
D. 4.2



Q40 General Intelligence and Reasoning

Study the given pie-chart and answer the following question.

The given pie chart depicts the number of complaints received in four years. The total number of complaints received in the four years together is 200.



What is the difference between the total number of complaints received in 2001 and 2003 together and the number of complaints received in 2002?

A. 110

B. 100



C. 120

D. 90

Q41 General Intelligence and Reasoning

Six friends are sitting around a circular table facing the centre. Gabriel is sitting second to the right of Suchita. Ritesh is sitting second to the right of Trinabh. Sourav is an immediate neighbour of both Gabriel and Dhruv. Who is an immediate neighbour of both Ritesh and Trinabh?

A. Dhruv

B. Gabriel

C. Sourav

D. Suchita

**Q42** General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

WQN : VPM

JRE : IQD

A. TGI : SFH



B. PKM : UGI

C. GKV : OSN

D. FCH : TBY



Q43 General Intelligence and Reasoning

The position of how many letters will remain unchanged if each of the letters in the word BRIGHT is arranged in alphabetical order?

A. Two



B. None

C. One

D. Three

Q44 General Intelligence and Reasoning

A statement is given followed by four conclusions. Find out which conclusion is true based on the given statement.

Statement: $L \leq H = P > O > D \geq S = U$

Conclusions:

1) $L \leq P$

2) $U \geq D$

3) $L > D$

4) $L > O$

A. 1



B. 2

C. 3

D. 4

Q45 General Intelligence and Reasoning

If each even digit is divided by 2 and 2 is added to each odd digit in the number 4723361, what will be the sum of the largest and the smallest digits thus formed?

A. 9

B. 10



C. 11

D. 12



Q46 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1331 729 343 125 ?

A. 27



B. 1

C. 64

D. 8

Q47 General Intelligence and Reasoning

Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

1. Some flowers are leaves.
2. Some flowers are stems.
3. Some fruits are flowers.

Conclusions:

I-Some stems are flowers.

II-Some fruits are leaves.

A. Only conclusion I follows.



B. Only conclusion II follows.

C. Both conclusions I and II follow.

D. Neither conclusion I nor II follows.

Q48 General Intelligence and Reasoning

Refer to the following letter series and answer the question.

(Left) B Z C T B Z T E S B C Z T W A Z T F Z T U K R B Z T V (Right)

How many Z are there in the series which are immediately followed by T but not immediately preceded by B?

A. Four

B. Three



C. Two

D. Five



Q49 General Intelligence and Reasoning

A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6.

C lives immediately above F, on an even numbered floor but not on the 6th floor. Only three people live between F and E. If B lives two floors below E, and A is not on the topmost floor, then how many people live exactly between D and C?

A. 1

B. 2

C. 4

D. 3



Q50 General Intelligence and Reasoning

If '+' means '×', '-' means '+', '×' means '-', and '÷' means '+', what will come in place of the question mark (?) in the following equation?

$$9 + 7 \div 8 - 4 \times 2 = ?$$

A. 60

B. 74

C. 63



D. 68

Q51 General Intelligence and Reasoning

Town C is south of the mid-point of the straight line joining town A and B. Town B is to the East of Town A. Town D is west of town C. Town M is north-east of town B. What is the position of town D with respect to M?

A. South-east

B. West

C. South

D. South-west



Q52 General Intelligence and Reasoning

Select the set in which the numbers are related in the same way as are the numbers of the following sets.
(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

(15, 405, 9)

(13, 273, 7)

A. (12, 360, 5)

B. (11, 165, 5)



C. (9, 405, 9)

D. (14, 490, 7)

Q53 General Intelligence and Reasoning

Six girls with the initials V, M, S, E, N and C are sitting around a circular table, facing the centre and at equal distance from each other, not necessarily in the same order.

E sits second to the left of C. S sits second to the right of V. C sits at the immediate left of V. N sits second to the left of E. Who sits at the immediate left of C?

A. N

B. V

C. S

D. M



Q54 General Intelligence and Reasoning

A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the assumptions is/are implicit in the statement.

Statement:

The Union Road Transport and Highways Ministry is gearing up to build a super expressway to connect Delhi and Mumbai, which would allow commuters to finish the 1,400 km long journey within 12 hours.

Assumptions:

- I. The road between the two cities is in very bad shape.
- II. Currently there are no roads to connect these two cities of India.

- A. Only assumption I is implicit
- B. Only assumption II is implicit
- C. Neither assumption I nor II is implicit
- D. Both assumptions I and II are implicit



Q55 General Intelligence and Reasoning

If each of the letters in the word 'CAUTIONED' is arranged in the English alphabetical order, which letter will be in the exact middle position after such arrangement?

- A. N
- B. O
- C. E
- D. I



General Science

25 Questions • Answer Key

Q56 General Science

Effective resistance of the parallel combination of two resistors with 2Ω and 3Ω resistance, respectively, is:

- A. 5Ω
- B. 1.2Ω
- C. 0.83Ω
- D. 8.3Ω



Q57 General Science

Which method of contraception changes the hormonal balance of the body?

- A. Use of condoms
- B. Intake of pills
- C. Insertion of Copper-T
- D. Surgical blockage of the fallopian tubes

Q58 General Science

Which of the following reactions is an example of a displacement reaction?

- A. $2\text{FeSO}_4(\text{s}) \longrightarrow \text{Fe}_2\text{O}_3(\text{s}) + \text{SO}_2(\text{g}) + \text{SO}_3(\text{g})$
- B. $3\text{Fe}(\text{s}) + 4\text{H}_2\text{O}(\text{l}) \longrightarrow \text{Fe}_3\text{O}_4(\text{s}) + 2\text{H}_2(\text{l})$
- C. $\text{CaO}(\text{s}) + \text{H}_2\text{O}(\text{l}) \longrightarrow \text{Ca}(\text{OH})_2(\text{aq}) + \text{Heat}$
- D. $\text{Zn}(\text{s}) + \text{CuSO}_4(\text{aq}) \longrightarrow \text{ZnSO}_4(\text{aq}) + \text{Cu}(\text{s})$

Q59 General Science

Complete the given step of anaerobic respiration:

Glucose ($\text{C}_6\text{H}_{12}\text{O}_6$) $\rightarrow$ _____ + Carbon Dioxide (CO_2) + Energy (ATP)

- A. Ethanol ($\text{C}_2\text{H}_5\text{OH}$)
- B. Water
- C. Lactic Acid
- D. Pyruvate

Q60 General Science

The process of using electricity to decompose water into oxygen and hydrogen gas is called _____.

- A. hydrolysis of water
- B. electrolysis of water
- C. ionisation of water
- D. atomisation of water



Q61 General Science

If an object is placed at a distance of 5 cm from the pole of a given concave mirror of focal length 2.5 cm, then the magnification produced is:

A. -2

B. 2

C. 1

D. -1



Q62 General Science

In electric circuits, losses take place in the form of _____ due to flow of electric current.

A. light

B. sound

C. heat



D. Magnetic losses

Q63 General Science

The effective diameter of the circular outline of a spherical lens is called _____.

A. radius of curvature

B. focus

C. centre of curvature

D. aperture



Q64 General Science

Consider a horse shoe magnet with its north pole towards west and south pole towards east. A conducting rod is loosely connected to a galvanometer. If this rod is now moved between the poles of the magnet vertically downwards, the direction of the induced current in it will be _____.

A. south to north direction

B. north to south direction



C. east to west direction

D. west to east direction



Q65 General Science

By which process do we get washing soda?

- A. By heating of NaHCO_3
- B. By mixing NaHCO_3 with an edible acid
- C. By recrystallisation of Na_2CO_3 ✓
- D. By reaction between NaCl(aq) , NH_3 and CO_2

Q66 General Science

Ratio of $\sin i$ and $\sin r$ is known as:

- A. magnification
- B. dispersion
- C. refraction
- D. refractive index ✓

Q67 General Science

In the Modern Periodic Table elements present in one group have the same number of _____.

- A. electrons
- B. valence electrons ✓
- C. shells
- D. protons



Q68 General Science

Generally, plants have low energy needs when compared to animals. The main reason for this is the:

- (A) presence of large proportion of dead cells in the tissues
- (B) absence of mobility
- (C) plants synthesise their own food
- (D) plants release O_2 during respiration

A. A and B



B. A and C

C. A and D

D. B and C

Q69 General Science

During heavy exercise when the demand for energy is high, but the supply of oxygen to produce the energy is limited, the muscle cells show _____.

- A. loss of water
- B. accumulation of pyruvate
- C. synthesis of ethanol
- D. formation of lactic acid



Q70 General Science

Which of the following is required for the formation of human blood?

- A. Copper
- B. Cobalt
- C. Iron
- D. Nickel



Q71 General Science

In which group and period is carbon present?

- A. Group 1 and period 2
- B. Group 5 and period 5
- C. Group 14 and period 2
- D. Group 13 and period 4



Q72 General Science

The process by which a changing magnetic field in a conductor induces a potential difference that sets up an induced electric current is called _____.

- A. magnetic induction
- B. electric induction
- C. thermal induction
- D. electromagnetic induction



Q73 General Science

During which period did the amount of ozone in the atmosphere begin to drop sharply?

- A. In the 1980s
- B. In the 1970s
- C. In the 1960s
- D. In the 1990s



Q74 General Science

An atom of element with electronic configuration of 2,8,8. To which group does it belong?

- A. 4th group
- B. 10th group
- C. 18th group
- D. 6th group



Q75 General Science

Which of the following is a correct pair for homologous series?

- A. CH_3OH and CH_4
- B. CH_3OH and $\text{C}_2\text{H}_5\text{OH}$ ✓
- C. CH_3OH and $\text{C}_3\text{H}_7\text{OH}$
- D. $\text{C}_3\text{H}_7\text{OH}$ and CH_3OH

Q76 General Science

For a spherical mirror, when a ray is passed through the centre of curvature C, the angle formed between the reflected ray and incident ray will be:

- A. 0° ✓
- B. 90°
- C. 180°
- D. 270°

Q77 General Science

The fuse used for domestic purpose is rated in the range of _____.

- A. 1 Ampere – 10 Ampere ✓
- B. 100 Ampere – 200 Ampere
- C. 500 Ampere – 1000 Ampere
- D. 1000 Ampere – 2000 Ampere

Q78 General Science

What kind of diet does an adolescent require to develop a healthy reproductive system?

- A. Rich in proteins
- B. Fortified with iron
- C. Low in saturated fats
- D. Nutritionally well-balanced ✓



Q79 General Science

What is the scientific name of baking soda?

- A. Sodium carbonate (NaCO_3)
- B. Sodium bicarbonate (NaHCO_3)
- C. Sodium chloride (NaCl)
- D. Sodium sulphate (Na_2SO_4)

Q80 General Science

In Rajasthan, _____ is a nature loving community that conserves forest and wildlife.

- A. Bishnoi
- B. Banjara
- C. Bhil
- D. Chhipa

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Which of the following is a premier national research funding agency with the mission to raise the quality and footprint of Indian science and engineering to the highest global levels in an accelerated mode, through calibrated, competitive support of research and development?

- A. Department of Space
- B. Department of Science & Industrial Research
- C. Department of Scientific Research
- D. Science and Engineering Research Board (SERB)

Q82 General Awareness and Current Affairs

Which of the following is responsible for bringing western disturbances from the Mediterranean region into the Indian subcontinent?

- A. Jet stream
- B. Mango shower
- C. Relief rain
- D. Anabatic winds



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Q83 General Awareness and Current Affairs

Nowruz is popularly known as the new year of which religious group/community?

- A. Buddhism
- B. Muslim
- C. Sikhism
- D. Parsi



Q84 General Awareness and Current Affairs

Which of the following cities is NOT situated on banks of the Ganga?

- A. Haridwar
- B. Kanpur
- C. Patna
- D. Lucknow



Q85 General Awareness and Current Affairs

At Devprayag (Uttarakhand), which of the following two rivers confluence and form river Ganga?

- A. Alaknanda and Yamuna
- B. Alaknanda and Bhagirathi
- C. Bhagirathi and Yamuna
- D. Yamuna and Gomti



Q86 General Awareness and Current Affairs

The Chairman of the Block Panchayat Samiti is elected by the:

- A. members of the samiti
- B. village Pradhan
- C. members of the State Legislative
- D. members of the Zila Panchayat



On 5th August 2021 which one of the following state launched 'Makkalai Thedi Maruthuvam' Scheme that helps the poor, sick who can't visit hospitals and the chronically ill, by providing medical facilities at their doorstep?

- A. Karnataka
- B. Tamil Nadu
- C. Kerala
- D. Telangana



Who founded the Indian Statistical Institute and is considered the Father of Modern Statistics in India?

- A. Debabrata Basu
- B. Raghu Raj Bahadur
- C. Prasanta Chandra Mahalanobis
- D. Anil Kumar Bhattacharya



Centre for Excellence of Classical Tamil was shifted from Mysore to Chennai in _____.

- A. 2004
- B. 2006
- C. 2008
- D. 2010



Q90 General Awareness and Current Affairs

Select the option that does NOT support the role of the Indian Parliament.

- A. To select the national government
- B. To settle disputes and makes judgments between different level of governments ✓
- C. To control, guide and inform the government
- D. The function of law making

Q91 General Awareness and Current Affairs

Who among the following was a well-known revolutionary activist and leader of the *Hindustan Socialist Republican Association (HSRA)*?

- A. Chandra Shekhar Azad ✓
- B. Chhakravarti Rajagopalachari
- C. Bhulabhai Desai
- D. Behramji M Malabari

Q92 General Awareness and Current Affairs

Which of the following statements about real wage rate is correct?

- A. Real wage rate is more than the Marginal Productivity of Labour.
- B. Real wage rate is equal to the Marginal Productivity of Labour.
- C. Real wage rate is less than the Marginal Productivity of Labour.
- D. Real wage rate has no relation to Marginal Productivity of Labour.

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q93 General Awareness and Current Affairs

How many people have received the Shanti Swaroop Bhatnagar Award in 2021 ?

- A. 9
- B. 11 ✓
- C. 10
- D. 12



Q94 General Awareness and Current Affairs

Which law states that 'as the quantity of one factor is increased, keeping the other factors fixed, the marginal product of that factor will eventually decline'?

- A. The law of variable proportions
- B. The law of constant proportions
- C. The law of money savings
- D. The law of unstable economy



Q95 General Awareness and Current Affairs

India has a _____ form of government.

- A. oligarchy
- B. communalism
- C. monarchy
- D. parliamentary



Q96 General Awareness and Current Affairs

Which of the following State Governments launched the 'Ghar Ghar Ration Yojna' in March 2022?

- A. Punjab
- B. Rajasthan
- C. Bihar
- D. Odisha



Q97 General Awareness and Current Affairs

According to the Census of India 2011, _____ has the largest number of Christians among the states.

- A. Kerela
- B. Goa
- C. Mizoram
- D. Nagaland



Q98 General Awareness and Current Affairs

system of ad hoc treasury bills to finance the budget deficit was discontinued in India with effect from April 1, _____.

- A. 1994
- B. 1997
- C. 2004
- D. 2007



Q99 General Awareness and Current Affairs

Which is the first country to play 1000 One-Day International matches?

- A. Australia
- B. Pakistan
- C. India
- D. Sri Lanka



Q100 General Awareness and Current Affairs

Which female tennis player has won the most Grand Slam tournament titles as of February 2021?

- A. Serena Williams
- B. Steffi Graf
- C. Martina Navratilova
- D. Chris Evert



Mathematics

25 Questions • Answer Key

Q1 Mathematics

Simplify the given expression.

$$\frac{z(x^3 - y^3)}{x^2 + xy + y^2} + \frac{x(y^3 - z^3)}{y^2 + yz + z^2} + \frac{y(z^3 - x^3)}{z^2 + zx + x^2}$$

A. $x + y + z$

B. $x^2 + y^2 + z^2$

C. $x - y - z$

D. 0



Q2 Mathematics

The average weight of 4 persons increases by 3 kg when a person of 53 kg is replaced by a new person. The weight (in kg) of the new person is:

A. 62

B. 65

C. 67

D. 68



Q3 Mathematics

Two trains of equal length are running on parallel lines in the same direction at speeds of 46 km/h and 36 km/h. The faster train passes the slower train in 36 seconds. The relative speed of these two trains (in m/s) is:

A. $\frac{25}{9}$

B. $\frac{25}{18}$

C. $\frac{25}{8}$

D. $\frac{25}{7}$



Q4 Mathematics

If $1.345 + 13.45 + 0.1354 + 0.0596 = 11.453 - 0.543 + k$, then what is the value of k ?

A. 3.06

B. 3.28

C. 4.08



D. 4.48

Q5 Mathematics

The marked price of an article is ₹1,820 and its selling price is ₹1,420. Find the discount percentage. (Round the answer to the nearest whole number.)

A. 22%



B. 25%

C. 28%

D. 26%

Q6 Mathematics

A trader owes a merchant ₹9,000 due in one year. However, the trader wants to settle the amount after 4 months. If the rate of interest is 6% per annum, then, how much money should he pay? (Give your answer correct to the nearest whole number value.)

A. ₹8,686

B. ₹8,688

C. ₹8,654



D. ₹8,645

Q7 Mathematics

In $\triangle ABC$, $AD \perp BC$ at D , $BE \perp AC$ at E and AD and BE intersect at a point F (in the interior of the triangle). If $BF = AC$, then which of the following is correct?

A. $\triangle CAD \cong \triangle DBF$

B. $\triangle CAD \cong \triangle FBD$



C. $\triangle CAD \cong \triangle BFD$

D. $\triangle CAD \cong \triangle DFB$



Q8 Mathematics

Find area of a triangle whose base measures 126.4 cm and height 54.8 cm.

A. 3343.36 cm^2

B. 3463.36 cm^2 ✓

C. 6926.72 cm^2

D. 9267.72 cm^2

Q9 Mathematics

$\{40 \div (2^5 \div 4) \times 125\}$ equals:

A. 1000

B. 2000

C. 625 ✓

D. 225

Q10 Mathematics

A and B invest in a business in the ratio of 7 : 8 for same time. If 7% of the total profit goes to charity and A's share in profit is ₹12,600, then what is the total amount of profit earned? [Give your answer correct to 2 decimal places.]

A. ₹29,032.26 ✓

B. ₹28,032.25

C. ₹29,025.32

D. ₹28,025.32

Q11 Mathematics

Simplify the given expression.

$$\frac{x^2 + 3x - 10}{x^2 - 25} \times \frac{x^2 + 3x + 2}{x^2 - 4} \times \frac{x(x + 2)}{(x + 1)^2 + (x + 1)}$$

A. $\frac{x + 5}{x}$

B. $\frac{x}{x + 5}$

C. $\frac{x - 5}{x}$

D. $\frac{x}{x - 5}$ ✓



Q12 Mathematics

Find the smallest number, which when tripled, will leave the remainder as zero on being divided by 5, 15 and 35.

- A. 100
- B. 150
- C. 35
- D. 70

**Q13** Mathematics

$\cot\theta \left(\frac{1}{\operatorname{cosec}\theta - 1} + \frac{1}{\operatorname{cosec}\theta + 1} \right) \times (\sin\theta - \operatorname{cosec}\theta)(\cos\theta - \sec\theta)$, $0^\circ < \theta < 90^\circ$, is equal to:

- A. $\operatorname{cosec} \theta$
- B. $\sec \theta$
- C. $2 \sin \theta$
- D. $2 \cos \theta$

**Q14** Mathematics

3 men can complete a piece of work in 6 days while 6 women can do it in 5 days. In how many days can 5 women and 3 men complete it?

- A. 3 days
- B. 4 days
- C. 5 days
- D. 6 days

**Q15** Mathematics

Which of the following equations does NOT have real roots?

- A. $3x^2 - 5x + 2 = 0$
- B. $x^2 - 4x - 3 = 0$
- C. $x^2 - 7x + 5 = 0$
- D. $6x^2 - 14x + 9 = 0$



Q16 Mathematics

A sum of ₹5,000 is divided into two parts. One part is deposited in bank A at simple interest at 5% per annum, and the other part is deposited in bank B at simple interest at 10% per annum. If the total annual interest received is ₹325, then the money deposited in bank A was:

A. ₹1,500

B. ₹5,000

C. ₹3,500



D. ₹4,000

Q17 Mathematics

Simplify the given expression.

$$2(x^2 + y^2)^2 - 3xy(x^2 + y^2) - 2x^2y^2$$

A. $(2x^2 + 2y^2 + xy)(x^2 + y^2 - 2xy)$ B. $(2x^2 + 2y^2 - xy)(x^2 + y^2 - 2xy)$ C. $(x^2 + y^2 - xy)(2x^2 + 2y^2 - xy)$ D. $(x^2 + y^2 + xy)(2x^2 + 2y^2 + xy)$ **Q18** Mathematics

If $12600 = p^3 \times q^2 \times r^2 \times s^1$, where p, q, r and s are consecutive prime numbers in ascending order, then what is the value of $(3p + 2q - r + s)$?

A. 12

B. 13

C. 14



D. 17

Q19 Mathematics

The area of a triangle whose sides measures 10 cm, 12 cm and 14 cm is:

A. $32\sqrt{3} \text{ cm}^2$ B. $24\sqrt{6} \text{ cm}^2$ C. $30\sqrt{2} \text{ cm}^2$ D. $25\sqrt{5} \text{ cm}^2$ 

Q20 Mathematics

If $12 : 3 :: 8 : x$, then find the value of x .

A. 4

B. 2



C. 6

D. 1

Q21 Mathematics

A class consisting of 30 students took a competitive exam. 18 of these students got an average of 90 marks and the remaining students of this class got an average of 80 marks. What is the average score of the class as a whole?

A. 76

B. 86



C. 92

D. 82

Q22 Mathematics

If a and b are the roots of the equation $x^2 + 5x + 4 = 0$, then the value of $\frac{a^3 + b^3}{a^2 + b^2 - 4}$ is:

A. -4

B. -5



C. -6

D. -7

Q23 Mathematics

If the ratio of two exterior angles on the same side of a transversal line intersecting the two parallel lines is $7 : 5$, then how much more is the larger of these two exterior angles than the smaller one?

A. 30°



B. 45°

C. 60°

D. 75°



Q24 Mathematics

A tailor has 22 metres of cloth and he has to cut each metre of cloth into 5 pieces. How many pieces can he get from the 22 metres of cloth he has?

A. 11

B. 55

C. 110



D. 1110

Q25 Mathematics

The sum of two consecutive multiples of 8 is 56. The greater of these two multiples is:

A. 24

B. 42

C. 32



D. 23

General Intelligence and Reasoning

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Refer to the following letter series and answer the question that follows.

PLMOKIJNBHUYGAVECFT

How many such consonants are there in the above series, each of which is immediately preceded by a vowel and immediately followed by a vowel?

A. Zero

B. One

C. Two



D. Three



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Q27 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Few spiders are caterpillars
No caterpillar is a grasshopper
All grasshoppers are bedbugs

Conclusions:

(I) Some bedbugs are not caterpillars
(II) All caterpillars are spiders
(III) All bedbugs are grasshoppers

A. Only conclusion I follows



B. Only conclusion II follows

C. Either conclusion I or III follows

D. None of the conclusions follow

Q28 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

6 : 27 :: 8 : ? :: 12 : 54

A. 35

B. 32

C. 36



D. 34

Q29 General Intelligence and Reasoning

Which of the following options is the closest approximate value which will come in place of the question mark (?) in the following equation?

20.01% of 320.002 + 121.99 = ?

A. 154

B. 162

C. 174

D. 186



Q30 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given number series?

590, 605, 588, 607, 586, ?

A. 609



B. 605

C. 611

D. 613

Q31 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. You have to take the statements to be true, even if they seem to be at variance with commonly known facts and decide which of the conclusions logically follow(s) from the statements.

Statements:

All Bats are Mammals.

Some Bats are Viruses.

All Viruses are Diseases.

Conclusions:

(I) Some Bats are Diseases.

(II) Some Mammals are Viruses.

A. Only conclusion (I) follows.

B. Only conclusion (II) follows.

C. Both conclusions (I) and (II) follow.



D. Neither conclusion (I) nor (II) follows.

Q32 General Intelligence and Reasoning

If '+' means '÷', '-' means '+', '×' means '-' and '÷' means '×', what will be the value of the following expression?

$$[(16 \times 6) - (2 \div 3)] + (4 - 4) \div 2$$

A. 4



B. 2

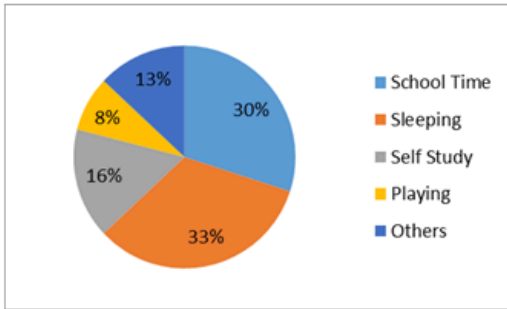
C. 8

D. 6



Q33 General Intelligence and Reasoning

The given pie chart shows use of time in a full day (24 hours) by a student. Study the pie chart and answer the question that follows.



What is the approximate difference between the number of hours used for self study and school time?

- A. 2 hours
- B. 4.5 hours
- C. 4 hours
- D. 3.5 hours

**Q34** General Intelligence and Reasoning

Refer to the given number, symbol series and answer the question that follows.

(Left) % Ω 8 3 1 \$ 2 4 @ 6 7 @ 1 & & \$ 5 # 2 8 @ 3 % & \$ 3 (Right)

How many such symbols are there (from left to right) which are immediately followed by an even number and also immediately preceded by an odd number?

- A. 1
- B. 2
- C. 3
- D. 4

**Q35** General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

1.1 1.2 1.4 1.8 2.5 ?

- A. 3.6
- B. 3.5
- C. 3.2
- D. 3.7



Q36 General Intelligence and Reasoning

Rahman goes 20 km towards north from a fixed-point F, then after turning to his right and he goes 15 km. After this he goes 20 km after turning to his right. How far and in what direction is he now with respect to the starting point F?

(All turns are 90° turns only)

A. 15 km towards east



B. 15 km towards west

C. 15 km towards north

D. 15 km towards south

Q37 General Intelligence and Reasoning

All 20 students of a class are sitting in a straight row facing east. Ram is 8th from the right end and Sita is 16th from the left end. How many students are sitting between Ram and Sita?

A. 2



B. 4

C. 8

D. 3

Q38 General Intelligence and Reasoning

Seven boxes S, T, U, V, W, X and Y are kept one over the other but not necessarily in the same order. X is kept immediately below V. Only two boxes are kept above U. T is kept immediately above S. U is kept immediately above V. Only two boxes are kept below X. How many boxes are below V?

A. Three



B. Two

C. One

D. Four

Q39 General Intelligence and Reasoning

Six friends are sitting around a round table facing the centre with equal distances between two neighbours. Sarah is sitting to the immediate left of Laura. Ron is sitting second to the right of Tyler. Sarah is sitting third to the left of Adam. Laura is sitting to the immediate left of Tyler. Tessa is sitting to the immediate right of Ron. Who is sitting to the immediate left of Sarah?

A. Tessa



B. Laura

C. Ron

D. Tyler



Q40 General Intelligence and Reasoning

U, V, W, X, Y and Z are six students sitting around a circular table, facing the centre of the table for a school assignment. X is the immediate neighbour of W. V is seated third to the left of W. U is seated to the immediate right of Y. V is seated second to the right of X. Who is seated third to the left of Z?

A. U



B. Y

C. W

D. V

Q41 General Intelligence and Reasoning

All 28 students of a class are standing in a straight row facing north. Jay is 14th from the right end, while Bela is 12th from the left end. How many students stand between Jay and Bela?

A. 2



B. 3

C. 4

D. 1

Q42 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

J J L _ K K J J _ K K K J _ L K K K J J

A. K J L

B. K L J



C. J K L

D. K L K

Q43 General Intelligence and Reasoning

Which of the following is NOT a leap year?

A. 2600



B. 4800

C. 6800

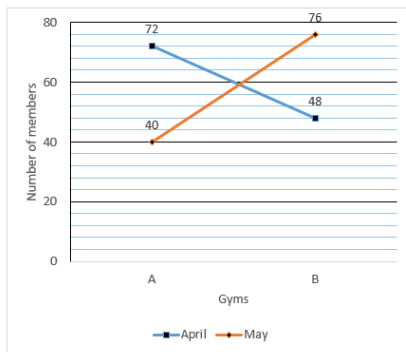
D. 8800



Q44 General Intelligence and Reasoning

Study the given line graph and answer the following question.

The given line graph depicts the number of members in two gyms A and B, in the months of April and May.



The number of members in Gym B in April is what percentage more than the number of members in Gym A in May?

- A. 12%
- B. 10%
- C. 20%
- D. 40%



Q45 General Intelligence and Reasoning

In this question, a statement is followed by two conclusions numbered I and II. You have to assume everything in the statement to be true and decide which of them logically follows beyond a reasonable doubt from the information given in the statement.

Statement:

Providing LPG connections to BPL (Below Poverty Level) households will ensure universal coverage of cooking gas in country X.

Conclusions:

- I. Usage of traditional cooking fuels such as firewood, coal, etc., is a common practice in rural parts of country X.
- II. No other mode of cooking is as effective as using LPG.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Neither conclusion I nor II follows
- D. Both conclusions I and II follow



Q46 General Intelligence and Reasoning

In a certain alpha-numeric code, 'PLATE' is written as 45 and 'BLEAK' is written as 13. How will 'PASTE' be written in the same code?

A. 16



B. 54

C. 21

D. 12

Q47 General Intelligence and Reasoning

Three statements are given followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide

which of the conclusions logically follow(s) from the statements.

Statements:

All books are papers.

All trees are papers.

All papers are recyclable.

Conclusions:

I. Some books are trees.

II. All trees are recyclable.

A. Only conclusion II follows



B. Only conclusion I follows

C. Both conclusions I and II follow

D. Neither conclusion I nor II follows

Q48 General Intelligence and Reasoning

Select the option that is related to the fifth number in the same way as the second number is related to the first number, the fourth number is related to the third number.

23 : 14 :: 11 : 8 :: 7 : ?

A. 5

B. 6



C. 4

D. 8



Q49 General Intelligence and Reasoning

Each of the digits in the number 46734 is arranged in ascending order from left to right. The position of how many digits will change as compared to that in the original number?

A. 5



B. 4

C. 3

D. 2

Q50 General Intelligence and Reasoning

In a certain code language, 'MATCH' is written as 'NDYJQ' and 'SKULL' is written as 'TNZSU'. How will 'CHAMP' be written in that language?

A. DKFTY



B. ELFTY

C. DJFTZ

D. EJFTZ

Q51 General Intelligence and Reasoning

Ashutosh walks 90 m towards north from his house, then he turns left and walks 110 m. He again turns left and walks 150 m. He then turns left again, and covers a distance of 130 m. In which direction is Ashutosh now, with respect to the starting point? (All turns are 90° turns only)

A. South-east



B. North-east

C. North-west

D. South-west

Q52 General Intelligence and Reasoning

Amongst six friends A, B, C, D, E and F, each has a different height. B is taller than D but shorter than A. D is not the shortest. Only one person is shorter than C. Only two people are shorter than E. Who is the shortest among all the friends?

A. F



B. B

C. C

D. D



Q53 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $A > S \geq D > F \leq G < H$

A. $D > G$

B. $S > F$



C. $S = H$

D. $A \geq G$

Q54 General Intelligence and Reasoning

In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic.

ACR : BDS

GUX : HVY

A. OIF : NHE

B. MQF : NRG



C. HJL : SQO

D. SIO : KQP

Q55 General Intelligence and Reasoning

Refer to the following letter-symbol series and answer the question that follows.

(Left) $S R ^ \wedge * * F S V \# Y @ Z Y T G B Y S \& Z R S V @ ^ \wedge C Y N$ (Right)

From left how many such letters are there that are immediately preceded by a symbol and immediately followed by a letter?

A. 3



B. 4

C. 5

D. 7



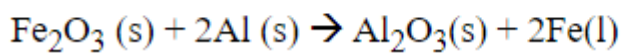
Q56 General Science

When Mendel crossed tall pea plants with short pea plants, the progeny was all tall plants. When he crossed plants bearing round seeds with plants bearing wrinkled seeds, the progeny was all round seeds. If he crossed tall plants bearing wrinkled seeds with short plants bearing round seeds, what would the progeny plants look like?

- A. Tall plants with wrinkled seeds
- B. Tall plants with round seeds
- C. Short plants with wrinkled seeds
- D. Short plants with round seeds

Q57 General Science

In the given reaction, reduction of which substance takes place?



- A. Ferric oxide
- B. Aluminium
- C. Aluminium oxide
- D. Iron

Q58 General Science

Mining causes pollution because of the large amount of:

- A. slurry
- B. slag
- C. sludge
- D. ore

Q59 General Science

What was the main reason behind Mendel's success in deriving the laws of inheritance?

- A. He chose parents that were identical.
- B. He studied only one character at a time in his crosses.
- C. He counted the individuals exhibiting a particular trait in each generation.
- D. He selected the pea plant.



Q60 General Science

The splitting of light of the sun into various colours of the rainbow is called _____.

- A. scattering of light
- B. Reflection of light
- C. Total internal reflection
- D. Dispersion of light



Q61 General Science

Which of the following properties is required for a material to be used in filament of an electric bulb?

- A. Low temperature
- B. Low melting point
- C. High resistivity
- D. High conductivity



Q62 General Science

The melting and boiling points of ionic compounds are very high because _____.

- A. a small amount of energy is required to break the strong inter-ionic attraction
- B. a large amount of energy is required to break the strong inter-ionic attraction
- C. a large amount of energy is required to break the weak inter-ionic attraction
- D. a small amount of energy is required to break the weak inter-ionic attraction



Q63 General Science

Select the correct Dobereiner's triads from the given sets.

- A. Li, Na, Ba
- B. F, Cl, Br
- C. Ca, Sr, I
- D. Ca, Sr, Ba



Q64 General Science

Consider the following reaction.



This reaction is an example of:

- A. precipitation reaction
- B. decomposition reaction
- C. displacement reaction
- D. combination reaction

Q65 General Science

An electric circuit consumes energy at a rate of 540 W per minute when heated. If the voltage across the circuit is 270 V, what is the resistance of the circuit?

- A. 65 ohm
- B. 135 ohm
- C. 270 ohm
- D. 540 ohm

Q66 General Science

A device employed to produce large currents for use in homes and industry is _____.

- A. electric motor
- B. electric kettle
- C. electric generator
- D. electric toaster

Q67 General Science

A copper wire has radius 0.5 mm and length 100 m. If the resistivity of the material is 2.5×10^{-8} ohm -m, then the resistance of the wire is _____.

- A. $1000 / \pi$ ohm
- B. 10π ohm
- C. 1000π ohm
- D. $10 / \pi$ ohm



Q68 General Science

In plants, resins and gums are stored especially in _____.

- A. old phloem
- B. old xylem
- C. old pith
- D. old cortex

Q69 General Science

The respiratory pigment, haemoglobin is present in:

- A. red blood corpuscles
- B. white blood corpuscles
- C. blood plasma
- D. blood platelets

Q70 General Science

The conversion of ethanol to acetic acid is an example of:

- A. addition reaction
- B. oxidation reaction
- C. reduction reaction
- D. substitution reaction

Q71 General Science

Carbon makes strong bonds with other elements.

Which of the following is the correct explanation for the given statement?

- A. A carbon nucleus holds the shared pairs of electrons strongly due to its small size.
- B. A carbon nucleus holds the shared pairs of electrons weakly due to its small size.
- C. A carbon nucleus holds the shared pairs of electrons strongly due to its large size.
- D. A carbon nucleus holds the shared pairs of electrons weakly due to its large size.



Q72 General Science

When we consider biodegradable substances, we see that the common property is that _____.

- A. they are all plant products
- B. they are not toxic
- C. they are all water-soluble
- D. they are all biological in origin



Q73 General Science

Suppose an object of height 5 cm is placed in front of a concave mirror and a real and inverted image of the same size is formed at a distance of 20.0 cm. Then the centre of curvature of the mirror is at:

- A. 5 cm
- B. 10 cm
- C. 15 cm
- D. 20 cm



Q74 General Science

In an electric motor, the _____ act(s) as a contact between the commutator and the terminals of the battery.

- A. split ring
- B. carbon brushes
- C. magnetic poles
- D. plug key



Q75 General Science

Identify the FALSE statement in the context of digestion.

- A. Digestion comes before egestion but after ingestion.
- B. Absorption comes before assimilation but after digestion.
- C. Assimilation comes before ingestion but after absorption.
- D. Assimilation and absorption both occur before egestion.



Q76 General Science

Which of the following properties remain same while moving down the group in the periodic table?

- A. Valency
- B. Atomic size
- C. Metallic character
- D. Non-metallic character

Q77 General Science

Clouds can be seen as white because the small water droplets of the cloud _____.

- A. do not scatter any one of the wavelengths of visible light
- B. scatter very less amount of red and blue wavelength of visible light
- C. scatter all the wavelengths of the visible light with almost equal intensity
- D. scatter very high amount of red and blue wavelength of visible light

Q78 General Science

Focal length of the concave mirror which can produce magnification of -2 and real image at a distance 1.5 m from the pole is:

- A. 0.5 m
- B. 5 m
- C. 1.5 m
- D. 2 m

Q79 General Science

The substance which doctors use as plaster for supporting fractured bones in the right position is:

- A. $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$
- B. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
- C. $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$
- D. $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$



Q80 General Science

Which of the following is a balanced food in itself?

A. Milk



B. Honey

C. Meat

D. Pulses

General Awareness and Current Affairs

20 Questions • Answer Key

Q81 General Awareness and Current Affairs

Pawl Kut is the greatest of all the festivals celebrated in the state of _____.

A. Mizoram



B. Meghalaya

C. Kerala

D. Goa

Q82 General Awareness and Current Affairs

What does the cost of self-owned inputs used in the production process refer to?

A. Total cost

B. Total variable cost

C. Marginal cost

D. Implicit cost



Q83 General Awareness and Current Affairs

The production function of a firm is a relationship between inputs used and _____.

A. price of inputs used by the firm

B. quantity of inputs used by the firm

C. output produced by the firm



D. quality of inputs used by the firm



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Q84 General Awareness and Current Affairs

When a Tirthankara leaves a mortal body, it is known as _____.

- A. Siddhashila
- B. Tapa Kalyana
- C. Janma Kalyana
- D. Nirvana



Q85 General Awareness and Current Affairs

In March 2022, _____ has been elected as the superior general of the Missionaries of Charity, becoming the fourth occupant of the top post of the global organisation founded by Saint Teresa of Kolkata.

- A. Sister Mary Prema Pierick
- B. Sister Mary Joseph
- C. Sisters Marguerite
- D. Sister Anselm



Q86 General Awareness and Current Affairs

Which of the following schemes is aimed at better administration of Waqf properties and safeguarding and preventing the encroachment of these properties?

- A. Molana Waqf Board Taraqqiati Scheme (MWBTS)
- B. Islamic Waqf Board Taraqqiati Scheme (IWBTS)
- C. Awami Waqf Board Taraqqiati Scheme (AWBTS)
- D. Qaumi Waqf Board Taraqqiati Scheme (QWBTS)



Q87 General Awareness and Current Affairs

Which Articles of the Constitution of India deals with the provision of Attorney General of India?

- A. Article 66
- B. Article 76
- C. Article 56
- D. Article 46



Q88 General Awareness and Current Affairs

Which of the following states has started the 'Kudumbashree' programme which plays a vital role in enhancing the financial status of the less privileged women in the State through its thrift and credit programme?

A. Kerala



B. Assam

C. West Bengal

D. Odisha

Q89 General Awareness and Current Affairs

Which Indian golfer was the runner-up at the Players Championship 2022 at Florida?

A. Shiv Kapur

B. Anirban Lahiri



C. Gaurav Ghei

D. Arjun Atwal

Q90 General Awareness and Current Affairs

The 'Northern Circars' is the name of a _____ in India.

A. mountain

B. coastal plain



C. river valley

D. waterfall

Q91 General Awareness and Current Affairs

Ao is a prominent language spoken in the state of _____.

A. Nagaland



B. Tripura

C. Chhattisgarh

D. Odisha



Q92 General Awareness and Current Affairs

Dibru-Saikhowa National Park is located in which of the following states?

A. Assam



B. Nagaland

C. Meghalaya

D. Mizoram

Q93 General Awareness and Current Affairs

Under which amendment in The Constitutional Act 1992 did the Panchayati Raj Institutions receive their constitutional status?

A. 65th Amendment

B. 75th Amendment

C. 70th Amendment

D. 73rd Amendment



Q94 General Awareness and Current Affairs

Who won a bronze medal at the U23 Asian Wrestling Championships in 2022?

A. Deepak Punia



B. Ravi K Dahiya

C. Anshu Malik

D. Sushil Kumar

Q95 General Awareness and Current Affairs

A _____ is a retail establishment that combines a department store and a grocery supermarket.

A. hypermarket



B. minimart

C. hitmart

D. supermarket



Q96 General Awareness and Current Affairs

Which of the following is India's first AI-based job platform for persons with disabilities?

- A. Bhartability
- B. Ujalaability
- C. Jeevanability
- D. Swarajability



Q97 General Awareness and Current Affairs

In the year 2021, who among the following became the first Indian Chairperson of the United Nations Advisory Committee of the Human Rights Council (HRC)?

- A. Barakat Ahmad
- B. Syed Akbaruddin
- C. Ajai Malhotra
- D. Nirupama Rao



Q98 General Awareness and Current Affairs

Which of the following ports is located along the east coast of India?

- A. Kandla
- B. Mazagaon
- C. Paradip
- D. JLN port Nhava Sheva



Q99 General Awareness and Current Affairs

In which year was the 11th Fundamental Duty added to the list of Fundamental Duties in the Indian Constitution?

- A. 1999
- B. 2000
- C. 2002
- D. 2004



India's first amputee clinic was launched in which place?

- A. Bhopal
- B. Bengaluru
- C. Kanpur
- D. Chandigarh



Mathematics

25 Questions • Answer Key

Q1 Mathematics

The area of a triangle is 85 cm^2 and its base is 5 cm. Find the height of the triangle corresponding to this given base.

A. 34 cm



B. 24 cm

C. 17 cm

D. 51 cm

Q2 Mathematics

A sum was invested at a certain rate of simple interest per annum for 8 years. Had it been invested at a rate of simple interest per annum that is 8% higher than the rate at which the sum had been actually invested, it would have fetched ₹4,000 more as interest at the end of the 8-year period. What was the sum invested?

A. ₹6,250



B. ₹6,500

C. ₹6,750

D. ₹6,925

Q3 Mathematics

The roots of the quadratic equation $x^2 - 6x + 5 = 0$ are:

A. -5, -1

B. 3, 2

C. 5, 1



D. -3, -2

Q4 Mathematics

The average age of Yamuna and her daughter, Sathvika, is 21 years. The ratio of their ages is 5 : 2. Find the age of Sathvika.

A. 10 years

B. 15 years

C. 17 years

D. 12 years



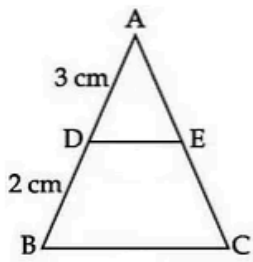
Q5 Mathematics

The HCF of 16, 20 and 24 is:

- A. 2
- B. 6
- C. 8
- D. 4



Q6 Mathematics



In the given figure, triangle ABC is similar to triangle ADE. If the area of triangle ADE = 18 cm^2 , then the area of triangle ABC is:

- A. 45 cm^2
- B. 90 cm^2
- C. 50 cm^2
- D. 55 cm^2



Q7 Mathematics

Observe the given pattern and find the missing number.

$$22^2 = 484$$

$$202^2 = 40804$$

$$2002^2 = 4008004$$

$$20002^2 = \dots\dots\dots$$

- A. 4840000
- B. 400800400
- C. 400080004
- D. 2000220002



Q8 Mathematics

If $K + \frac{1}{K} = -2$, then the value of $K^3 + \frac{1}{K^3}$ is:

A. -1

B. -2

C. -3

D. -4



Q9 Mathematics

There is a 20% discount on a dozen pairs of identical shoes marked at a combined price of ₹7,200. How many such pairs of shoes can be bought for ₹1,440?

A. 5

B. 4

C. 3

D. 2



Q10 Mathematics

Avinash's age is 5 times his son Aravind's age. Four years hence, the age of Avinash will be four times Aravind's age. Find the average of their present ages.

A. 36 years

B. 30 years

C. 24 years

D. 28 years



Q11 Mathematics

Simplify the following.

$$\frac{(3x^2)^5}{(6x^{-2})^2}$$

A. $\frac{81x^{14}}{36}$

B. $\frac{27x^6}{36}$

C. $\frac{27x^{14}}{4}$ ✓

D. $\frac{81x^6}{36}$

Q12 Mathematics

Mohan, Meena and Madhav enter into a partnership investing ₹3,000, ₹2,000 and ₹5,000 respectively. Find their respective shares in the annual profit of ₹5,600 in the given order of the names mentioned here.

A. ₹1,480, ₹1,320, ₹2,800

B. ₹1,680, ₹1,240, ₹2,680

C. ₹1,752, ₹1,168, ₹2,680

D. ₹1,680, ₹1,120, ₹2,800 ✓

Q13 Mathematics

While packing birthday caps for a party in packs of 8 or 10, one cap was always left out. How many caps were there if there were more than 250 but less than 300 caps in the lot?

A. 268

B. 275

C. 281 ✓

D. 261



Q14 Mathematics

In order to make the simplification problem given below correct, which of the pairs of signs given in the options needs to be interchanged?

$$25 \div 5 - 2 \times 30 + 3 = 10$$

A. $\div$ and $-$

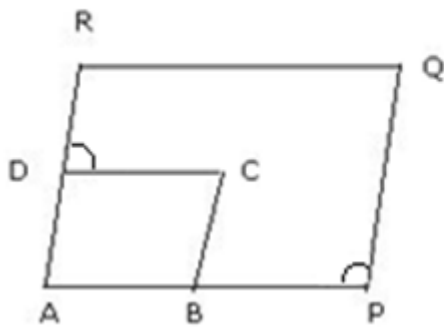
B. $\times$ and $-$

C. $\times$ and $+$

D. $\div$ and $+$

**Q15** Mathematics

In the given figure, ABCD and APQR are two parallelograms. If $\angle APQ = 100^\circ$, find $\angle CDR$.



A. 80°

B. 40°

C. 100°

D. 36°

**Q16** Mathematics

3 kg of apples and 4 kg of oranges cost ₹210, and 5 kg of apples and 2 kg of oranges cost ₹175. Find the cost of 1 kg of apples.

A. ₹37.5

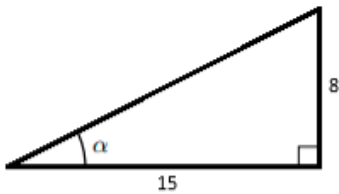
B. ₹35.7

C. ₹20

D. ₹25



Q17 Mathematics



In the given right-angled triangle, where the lengths of the sides given are in cm, find the value of $\cos \alpha + \cot \alpha$

A. $\frac{15}{17}$

B. $\frac{19}{8}$

C. $\frac{333}{136}$

D. $\frac{375}{136}$ ✓

Q18 Mathematics

If $i = \frac{7}{3}j$ and $j = \frac{4}{5}k$, then the ratio of $i : j : k$ is:

A. $28 : 4 : 15$

B. $7 : 12 : 5$

C. $28 : 12 : 15$ ✓

D. $21 : 12 : 20$

Q19 Mathematics

A pipe can fill an empty tank in 15 hours, but due to a leakage at the bottom, it is filled in 20 hours. If the tank is full, how long will the leakage take to empty it if no other entry or exit point in the tank is open?

A. 60 hours ✓

B. 40 hours

C. 50 hours

D. 30 hours



Q20 Mathematics

What is the discount percentage in the scheme of 'buy 5 get 3 free'?

- A. 60%
- B. 37.5%
- C. 39.25%
- D. 36.5%



Q21 Mathematics

Find the mode for the following data of student ages:

16, 17, 15, 17, 16, 15, 14, 14, 13, 17, 13, 12, 12, 16, 10, 14, 17, 10, 11.

- A. 11
- B. 16
- C. 17
- D. 15



Q22 Mathematics

If K is the mean of 2, 3, 4, K , then the mode is:

- A. 1
- B. 2
- C. 3
- D. 4



Q23 Mathematics

The base of the right-angled triangle is 3 m greater than its height. If its hypotenuse is 15 m, then find its area.

- A. 54 m^2
- B. 64 m^2
- C. 72 m^2
- D. 84 m^2



Q24 Mathematics

A and B can do a piece of work in 28 days and 35 days, respectively. They work on alternate days starting with A till the work gets completed. How long (in days) would it take A and B to complete the work?

A. 31



B. $31\frac{1}{9}$

C. $31\frac{1}{5}$

D. $31\frac{1}{2}$

Q25 Mathematics

If the length l of a room is reduced by 10% and breadth b is increased by 10%, then find the positive change in its perimeter.

A. $\frac{2}{5}(l - b)$

B. $\frac{2}{5}(l + b)$

C. $\frac{l+b}{5}$

D. $\frac{l-b}{5}$

**General Intelligence and Reasoning**

30 Questions • Answer Key

Q26 General Intelligence and Reasoning

Seven people - B, D, F, K, M, Q and W are sitting in a straight line facing North. D sits second from one of the extreme ends of the line. Only two people sit between D and F. M sits fourth to the right of F. Q sits second to the right of W. K is not an immediate neighbour of W.

How many people sit to the left of B?

A. One

B. Three

C. None



D. Two



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Q27 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '×' means '÷', and '÷' means '×', what will come in place of the question mark (?) in the following equation?

$$15 - 8 + 7 \div 6 \times 3 = ?$$

A. 6

B. 10

C. 9



D. 12

Q28 General Intelligence and Reasoning

Refer to the given letter-cluster series and answer the question that follows.

AKMG, RTDC, WQCT, PILE, VTXF, HRXW

If in each of the letter-clusters, each letter is changed to the next letter in the English alphabetical order, how many letter-clusters thus formed will have exactly two vowels?

A. 0

B. 1

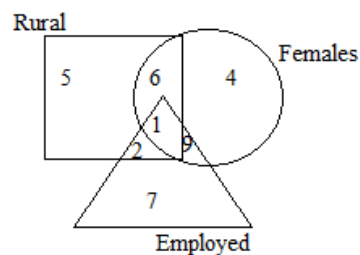


C. 2

D. 3

Q29 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many rural females are there who are NOT employed?

A. 3

B. 7

C. 1

D. 6



Q30 General Intelligence and Reasoning

Select the option that represents the letters that, when placed from left to right in the same sequence in the blanks below, will complete the letter series.

M N O _ M N _ _ M N _ P _ _ O P

- A. POPOMN
- B. POPOMM
- C. MNPOPP
- D. NMPONM

Q31 General Intelligence and Reasoning

If '+' means '-', '-' means '+', '×' means '+', and '÷' means '×', what will be the value of the following expression?

$$[(6 \times 9) + (3 \div 2)] - (7 + 4) \div 2$$

- A. 2
- B. 4
- C. 6
- D. 8

Q32 General Intelligence and Reasoning

In a certain code language, 'FRAME' is written as 'HPCKG', and 'PEACH' is written as 'RCCAJ'. How will 'BROOM' be written in that language?

- A. DPQMO
- B. DTQQO
- C. APQNO
- D. CPPMO

Q33 General Intelligence and Reasoning

In this question, the statement is followed by four conclusions. Find out which conclusion is true based on the given statement:

Statement: $N > W = E \geq D < Y = P \leq K$

- A. $N < E$
- B. $D > N$
- C. $W \geq D$
- D. $K \leq Y$



Q34 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

$$32 : 56 :: 52 : ? :: 42 : 66$$

A. 71

B. 75

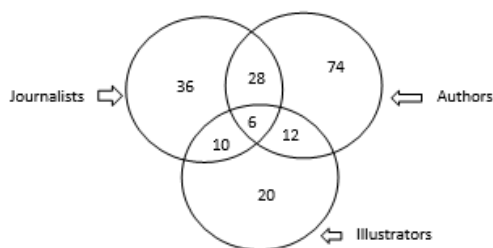
C. 76



D. 73

Q35 General Intelligence and Reasoning

Study the given diagram carefully and answer the question. The numbers in different sections indicate the number of persons.



How many such authors are there who are also illustrators but are NOT journalists?

A. 18

B. 28

C. 12



D. 54



Q36 General Intelligence and Reasoning

Study the given table and answer the following question.

	Number of words translated		
	Monday	Tuesday	Wednesday
Puneet	548	581	628
Mohit	696	684	692

If ₹2 was paid for the translation of one word, what was the total amount received by Puneet and Mohit on Monday?

A. ₹2,488



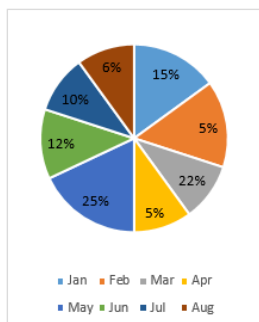
B. ₹2,966

C. ₹2,312

D. ₹2,916

Q37 General Intelligence and Reasoning

The given pie chart shows the percentage of expenditure on electricity by a family in different months. Study the chart and answer the question.



What is the central angle for the total expenditure on electricity in all the months together, EXCEPT May and August?

A. 234.8°

B. 216.8°

C. 210.7°

D. 248.4°



Q38 General Intelligence and Reasoning

This question consists of a statement followed by two arguments I and II. Read the statement and the arguments carefully and select the appropriate answer from the given options.

Statement:

Eating frozen foods is advantageous.

Arguments:

- I. Frozen foods sometimes may have more vitamins and minerals compared to fresh food, because fresh foods lose vitamins and minerals over time while freezing preserves nutrients.
- II. Sodium present in frozen foods can lead to increased blood pressure level.

A. I weakens while II strengthens the statement

B. II weakens while I strengthens the statement



C. Both I and II weaken the statement

D. Both I and II strengthen the statement

Q39 General Intelligence and Reasoning

Mangal walks 30 m north from his house, then he takes a right turn and walks 20 m. He then takes a right turn and walks 30 m, then turns left and walks 20 m, then he turns right and walks 10 m. Finally, he takes a right turn and walks 40 m. In which direction and how many metres is Mangal now from his house? (All turns are 90° turns only)

A. 20 m, east

B. 10 m, west

C. 20 m, north

D. 10 m, south



Q40 General Intelligence and Reasoning

A statement is given below, followed by four conclusions given in the options. Find out which conclusion is true based on the given statement.

Statement: $S < T \leq G < M < K > P \geq O$

A. $K > G > S$



B. $M \geq P \geq O$

C. $O = S = T$

D. $K > O > S$



Q41 General Intelligence and Reasoning

Refer to the following number series and answer the question that follows.

4 3 9 1 5 3 9 2 4 3 5 9 5 7 9 2 6 8 7

How many such odd digits are there, each of which is immediately preceded by an even digit and also immediately followed by an odd digit?

A. One

B. Two



C. Three

D. Four

Q42 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

3 13 21 27 31 ?

A. 36

B. 34

C. 35

D. 33



Q43 General Intelligence and Reasoning

Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

15 : 4913 :: 8 : ? :: 11 : 2197

A. 1000



B. 1001

C. 1003

D. 1002

Q44 General Intelligence and Reasoning

What is the sum of the digits placed at the even places when counted from left to right in the number 479812356?

A. 26

B. 22



C. 32

D. 18



Q45 General Intelligence and Reasoning

G, K, M, P, S and V live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. G lives on floor number 3. Only one person lives between G and M. As many people live below K as above M. P lives immediately below S.

How many people live above P?

- A. One
- B. Two
- C. Three
- D. Four

Q46 General Intelligence and Reasoning

Ravi starts from Point A and drives 8 km towards the west. He then takes a left turn, drives 5 km, turns left and drives 19 km. He then takes a right turn and drives 2 km. He takes a final right turn, drives 11 km and stops at Point B. How far and towards which direction should he drive in order to reach Point A from Point B? (All turns are 90 degree turns only)

- A. 7 km towards the north
- B. 2 km towards the north
- C. 3 km towards the south
- D. 5 km towards the south

Q47 General Intelligence and Reasoning

Select the option that is related to the fifth term in the same way as the fourth term is related to the third term and the second term is related to the first term.

STUDENT : HGFVVMG :: TEACHER : GVZXSVI :: SCHOOL : ?

- A. XSHLLO
- B. HXSLLO
- C. SLOLXH
- D. HXSOLL



Q48 General Intelligence and Reasoning

Refer to the following letter, number, symbol series and answer the question.

(Left) E 7 8 # K 2 L ? = R 3 @ W * X 5 C H D 4 (Right) .

If all numbers are dropped from the series, which of the following will be seventh from the left?

A. W

B. =

C. R



D. *

Q49 General Intelligence and Reasoning

Seven people A, B, D, E, G, H and K are sitting in a straight line facing the north. E is sitting at an extreme end of the line. B is an immediate neighbour of E. Only three people are sitting between A and E. A is sitting second to the right of G. H is neither an immediate neighbour of A nor B. K is sitting second to the right of D. How many people are sitting to the right of K?

A. Three

B. Two

C. One



D. Zero

Q50 General Intelligence and Reasoning

Three statements are followed by three conclusions numbered I, II and III. You have to consider these statements to be true, even if they seem to be at variance with commonly known facts. Decide which of the given conclusions logically follow(s) from the given statements.

Statements:

Some eggs are wheats

Some fruits are guavas

All guavas are lemons

Conclusions:

(I) Some fruits are wheats

(II) Some lemons are fruits

(III) Some eggs are guavas

A. Only conclusion I follows

B. Only conclusion II follows



C. Either conclusion I or III follows

D. None of the conclusions follow



Q51 General Intelligence and Reasoning

Five boxes containing different items, namely scales, pens, tapes, erasers and pencils, are kept one above the other, not necessarily in the same order. The box with pens is on the topmost position. The box with erasers is the only box between the boxes with pencils and scales. There is only one box below the box with scales and that is the box with tapes. Which box is immediately below the box containing pencils?

A. Scales

B. Tapes

C. Erasers



D. Pens

Q52 General Intelligence and Reasoning

Which of the following numbers will replace the question mark (?) in the given series?

6, 6, 8, 24, 28, ?

A. 32

B. 140



C. 112

D. 130

Q53 General Intelligence and Reasoning

In a certain code language, 'WORSE' is written as 'K#2&6' and 'STEAK' is written as '&@689'. How will 'THORN' be written in that language?

A. @5#86

B. @5#27



C. #5@27

D. #5@86

Q54 General Intelligence and Reasoning

A total of 50 students are in a row. Ankit is at the 19th position from the start of the row. What is the position of Ankit from the end of the row?

A. 30th

B. 31st

C. 32nd



D. 33rd



Q55 General Intelligence and Reasoning

If yesterday was Monday, then which day of the week it will be after 89 days from today?

- A. Sunday
- B. Monday
- C. Tuesday
- D. Saturday



General Science

25 Questions • Answer Key

Q56 General Science

The power of an electric bulb of resistance 18 ohm if no voltage is applied across it is _____.

- A. 0 W
- B. 18 W
- C. 9 W
- D. infinity



Q57 General Science

Which of the following vessels carries blood away from the heart to various organs of the body, except the lungs?

- A. Vena cava
- B. Pulmonary artery
- C. Pulmonary vein
- D. Aorta



Q58 General Science

One of the following is NOT a bacterial disease?

- A. Gonorrhoea
- B. AIDS
- C. Syphilis
- D. Tuberculosis



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Q59 General Science

Which statement regarding molecular movement (living character) of viruses is correct?

- A. A virus does not grow in an artificial medium.
- B. Metabolism is absent in viruses.
- C. Inactive until they infect some cell. ✓
- D. Viruses do not respire.

Q60 General Science

The SI unit of power of a lens is:

- A. newton
- B. joule
- C. dioptre ✓
- D. metre

Q61 General Science

Burning of natural gas is:

- A. an exothermic reaction ✓
- B. an endothermic reaction
- C. a decomposition reaction
- D. a substitution reaction

Q62 General Science

When a magnet is moved into a coil connected to a galvanometer, the current is induced in the coil. The induced current does not depend on which of the following factor?

- A. The pole strength of the magnet
- B. Speed of movement of the magnet
- C. Resistance of the galvanometer connected in the coil ✓
- D. Number of turns of the coil



Q63 General Science

A galvanometer when connected in a circuit, detects the presence of :

A. Current



B. Potential difference

C. Resistance

D. Frequency

Q64 General Science

Which of the following statements is/are true in case of an incandescent filament bulb?

(a) Filament can be made of tungsten or nichrome.

(b) The glass envelope covering the filament is filled with inactive gases such as nitrogen or argon.

(c) Since the filament used is thin, its resistivity is very low.

(d) The resistivity of the filament is low to allow more current.

(e) The filament material used should have high melting point.

A. (a), (c), (d)

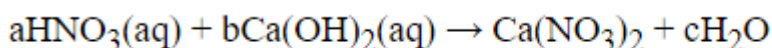
B. (b), (c), (d)

C. (a), (b), (e)



D. (c), (d), (e)

Q65 General Science



The coefficients a, b and c in the given balanced chemical equation are:

A. 2, 1 and 2, respectively



B. 2, 1 and 1, respectively

C. 1, 2 and 1, respectively

D. 2, 2 and 2, respectively



Q66 General Science

Which of the following salts is an active ingredient in antacids?

- A. Na_2CO_3
- B. NaHCO_3 ✓
- C. CaOCl_2
- D. CaCl_2

Q67 General Science

object is placed _____ to obtain an inverted and enlarged image.

- A. at infinity from concave mirror
- B. at infinity from convex mirror
- C. between C and F of concave mirror ✓
- D. between C and F of convex mirror

Q68 General Science

What would have happened if Mendel had NOT studied the F2 generation?

- A. He would not have discovered which traits were dominant
- B. He would not have discovered that recessive traits are not lost ✓
- C. He would not have been able to get hybrid plants
- D. He would not have been able to study multiple characters

Q69 General Science

Bleaching powder is formed when dry slaked lime reacts with _____.

- A. nitrogen
- B. hydrogen
- C. chlorine ✓
- D. bromine



Q70 General Science

The best practice that is involved in biological waste disposal is:

- A. reusing
- B. recycling
- C. open dumping
- D. incineration



Q71 General Science

Among the following situations, potential difference is induced in a closed conducting coil when:

- A. a bar magnet is moved towards the closed coil only
- B. the closed coil is moved towards the bar magnet only
- C. either the bar magnet is moved towards the closed coil or the closed coil is moved towards the bar magnet
- D. both the bar magnet and the closed coil are moving with same speed and in the same direction



Q72 General Science

From the following, identify the applications of scattering of light.

- (a) Danger signals being red
- (b) Advanced sun rise and delayed sun set
- (c) Twinkling of stars
- (d) Tyndall effect
- (e) Redness of sun and blueness of sky

- A. (a), (b), (c)
- B. (b), (c), (d)
- C. (c), (d), (e)
- D. (d), (e), (a)



Q73 General Science

Some bacteria are photosynthetic. Where are the photosynthetic pigments located in these cells?

A. In the infolding of the plasma membrane



B. In chloroplasts

C. On special membranes

D. In the cell cytoplasm

Q74 General Science

How many number of bonds do the single carbon atom form?

A. 4



B. 3

C. 2

D. 1

Q75 General Science

Parts of which present state had evolved a local system of canal irrigation called 'kulhs' over 400 years ago?

A. Himachal Pradesh



B. Jammu and Kashmir

C. Madhya Pradesh

D. Uttar Pradesh

Q76 General Science

The voltages across three resistances R_1 , R_2 and R_3 connected in series are V_1 , V_2 and V_3 , respectively. What is the net voltage V across them if I represents the net current flowing through them?

A. $V = (1/V_1) + (1/V_2) + (1/V_3)$

B. $V = (1/R_1) + (1/R_2) + (1/R_3)$

C. $V = R_1 + R_2 + R_3$

D. $V = V_1 + V_2 + V_3$



Q77 General Science

How many elements exist in nature according to Newlands law of octaves?

- A. 36
- B. 46
- C. 56
- D. 76



Q78 General Science

Which of the following with respect to the Modern Periodic Table is NOT correct?

- A. It has 18 groups and 7 periods.
- B. The elements present in the same group have same number of valence electrons.
- C. The number of shells increases as we go down the group.
- D. Na, Mg and S belongs to the 4th period of the Modern Periodic Table.



Q79 General Science

Formation of slaked lime by the reaction of calcium oxide with water is an example of _____.

- A. combination reaction
- B. endothermic reaction
- C. displacement reaction
- D. decomposition reaction



Q80 General Science

Meristematic tissue cells lack _____.

- A. cell wall
- B. cytoplasm
- C. nucleus
- D. vacuoles



Q81 General Awareness and Current Affairs

What are the four factors of production?

- A. Man power, transportation, excise duty and import
- B. Land, labour, capital, and entrepreneurship ✓
- C. Labour, transportation, excise duty and entrepreneurship
- D. Capital, transportation, excise duty and entrepreneurship

Q82 General Awareness and Current Affairs

Match the mountain ranges in column-A with their states in column-B.

Column-A (Mountain range)	Column-B (State)
a. Aravali mountain	1. Himachal Pradesh and Uttarakhand
b. Vindhya range	2. Kerala and Karnataka
c. Western ghat	3. Rajasthan
d. Himalaya range	4. Madhya Pradesh

- A. a-1, b-2, c-3, d-4
- B. a-4, b-3, c-2, d-1
- C. a-3, b-4, c-2, d-1 ✓
- D. a-4, b-3, c-1, d-2

Q83 General Awareness and Current Affairs

During which of the following festivals is the Puli Kali (Tiger dance) event the main attraction?

- A. Onam ✓
- B. Pongal
- C. Bihu
- D. Baisakhi



Q84 General Awareness and Current Affairs

In which part of the Indian Constitution are the Fundamental Rights explained?

- A. Part III
- B. Part IV
- C. Part V
- D. Part VI



Q85 General Awareness and Current Affairs

As of August 2022, the Maintenance and Welfare of Parents and Senior Citizens Act of which year governs the financial security, welfare and protection of senior citizens?

- A. 2002
- B. 2005
- C. 2007
- D. 2014



Q86 General Awareness and Current Affairs

Which of the following is NOT a body of the urban local body administration?

- A. Municipal Corporation
- B. Municipality
- C. Nagar Panchayat
- D. Zila panchayat



Q87 General Awareness and Current Affairs

Padma Vibhushan award of 2022 has not been given in which of the following fields?

- A. Civil Service
- B. Art
- C. Literature and Education
- D. Trade and Industry



Q88 General Awareness and Current Affairs

Which of the following is a Buddhist temple in India?

- A. Nidhivan Temple
- B. Gorakhnath Temple
- C. Mahabodhi Temple
- D. Vishwanath Temple



Q89 General Awareness and Current Affairs

In August 2022, Rameshbabu Pragganandhaa, the 17-year-old Indian Chess master, defeated world champion Magnus Carlsen in the last round of the FTX Crypto Cup in _____.

- A. Austin
- B. Boston
- C. San Jose
- D. Miami



Q90 General Awareness and Current Affairs

Which is the apex governing body of air sports in India?

- A. Air Sports Federation of India
- B. Ministry of Civil Aviation
- C. Ministry of Youth Affairs and Sports
- D. Aero Club of India



Q91 General Awareness and Current Affairs

Which of the following is NOT correctly matched?

- A. Indian Sandalwood – Deciduous forests of Deccan Plateau
- B. Pine – Himalayan subtropical forest
- C. Neem – Alpine region
- D. Ficus – Malabar coast moist forests



Q92 General Awareness and Current Affairs

Which group of organisation/institutes is an example of Constitutional bodies in India?

- A. Election Commission of India, Attorney General of India, Union Public Service Commission ✓
- B. National Human Right Commission, National Commission for Minorities, Election Commission of India
- C. National Commission of India, Securities and Exchange Board of India, Attorney General of India
- D. Comptroller and Auditor General of India, National Human Rights Commission, Election Commission of India

Q93 General Awareness and Current Affairs

What is the full form of 'MICR' in MICR code?

- A. Marking Ink Character Recognition
- B. Magnetic Ink Character Reconstruction
- C. Magnetic Ink Character Registration
- D. Magnetic Ink Character Recognition ✓

Q94 General Awareness and Current Affairs

Which of the following languages has maximum number of speakers in India according to the Census 2011 data?

- A. Bengali ✓
- B. Kannada
- C. Odia
- D. Malayalam

Q95 General Awareness and Current Affairs

Which of the following events of modern Indian history is NOT correctly matched?

- A. Partition of Bengal by Lord Curzon – 1905
- B. Jallianwala Bagh massacre at Amritsar – 1919
- C. Dandi March by Mahatma Gandhi – 1910 ✓
- D. Quit India movement – 1942



Q96 General Awareness and Current Affairs

Which NRI was awarded Padma Vibhushan in the field of Science and Engineering posthumously in 2022 ?

- A. Rattan Lal
- B. Narinder Singh Kapany
- C. Sanjay Rajaram
- D. Thiruvengadam Veeraraghavan

Dropped by RRB: discrepancy found in question/answer, ignored for all candidates (no answer key).

Q97 General Awareness and Current Affairs

In 1955 a special committee known as the Karve Committee was constituted. This committee advised:

- A. the promotion of small-scale industries for the purpose of rural development ✓
- B. the promotion of large industries for the purpose of urban development
- C. the promotion of the agriculture sector
- D. the rapid export of cotton and fresh fruits

Q98 General Awareness and Current Affairs

According to the NREGA 'At a Glance' report, the average MGNREGA wages paid in the financial year 2021-2022 remain at only ₹208.85 per day. What is the full form of MGNREGA?

- A. Mahatma Gandhi National Rural Employment Guarantee Act ✓
- B. Mahatma Gandhi National Rural Employment Guarantee Activity
- C. Mahatma Gandhi National Rural Employee Guarantee Act
- D. Mahatma Gandhi National Rural Employer Guarantee Action

Q99 General Awareness and Current Affairs

Orchidarium and the orchid production unit on the premises of the Institute of Bioresources and Sustainable Development (IBSD), is coming up in the state of _____ which has about 300 of the world's 17,000 species of orchids.

- A. Himachal Pradesh
- B. Arunachal Pradesh
- C. Meghalaya ✓
- D. Uttarakhand



Which of the following is NOT among the groups organised by microfinance institutions in India?

- A. Joint Liability Group (JLG)
- B. Self Help Group (SHG)
- C. Grameen Model Bank
- D. Urban Model Bank

