



RRB JE 2024 CBT-1

Junior Engineer, DMS, CMA · CEN 03/2024 · CBT-1 · Question Paper

Kannada

All 9 Shifts (Sets) · Official Answer Key

About this Compilation

This booklet contains all **9 shift papers** of the **RRB JE 2024 CBT-1** examination in **Kannada**, with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

Sections. The JE CBT-1 paper is not divided into sections and the saved paper carries no section labels. In this book the questions of every shift are grouped by subject (Mathematics, General Intelligence and Reasoning, General Awareness, General Science), assigned from our topic tags, so the section counts may differ slightly from the notified pattern.

1 question without question text. The saved paper record has no question text or figure for it; it is printed with its options and official answer and marked in the text.

836 of these 900 questions are shown in English. RRB did not release them in Kannada to any candidate whose response sheet we could reach, so the official English version is printed instead and marked with an **ENGLISH** chip. Nothing here is machine translated.

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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Mathematics

30 Questions • Answer Key

Q1 Mathematics ENGLISH

Two taps can fill a cistern in 2 hours and 54 hours respectively. A third tap can empty it in 54 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

A. 3

B. 2

C. 5

D. 4

Q2 Mathematics

1 ರಿಂದ 91ರ ವರೆಗಿನ ಎಲ್ಲಾ ಸ್ವಾಭಾವಿಕ ಸಂಖ್ಯೆಗಳ ಸರಾಸರಿ ಎಷ್ಟು?

A. 46.5

B. 46

C. 47

D. 45.5

Q3 Mathematics ENGLISH

The length of each of the two equal sides of an isosceles triangle is 100 cm each and the length of its base is 56 cm. The area (in cm^2) of the triangle is:

A. 2672

B. 2690

C. 2688

D. 2675

Q4 Mathematics

$(8a + 3b + 9c)^2$ ನ ವಿಸ್ತೃತ ರೂಪವನ್ನು ಬರೆಯಿರಿ.

A. $64a^2 + 9b^2 + 81c^2 + 48ab + 54bc + 144ac$ B. $64a^2 + 9b^2 + 81c^2 + 48ab + 49bc + 144ac$ C. $64a^2 + 9b^2 + 81c^2 + 52ab + 54bc + 144ac$ D. $64a^2 + 9b^2 + 81c^2 + 48ab + 54bc + 154ac$

Q5 Mathematics

ಚೌಕಾಕಾರದ ಒಂದು ನಿವೇಶನದ ವಿಸ್ತೀರ್ಣವು 289 m^2 ಆಗಿದೆ. ಹಾಗಾದರೆ ಆ ನಿವೇಶನದ ಪ್ರತಿ ಬದಿಯ (side) ಉದ್ದವು (m ಗಳಲ್ಲಿ):

A. 17

B. 27

C. 11

D. 7

Q6 Mathematics ENGLISH

The marks scored by 10 students are given below.

17, 16, 12, 16, 15, 16, 13, 14, 13, 20

The mode of the data is:

A. 17

B. 16

C. 12

D. 18

Q7 Mathematics

50 ಪುರುಷರು ಒಂದು ಕೆಲಸವನ್ನು 12 ದಿನಗಳಲ್ಲಿ ಪೂರ್ಣಗೊಳಿಸಬಲ್ಲರು. ಹಾಗಾದರೆ ಅದೇ ಕೆಲಸವನ್ನು 50 ದಿನಗಳಲ್ಲಿ ಮುಗಿಸಲು ಬೇಕಾಗುವ ಪುರುಷರ ಸಂಖ್ಯೆಯು:

A. 19

B. 15

C. 12

D. 11

Q8 Mathematics

ಒಂದು ವಾಷಿಂಗ್ ಮಶೀನ್‌ನ ಬೆಲೆಯು ಒಂದು ಟಿ.ವಿ.ಯ ಬೆಲೆಗಿಂತ 75% ರಷ್ಟು ಕಡಿಮೆ ಇದೆ. ಒಂದು ವೇಳೆ ವಾಷಿಂಗ್ ಮಶೀನ್‌ನ ಬೆಲೆಯನ್ನು 77% ರಷ್ಟು ಹೆಚ್ಚು ಮಾಡಿ, ಟಿ.ವಿ.ಯ ಬೆಲೆಯನ್ನು 27% ರಷ್ಟು ಕಡಿಮೆ ಮಾಡಿದರೆ, 8 ವಾಷಿಂಗ್ ಮಶೀನ್‌ಗಳು ಮತ್ತು 2 ಟಿ.ವಿ ಗಳ ಒಟ್ಟು ಬೆಲೆಗಳಲ್ಲಿ ಎಷ್ಟು ಬದಲಾವಣೆ ಉಂಟಾಗುತ್ತದೆ?

A. 22% ರಷ್ಟು ಇಳಿಕೆ

B. 31% ರಷ್ಟು ಹೆಚ್ಚಳ

C. 25% ರಷ್ಟು ಹೆಚ್ಚಳ

D. 29% ರಷ್ಟು ಇಳಿಕೆ



Q9 Mathematics

₹4000 ಮೊತ್ತದ ಮೇಲೆ ವಾರ್ಷಿಕ 5.25% ಬಡ್ಡಿದರದಲ್ಲಿ 12 ಫೆಬ್ರವರಿ 2024 ರಿಂದ 13 ಏಪ್ರಿಲ್ 2024ರ ತನಕ ದೊರೆಯುವ ಸರಳ ಬಡ್ಡಿಯನ್ನು (ಸಮೀಪದ ಪೂರ್ಣಾಂಕ ₹ ಗೆ ಸರಿಹೊಂದಿಸಿ) ಕಂಡುಹಿಡಿಯಿರಿ.

A. 36

B. 34

C. 35



D. 33

Q10 Mathematics ENGLISH

If third proportional of 12 and 24 be x, then what is the value of x?

A. 50

B. 45

C. 48



D. 49

Q11 Mathematics

$(1 + \sin A)(1 - \sin A)(1 + \tan^2 A)$ ಇದು ಈ ಕೆಳಗಿನ ಯಾವುದಕ್ಕೆ ಸಮನಾಗಿದೆ?

A. $\cos A$

B. 0

C. 1

D. $\tan A$ **Q12 Mathematics ENGLISH**

A shopkeeper lists the price of a fan at 20% above its cost price and offers a 10% discount on its list price. If he earns a profit of ₹150, then what is the list price (in ₹) of the fan?

A. 1969

B. 2054

C. 2250



D. 2172

Q13 Mathematics ENGLISH

Find the value of $K^2 - 3K$, for which the number 58K764 is divisible by 11.

A. 48

B. 60

C. 52

D. 40

**Q14 Mathematics ENGLISH**

Find the median of the data given below.

180, 90, 134, 68, 52, 152, 88, 110

A. 100



B. 89

C. 60

D. 110

Q15 Mathematics ENGLISH

Komal invested a sum of ₹5000 at 20% per annum compound interest, compounded annually. If she received an amount of ₹8640 after n years, the value of n is:

A. 3.5

B. 4

C. 2.5

D. 3

**Q16 Mathematics ENGLISH**

Two pieces of cloth measure 96 metres and 144 metres in length. What is the maximum length of cloth that can be cut equally from both pieces without any remainder?

A. 96 metres

B. 12 metres

C. 24 metres

D. 48 metres



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Q17 Mathematics

$16 + 16 \div 4 - 3 \times 3$ ಇದರ ಮೌಲ್ಯ ಕಂಡುಹಿಡಿಯಿರಿ.

A. 10

B. 13

C. 14

D. 11

**Q18 Mathematics**

ಒಂದು ಸಂಖ್ಯೆಯನ್ನು 50% ರಷ್ಟು ಹೆಚ್ಚಿಸಿದಾಗ ಅದು 2820 ಆಗುತ್ತದೆ. ಹಾಗಾದರೆ ಆ ಸಂಖ್ಯೆಯು:

A. 940

B. 3760

C. 5640

D. 1880

**Q19 Mathematics ENGLISH**

17 men can dig a ditch 26 m long in 18 days, working 8 hours a day. How many more men should be engaged to dig a similar ditch 39 m long in 6 days, each man now working 9 hours a day?

A. 48

B. 53

C. 55

D. 51

**Q20 Mathematics ENGLISH**

What is the average of all the natural numbers from 1 to 92?

A. 47.5

B. 46.5

C. 46

D. 47

**Q21 Mathematics ENGLISH**

There are total 120 students in three sections A, B and C of Class 10. The average marks of the three sections is 85. The average marks of section B and C is 88 and the average marks of section A is 78. Find the number of students in section A.

A. 33

B. 36

C. 24

D. 28

**Q22 Mathematics**

ಒಂದು ವೇಳೆ ಒಂದು ಚತುರ್ಭುಜದ ಮೂರು ಕೋನಗಳು 70° , 85° ಮತ್ತು 95° ಆಗಿದ್ದರೆ, ನಾಲ್ಕನೇ ಕೋನವನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.

A. 105° B. 100° C. 115° D. 110° **Q23 Mathematics**

ಒಬ್ಬ ವ್ಯಕ್ತಿಯು ಒಂದು ವಸ್ತುವಿನ ನಮೂದಿತ ಬೆಲೆಯ ಮೇಲೆ ಮೊದಲಿಗೆ d% ರಿಯಾಯಿತಿ ನೀಡಿದನು, ನಂತರ ಅಷ್ಟೇ ರಿಯಾಯಿತಿಯ ಮೊತ್ತಕ್ಕೆ ಸಮನಾದ (₹ ಗಳಲ್ಲಿ) ಇನ್ನೊಂದು ರಿಯಾಯಿತಿಯನ್ನು ನೀಡಿದನು, ಮತ್ತು ನಂತರ ಆ ವಸ್ತುವನ್ನು ₹346 ಕ್ಕೆ ಮಾರಾಟ ಮಾಡಿದನು. ಒಂದು ವೇಳೆ ಆ ವಸ್ತುವಿನ ನಮೂದಿತ ಬೆಲೆಯು ₹1730 ಆಗಿದ್ದರೆ, d ಯ ಮೌಲ್ಯ ಎಷ್ಟು?

A. 38

B. 43

C. 40

D. 44

**Q24 Mathematics ENGLISH**

A shopkeeper bought an article for ₹740. At what price (in ₹) should he sell the article to make 20% profit?

A. 900

B. 876

C. 592

D. 888



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Q25 Mathematics

ಅಕ್ಷತ್ ಅವರು ತಮ್ಮ ಪ್ರಯಾಣವನ್ನು 20 ಗಂಟೆಗಳಲ್ಲಿ ಪೂರ್ಣಗೊಳಿಸುತ್ತಾರೆ. ಅವರು ತಮ್ಮ ಪ್ರಯಾಣದ ಅರ್ಧದಷ್ಟು ದೂರವನ್ನು 57 km/h ವೇಗದಲ್ಲಿ ಕ್ರಮಿಸುತ್ತಾರೆ ಮತ್ತು ಉಳಿದ ದೂರವನ್ನು 95 km/h ವೇಗದಲ್ಲಿ ಕ್ರಮಿಸುತ್ತಾರೆ. ಹಾಗಾದರೆ ಅವರ ಇಡೀ ಪ್ರಯಾಣದ ಒಟ್ಟು ದೂರ (Km ಗಳಲ್ಲಿ) ಎಷ್ಟು?

A. 1435

B. 1423

C. 1416

D. 1425

**Q26 Mathematics**

$(9a + 4b + 5c)^2$ ನ ವಿಸ್ತರಿತ ರೂಪವನ್ನು ಬರೆಯಿರಿ.

A. $81a^2 + 16b^2 + 25c^2 + 72ab + 35bc + 90ac$ B. $81a^2 + 16b^2 + 25c^2 + 72ab + 40bc + 90ac$ C. $81a^2 + 16b^2 + 25c^2 + 76ab + 40bc + 90ac$ D. $81a^2 + 16b^2 + 25c^2 + 72ab + 40bc + 100ac$ **Q27 Mathematics**

ರಾಧಿಕಾ ಅವರು ತಮ್ಮ ಕಾರಿನಲ್ಲಿ 230 km ದೂರವನ್ನು 46 km/h ವೇಗದಲ್ಲಿ ಕ್ರಮಿಸುತ್ತಾರೆ ಮತ್ತು 400 km ದೂರವನ್ನು 100 km/h ವೇಗದಲ್ಲಿ ಕ್ರಮಿಸುತ್ತಾರೆ. ಹಾಗಾದರೆ ರಾಧಿಕಾ ಅವರ ಪ್ರಯಾಣದ ಸರಾಸರಿ ವೇಗವನ್ನು (km/h ಗಳಲ್ಲಿ) ಕಂಡುಹಿಡಿಯಿರಿ.

A. 70

B. 72

C. 80

D. 75

**Q28 Mathematics**

12 m ಎತ್ತರದ ಒಂದು ಮರವು 16 m ಉದ್ದದ ನೆರಳನ್ನು ಮೂಡಿಸಿದರೆ, ಒಂದು ವಿದ್ಯುತ್ ಕಂಬವು 42 m ಉದ್ದದ ನೆರಳನ್ನು ಮೂಡಿಸುತ್ತದೆ. ಹಾಗಾದರೆ ಆ ವಿದ್ಯುತ್ ಕಂಬದ ಉದ್ದವನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.

A. 30.5 m

B. 33 m

C. 29 m

D. 31.5 m

**Q29 Mathematics**

$(4a + 9b + 5c)^2$ ನ ವಿಸ್ತರಿತ ರೂಪವನ್ನು ಬರೆಯಿರಿ.

A. $16a^2 + 81b^2 + 25c^2 + 76ab + 90bc + 40ac$ B. $16a^2 + 81b^2 + 25c^2 + 72ab + 90bc + 40ac$ C. $16a^2 + 81b^2 + 25c^2 + 72ab + 90bc + 50ac$ D. $16a^2 + 81b^2 + 25c^2 + 72ab + 85bc + 40ac$ **Q30 Mathematics**

A conical tent has to accommodate 30 persons. Each person must have 5 m^2 spaces on the ground and 120 m^3 of air to breathe. Find the height (in m) of the tent.

A. 72

B. 60

C. 64

D. 84



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Q31 General Intelligence and Reasoning

ಕೆಳಗಿನ ಪ್ರಶ್ನೆಯಲ್ಲಿ ಕೊಟ್ಟಿರುವ ತ್ರಿವಳಿಗಳು ಯಾವ ರೀತಿಯ ಸಂಬಂಧವನ್ನು ಹೊಂದಿವೆಯೋ, ಅದೇ ರೀತಿಯ ಸಂಬಂಧವನ್ನು ಹೊಂದಿರುವ ತ್ರಿವಳಿಯನ್ನು ಕೊಟ್ಟಿರುವ ಆಯ್ಕೆಗಳಿಂದ ಆರಿಸಿ.

LIFE - IFEL - FELI

CALM - ALMC - LMCA

A. MUGS - UGSM - GSMU



B. FLIP - LIFP - FPLI

C. LAST - TLAS - STLA

D. HUNT - HTUN - HNTU

Q32 General Intelligence and Reasoning

ಒಂದು ವಿಶಿಷ್ಟ ಸಂಕೇತ ಭಾಷೆಯಲ್ಲಿ, 'soldier protect country' ಅನ್ನು 'lu mh na' ಎಂದು ಸಂಕೇತಿಸಲಾಗಿದೆ, 'entrepreneur prosper country' ಅನ್ನು 'na ki tu' ಎಂದು ಸಂಕೇತಿಸಲಾಗಿದೆ ಮತ್ತು 'soldier entrepreneur vital' ಅನ್ನು 'mh tu sy' ಎಂದು ಸಂಕೇತಿಸಲಾಗಿದೆ. ಹಾಗಾದರೆ ಅದೇ ಭಾಷೆಯಲ್ಲಿ 'country vital' ನ ಸಂಭಾವ್ಯ ಸಂಕೇತ ಯಾವುದು?

A. na sy



B. mh na

C. sy ki

D. tu na

Q33 General Intelligence and Reasoning

ಒಂದು ವಿಶಿಷ್ಟ ಸಂಕೇತ ಭಾಷೆಯಲ್ಲಿ, 'house fire gas' ಅನ್ನು 'dy ph mt' ಎಂದು ಸಂಕೇತಿಸಲಾಗಿದೆ, 'pressure gas station' ಅನ್ನು 'lp ph st' ಎಂದು ಸಂಕೇತಿಸಲಾಗಿದೆ, 'station house farm' ಅನ್ನು 'st bq dy' ಎಂದು ಸಂಕೇತಿಸಲಾಗಿದೆ. ಹಾಗಾದರೆ ಅದೇ ಭಾಷೆಯಲ್ಲಿ 'gas' ನ ಸಂಕೇತ ಯಾವುದು? (ಸೂಚನೆ: ಎಲ್ಲಾ ಸಂಕೇತಗಳು ಕೇವಲ ಎರಡು ಅಕ್ಷರಗಳ ಸಂಕೇತಗಳಾಗಿವೆ.)

A. ph



B. mt

C. lp

D. st

Q34 General Intelligence and Reasoning **ENGLISH**

In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. 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.)

37.4, 34.6

45, 42.2

A. 32.9, 29.1

B. 69, 66.2



C. 21.5, 17.7

D. 58, 56.2

Q35 General Intelligence and Reasoning

ಕೆಳಗಿನ ಸಂಖ್ಯೆ ಮತ್ತು ಸಂಕೇತ ಸರಣಿಯನ್ನು ಅವಲೋಕಿಸಿ ಮತ್ತು ಈ ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿ.
ಎಣಿಕೆಯನ್ನು ಎಡದಿಂದ ಬಲಕ್ಕೆ ಮಾತ್ರ ಮಾಡಬೇಕು.

(ಎಡ) \$ 7 @ 6 = & 5 Ω 4 > # 8 & % 9 1 * £ 3 (ಬಲ)

ತನ್ನ ತಕ್ಷಣದ ಹಿಂದೆಯೂ ಒಂದು ಸಂಖ್ಯೆಯನ್ನು ಹೊಂದಿರುವಂತಹ ಮತ್ತು ತನ್ನ ತಕ್ಷಣದ ಮುಂದೆಯೂ ಇನ್ನೊಂದು ಸಂಖ್ಯೆಯನ್ನು ಹೊಂದಿರುವಂತಹ ಸಂಕೇತಗಳು ಎಷ್ಟಿವೆ?

A. ಮೂರು

B. ಒಂದು

C. ಎರಡು



D. ನಾಲ್ಕು

Q36 General Intelligence and Reasoning

ಹೈತರ್ ಅವರು ತನ್ನ ತರಗತಿಯಲ್ಲಿ ಕೆಳಗಿನಿಂದ 20 ನೇ ಸ್ಥಾನ ಮತ್ತು ಮೇಲಿನಿಂದ 30 ನೇ ಸ್ಥಾನ ಪಡೆದಿದ್ದಾರೆ. ಹಾಗಾದರೆ ಅವರ ತರಗತಿಯಲ್ಲಿ ಎಷ್ಟು ವಿದ್ಯಾರ್ಥಿಗಳಿದ್ದಾರೆ?

A. 45

B. 34

C. 47

D. 49



Q37 General Intelligence and Reasoning

ಇಂಗ್ಲಿಷ್ ವರ್ಣಮಾಲೆಯ ಕ್ರಮವನ್ನು ಆಧರಿಸಿ, ಈ ಕೆಳಗಿನ ನಾಲ್ಕು ಅಕ್ಷರಗಳ ಗುಚ್ಛ ಜೋಡಿಗಳ ಪೈಕಿ ಮೂರು ಅಕ್ಷರ ಗುಚ್ಛಗಳು ಒಂದು ವಿಶಿಷ್ಟ ರೀತಿಯಲ್ಲಿ ಸದೃಶವಾಗಿದೆ. ಮತ್ತು ಹೀಗಾಗಿ ಅವು ಒಂದೇ ಗುಂಪಿಗೆ ಸೇರುತ್ತವೆ. ಈ ಕೆಳಗಿನ ಯಾವ ಅಕ್ಷರ ಗುಚ್ಛವು ಆ ಗುಂಪಿಗೆ ಸೇರುವುದಿಲ್ಲ?

(ಗಮನಿಸಿ: ಗುಂಪಿಗೆ ಸೇರದ ಅಕ್ಷರ ಗುಚ್ಛವು ಅದರಲ್ಲಿನ ವ್ಯಂಜನಗಳು/ಸ್ವರಗಳ ಸಂಖ್ಯೆ ಅಥವಾ ಅಕ್ಷರ ಗುಚ್ಛದಲ್ಲಿನ ಅವುಗಳ ಸ್ಥಾನಗಳನ್ನು ಆಧರಿಸಿಲ್ಲ)

A. HKQU

B. TWCG

C. RUAF

D. CFLP

Q38 General Intelligence and Reasoning **ENGLISH**

Kamal starts from Point A and drives 17 km towards south. He then takes a left turn, drives 13 km, turns left and drives 21 km. He then takes a left turn and drives 18 km. He takes a final left turn, drives 4 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)

A. 5 km to the east

B. 3 km to the east

C. 6 km to the east

D. 4 km to the east

Q39 General Intelligence and Reasoning **ENGLISH**

Refer to the following number and symbol series and answer the question that follows. (Counting to be done from left to right only.)

(Left) @ 2 # 2 4 3 = % 8 * 1 8 @ \$ 4 ! 6 4 3 * 8 = (Right)

How many such numbers are there, each of which is immediately preceded by and also immediately followed by a symbol?

A. One

B. Five

C. Three

D. Four

Q40 General Intelligence and Reasoning

ಈ ಕೆಳಗಿನ ಯಾವ ಅಕ್ಷರ ಗುಚ್ಛವನ್ನು # ಮತ್ತು % ಜಾಗದಲ್ಲಿ ಹಾಕಿದಾಗ :: ಎಡಭಾಗದಲ್ಲಿರುವ ಅಕ್ಷರ ಗುಚ್ಛ ಜೋಡಿಯು ಹೊಂದಿರುವ ಮಾದರಿ ಮತ್ತು ಸಂಬಂಧವನ್ನೇ :: ಬಲಭಾಗದಲ್ಲಿರುವ ಅಕ್ಷರ ಗುಚ್ಛ ಜೋಡಿಯು ಹೊಂದಿರುತ್ತದೆ?

: OKR :: XTA : %

A. # = KGN, % = FXE

B. # = KGN, % = BXP

C. # = KLN, % = BXE

D. # = KGN, % = BXE

Q41 General Intelligence and Reasoning **ENGLISH**

B, C, D, F and H have different marks. Only one person has scored between C and D. Only one person has scored between H and D. F has scored less than C and D. How many people have scored less than B?

A. Four

B. Two

C. Three

D. One

Q42 General Intelligence and Reasoning

ಈ ಕೆಳಗೆ ಒಂದು ಪ್ರಶ್ನೆಯನ್ನು ನೀಡಲಾಗಿದೆ ಮತ್ತು ಅದರ ನಂತರ (I) ಮತ್ತು (II) ಎಂದು ಸಂಖ್ಯೆಗಳನ್ನು ನೀಡಿದ ಎರಡು ಹೇಳಿಕೆಗಳನ್ನು ನೀಡಲಾಗಿದೆ. ಈ ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಯಾವ ಹೇಳಿಕೆ/ಗಳು ಸಾಕಾಗುತ್ತದೆ/ವೆ ಎಂಬುದನ್ನು ಗುರುತಿಸಿ. ಎರಡೂ ಹೇಳಿಕೆಗಳನ್ನು ಓದಿ ಮತ್ತು ಸೂಕ್ತ ಉತ್ತರ ಯಾವುದೆಂದು ನಿರ್ಧರಿಸಿ.

ಪ್ರಶ್ನೆ:

S, T, U, V ಮತ್ತು W ಎಂಬ ಐದು ಜನ ಸ್ನೇಹಿತರು ಬೇರೆ ಬೇರೆ ವಯಸ್ಸಿನವರು. ಅವರಲ್ಲಿ ಎರಡನೇ ಅತ್ಯಂತ ಹಿರಿಯ ವ್ಯಕ್ತಿ ಯಾರು?

ಹೇಳಿಕೆಗಳು:

(I) W ಅವರು T ಗಿಂತ ಕಿರಿಯರು. W ಅವರು U ಗಿಂತ ಹಿರಿಯರು.

(II) T ಅವರು ಅತ್ಯಂತ ಹಿರಿಯರು. ಒಬ್ಬರು ಮಾತ್ರ V ಗಿಂತ ಕಿರಿಯರು.

A. ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಹೇಳಿಕೆ I ರಲ್ಲಿನ ಮಾಹಿತಿಯೊಂದೇ ಸಾಕಾಗುತ್ತದೆ, ಆದರೆ ಹೇಳಿಕೆ II ರಲ್ಲಿನ ಮಾಹಿತಿ ಸಾಕಾಗುವುದಿಲ್ಲ.

B. ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಹೇಳಿಕೆ I ಮತ್ತು II ರಲ್ಲಿರುವ ಒಟ್ಟು ಮಾಹಿತಿಗಳು ಸಾಕಾಗುವುದಿಲ್ಲ.

C. ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಹೇಳಿಕೆ I ಮತ್ತು II ರಲ್ಲಿನ ಒಟ್ಟಾರೆ ಮಾಹಿತಿಗಳು ಸಾಕಾಗುತ್ತದೆ.

D. ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಲು ಹೇಳಿಕೆ II ರಲ್ಲಿನ ಮಾಹಿತಿಯೊಂದೇ ಸಾಕಾಗುತ್ತದೆ, ಆದರೆ ಹೇಳಿಕೆ I ರಲ್ಲಿನ ಮಾಹಿತಿ ಸಾಕಾಗುವುದಿಲ್ಲ.



Q43 General Intelligence and Reasoning

ಇಂಗ್ಲಿಷ್ ವರ್ಣಮಾಲೆಯ ಕ್ರಮವನ್ನು ಆಧರಿಸಿ, ಈ ಕೆಳಗಿನ ನಾಲ್ಕರ ಪೈಕಿ ಮೂರು ಒಂದು ವಿಶಿಷ್ಟ ರೀತಿಯಲ್ಲಿ ಸದೃಶವಾಗಿದ್ದು ಒಂದೇ ಗುಂಪಿಗೆ ಸೇರುತ್ತವೆ. ಈ ಕೆಳಗಿನ ಯಾವುದು ಆ ಗುಂಪಿಗೆ ಸೇರುವುದಿಲ್ಲ? (ಗಮನಿಸಿ: ಗುಂಪಿಗೆ ಸೇರದ ಅಕ್ಷರ ಗುಚ್ಛವು ಅದರಲ್ಲಿನ ವ್ಯಂಜನಗಳು/ಸ್ವರಗಳ ಸಂಖ್ಯೆ ಅಥವಾ ಅಕ್ಷರ ಗುಚ್ಛದಲ್ಲಿನ ಅವುಗಳ ಸ್ಥಾನಗಳನ್ನು ಆಧರಿಸಿಲ್ಲ)

A. NKL

B. ZWX

C. VST

D. FHD

**Q44 General Intelligence and Reasoning**

ಈ ಕೆಳಗೆ ನೀಡಿರುವ ಸರಣಿಯಲ್ಲಿ ಪ್ರಶ್ನಾರ್ಥಕ ಚಿಹ್ನೆಯ (?) ಜಾಗದಲ್ಲಿ ಯಾವುದು ಬರಬೇಕು?

17 22 37 62 97 ?

A. 137

B. 140

C. 142



D. 148

Q45 General Intelligence and Reasoning ENGLISH

If in a code language, If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '-', then the resultant of which of the following would be 55?

A. 16 C 112 D 63 A 77 B 31

B. 16 A 112 B 63 C 77 D 31



C. 16 D 112 A 63 C 77 B 31

D. 16 B 112 C 63 A 77 D 31

Q46 General Intelligence and Reasoning ENGLISH

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying 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 – 17 – 21 – 30; 13 – 14 – 18 – 27

A. 24 – 25 – 29 – 42

B. 11 – 12 – 16 – 18

C. 15 – 16 – 20 – 26

D. 22 – 23 – 27 – 36

**Q47 General Intelligence and Reasoning** ENGLISH

Select the term from among the given options that can replace the question mark (?) in the following series.

OJH 20, MHF 25, KFD 35, IDB 55, GBZ 95, ?

A. EXS 175

B. YXS 175

C. EZX 175



D. EXO 175

Q48 General Intelligence and Reasoning

ಇಂಗ್ಲಿಷ್ ವರ್ಣಮಾಲೆಯ ಕ್ರಮದ ಆಧಾರದ ಮೇಲೆ ಈ ಕೆಳಗಿನ ಸರಣಿಯಲ್ಲಿರುವ ಪ್ರಶ್ನಾರ್ಥಕ ಚಿಹ್ನೆಯ (?) ಜಾಗಕ್ಕೆ ಯಾವುದು ಸರಿಹೊಂದುತ್ತದೆ?

ONL AZX MLJ YXV ?

A. JKH

B. KHJ

C. KJH



D. JHK



Q49 General Intelligence and Reasoning

ಈ ಕೆಳಗೆ ನೀಡಿರುವ ಸರಣಿಯಲ್ಲಿ ಪ್ರಶ್ನಾರ್ಥಕ ಚಿಹ್ನೆಯ (?) ಜಾಗದಲ್ಲಿ ಯಾವುದು ಬರುತ್ತದೆ?
1 13 28 46 67 ?

A. 92

B. 90

C. 93

D. 91 ✓

Q50 General Intelligence and Reasoning ENGLISH

SKIB is related to OGNG in a certain way based on the English alphabetical order. In the same way, CUCV is related to YQHA. To which of the following options is QIRK related, following the same logic?

A. MEPW

B. MEWP ✓

C. MWEF

D. MWPE

Q51 General Intelligence and Reasoning

ಆರು ಜನ ವಿಧ್ಯಾರ್ಥಿಗಳು ಒಂದು ವೃತ್ತಕಾರದ ಮೇಜಿನ ಸುತ್ತಲೂ ಮೇಜಿನ ಮಧ್ಯಭಾಗಕ್ಕೆ ಮುಖ ಮಾಡಿ ಕುಳಿತಿದ್ದಾರೆ. L ಅವರು J ಮತ್ತು H ಇವರಿಬ್ಬರಿಗೂ ತಕ್ಷಣದ ನೆರೆಹೊರೆಯವರಾಗಿದ್ದಾರೆ. I ಅವರು J ಅವರ ಎಡಕ್ಕೆ ಎರಡನೇ ಸ್ಥಾನದಲ್ಲಿ ಕುಳಿತಿದ್ದಾರೆ. K ಅವರು H ಅವರ ಬಲಕ್ಕೆ ಮೂರನೇ ಸ್ಥಾನದಲ್ಲಿ ಕುಳಿತಿದ್ದಾರೆ. G ಅವರು I ಮತ್ತು H ಇವರಿಬ್ಬರಿಗೂ ತಕ್ಷಣದ ನೆರೆಹೊರೆಯವರಾಗಿದ್ದಾರೆ. ಹಾಗಾದರೆ G ಅವರಿಂದ ಆರಂಭಿಸಿ (G ಅವರನ್ನೂ ಸೇರಿಸಿಕೊಂಡು) ಈ ಎಲ್ಲಾ ವ್ಯಕ್ತಿಗಳನ್ನು ಗಡಿಯಾರದ ಚಲನೆಯ ದಿಕ್ಕಿನ ಪ್ರಕಾರ ಇಂಗ್ಲೀಷ್ ವರ್ಣಮಾಲೆಯ ಕ್ರಮದಲ್ಲಿ ಕೂರಿಸಿದರೆ, ಎಷ್ಟು ಜನರ ಸ್ಥಾನಗಳು ಬದಲಾಗದೆ ಹಾಗೆಯೇ ಇರುತ್ತವೆ?

A. ಒಂದು

B. ಎರಡು

C. ಮೂರು

D. ನಾಲ್ಕು ✓

Q52 General Intelligence and Reasoning ENGLISH

Seven boxes, D, E, F, R, S, T and U, are kept one over the other but not necessarily in the same order. U is kept immediately above T. E is kept immediately above D. Only F is kept above S. Only two boxes are kept above U. E is not kept at third position from the bottom. How many boxes are kept between R and F?

A. Four

B. Two

C. Three ✓

D. One

Q53 General Intelligence and Reasoning

ಒಂದು ವೇಳೆ 'A' ಎಂದರೆ '+', 'B' ಎಂದರೆ 'x', 'C' ಎಂದರೆ '+' ಮತ್ತು 'D' ಎಂದರೆ '-' ಆಗಿದ್ದರೆ, ಕೆಳಗಿನ ಸಮೀಕರಣದಲ್ಲಿ ಪ್ರಶ್ನಾರ್ಥಕ ಚಿಹ್ನೆಯ (?) ಸ್ಥಾನಕ್ಕೆ ಯಾವ ಸಂಖ್ಯೆ ಬರುತ್ತದೆ?

93 D 7 B 5 C (69 A 3) C 26 = ?

A. 75

B. 122

C. 93

D. 107 ✓

Q54 General Intelligence and Reasoning ENGLISH

P is the sister of Q's brother R. S is the husband of Q and T is the son of S. How is P related to T?

A. Mother's sister ✓

B. Mother's mother

C. Mother

D. Sister

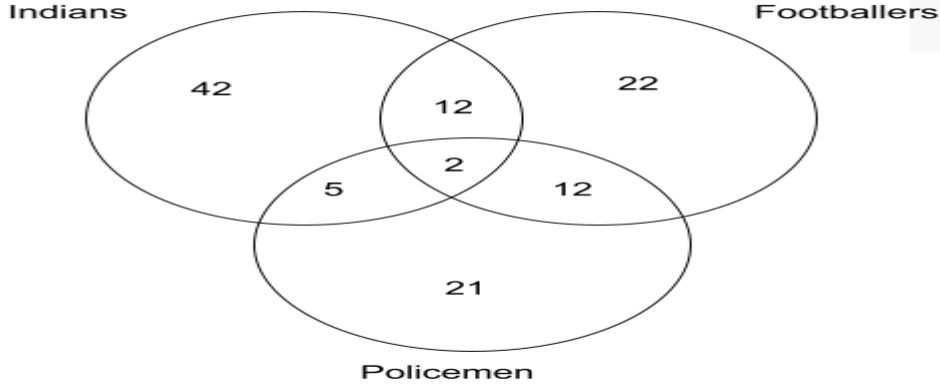


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Q55 General Intelligence and Reasoning **ENGLISH**

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



How many such policemen exist that are also Indians and footballers?

A. 5

B. 2

C. 12

D. 3

General Awareness

18 Questions • Answer Key

Q56 General Awareness

ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವ ದೇಶವು 2024 ರಲ್ಲಿ ಬಹು-ವಲಯ ತಾಂತ್ರಿಕ ಮತ್ತು ಆರ್ಥಿಕ ಸಹಕಾರಕ್ಕಾಗಿ ಬಂಗಾಳ ಕೊಲ್ಲಿ ಉಪಕ್ರಮದ (BIMSTEC) ಮೊದಲ ವ್ಯವಹಾರ ಶೃಂಗಸಭೆಯನ್ನು ಆಯೋಜಿಸಿತು?

A. ಥಿಂಪು, ಭೂತಾನ್

B. ನವದೆಹಲಿ, ಭಾರತ

C. ಢಾಕಾ, ಬಾಂಗ್ಲಾದೇಶ

D. ಕಠ್ಮಂಡು, ನೇಪಾಳ

Q57 General Awareness

2011 ರಲ್ಲಿ ಪ್ರಕಟವಾದ 'ದಿ ಗ್ರೇಟ್ ಇಂಡಿಯನ್ ನೋವೆಲ್' ಪುಸ್ತಕದ ಲೇಖಕರು ಯಾರು?

A. ಅರುಂಧತಿ ರಾಯ್

B. ಶಶಿ ತರೂರ್

C. ವಿಕ್ರಮ್ ಸೇಠ್

D. ಹಿರಣ್ ನಗರ್‌ಕರ್

Q58 General Awareness **ENGLISH**

Which of the following released the fourth edition of SDG India Index 2023-24?

A. National Institute for Transforming India

B. National Commission of Backward Classes

C. National Commission for Women

D. National Crime Record Bureau

Q59 General Awareness

ಭಾರತದ ಉಪರಾಷ್ಟ್ರಪತಿಗಳ ಚುನಾವಣೆ, ಅರ್ಹತೆ ಮತ್ತು ಪದಚ್ಯುತಿಗೆ ಸಂಬಂಧಿಸಿದ ನಿಬಂಧನೆಗಳನ್ನು ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವ ಅನುಚ್ಛೇದವು ಹೊಂದಿದೆ?

A. ಅನುಚ್ಛೇದ 63 - 71

B. ಅನುಚ್ಛೇದ 68 - 75

C. ಅನುಚ್ಛೇದ 224 - 245

D. ಅನುಚ್ಛೇದ 78 - 80



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Q60 General Awareness

ಈ ಕೆಳಗಿನವರಲ್ಲಿ ಭಾರತದ ಮೊದಲ ನಾಗರಿಕ ಬಾಹ್ಯಾಕಾಶ ಪ್ರವಾಸಿ ಯಾರು?

- A. ಶುಭಾಂಶು ಶುಕ್ಲಾ
- B. ಪ್ರಶಾಂತ್ ಬಾಲಕೃಷ್ಣನ್ ನಾಯರ್
- C. ಗೋಪಿಚಂದ್ ತೋಟಕೂರ ☒
- D. ಅಜಿತ್ ಕೃಷ್ಣನ್

Q61 General Awareness

ಈ ಕೆಳಗಿನ ನದಿಗಳನ್ನು ಅವುಗಳ ಉಪನದಿಗಳೊಂದಿಗೆ ಹೊಂದಿಸಿ.

ನದಿಗಳು	ಅವುಗಳ ಉಪನದಿಗಳು
1. ಬ್ರಹ್ಮಪುತ್ರ	a. ವೇತಾವತಿ (Betwa)
2. ಸಿಂಧೂ	b. ಚೀನಾಬ್ (Chenab)
3. ಯಮುನಾ	c. ದಿಬಾಂಗ್ (Dibang)

- A. 1-a, 2-b, 3-c
- B. 1-b, 2-c, 3-a
- C. 1-c, 2-a, 3-b
- D. 1-c, 2-b, 3-a ☒

Q62 General Awareness

ತಾಜ್ ಮಹಲ್‌ನ ವಸ್ತು ಎಲ್ಲಿ ನಡೆಸಲಾಗುತ್ತದೆ?

- A. ಫತೇಪುರ್ ಸಿಕ್ರಿಯಲ್ಲಿ
- B. ತಾಜ್ ಮಹಲ್ ನ ಪೂರ್ವ ದ್ವಾರದ ಬಳಿ ☒
- C. ಆಗ್ರಾ ಕೋಟೆಯಲ್ಲಿ
- D. ತಾಜ್ ಮಹಲ್ ನ ಪಶ್ಚಿಮ ದ್ವಾರದ ಬಳಿ

Q63 General Awareness

ಈ ಕೆಳಗಿನವರಲ್ಲಿ ಯಾರು 2024 ರ ಪ್ಯಾರಿಸ್ ಪ್ಯಾರಾಲಿಂಪಿಕ್ಸ್ ಕ್ರೀಡಾಕೂಟದಲ್ಲಿ ಭಾರತಕ್ಕಾಗಿ ಚಿನ್ನದ ಪದಕ ಗೆದ್ದು ಕೊಟ್ಟರು?

- A. ಅವನಿ ಲೇಖರಾ ☒
- B. ಪ್ರೀತಿ ಪಾಲ್
- C. ಮೋನಾ ಅಗರ್ವಾಲ್
- D. ನಿಷಾದ್ ಕುಮಾರ್

Q64 General Awareness **ENGLISH**

Which of the following committees suggested that the 'duty to pay taxes' should also be a Fundamental Duty of the Indian citizen?

- A. Sarkaria Commission
- B. Swaran Singh Committee ☒
- C. Justice JS Verma Committee
- D. Santhanam Committee

Q65 General Awareness

2024 ಸೆಪ್ಟೆಂಬರ್ 30 ರವರೆಗಿನ ಮಾಹಿತಿಯಂತೆ, ಭಾರತ ಸರ್ಕಾರವು ದೇಶಾದ್ಯಂತ ಎಷ್ಟು ಜನಾಭಿಮಾನ ಕೇಂದ್ರಗಳನ್ನು ಸ್ಥಾಪಿಸಿದೆ?

- A. 14,822
- B. 12,822
- C. 13,822 ☒
- D. 11,822

Q66 General Awareness

ಪ್ಲಾಸ್ಟಿಕ್ ತ್ಯಾಜ್ಯವನ್ನು ಕಡಿಮೆ ಮಾಡಲು ಈ ಕೆಳಗಿನ ಯಾವುದು ಪರಿಣಾಮಕಾರಿ ವಿಧಾನವಾಗಿದೆ?

- A. ವಿಲೇವಾರಿ ಮಾಡಬಹುದಾದ ಪ್ಲಾಸ್ಟಿಕ್ ಚೀಲಗಳನ್ನು ಬಳಸುವುದು
- B. ಪ್ಲಾಸ್ಟಿಕ್ ವಸ್ತುಗಳನ್ನು ಮರುಚಕ್ರೀಕರಣ ಮಾಡುವುದು ಮತ್ತು ಮರುಬಳಕೆ ಮಾಡುವುದು ☒
- C. ಪ್ಲಾಸ್ಟಿಕ್ ತ್ಯಾಜ್ಯವನ್ನು ಸುಡುವುದು
- D. ಪ್ಲಾಸ್ಟಿಕ್ ತ್ಯಾಜ್ಯವನ್ನು ನೆಲದೊಳಗೆ ಹೂತುಹಾಕುವುದು

Q67 General Awareness

ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ನೈಸರ್ಗಿಕ ಪರಿಸರ ವ್ಯವಸ್ಥೆಯಾಗಿದೆ?

- A. ತೋಟ
- B. ಹೊಲ/ ಗದ್ದೆ
- C. ಅಕ್ಷೇರಿಯಂ
- D. ಕಾಡು ☒

Q68 General Awareness

ಭಾರತೀಯ ರಾಷ್ಟ್ರೀಯ ಕಾಂಗ್ರೆಸ್‌ನ ಮೊದಲ ಅಧಿವೇಶನವು ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವ ಸ್ಥಳದಲ್ಲಿ ನಡೆಯಿತು?

- A. ಲಾಹೋರ್
- B. ಬಾಂಬೆ ☒
- C. ಕಲ್ಕತ್ತಾ
- D. ಅಲಹಾಬಾದ್



Q69 General Awareness

ಈ ಕೆಳಗಿನ ಯಾವ ವಸ್ತುವು ಜೈವಿಕವಾಗಿ ವಿಘಟನೀಯವಲ್ಲ?

A. ಪ್ಲಾಸ್ಟಿಕ್



B. ಮರ

C. ತರಕಾರಿಗಳ ಸಿಪ್ಪೆಗಳು

D. ಕಾಗದ

Q70 General Awareness

ಈ ಕೆಳಗಿನ ಯಾವ ಅನುಚ್ಛೇದವು ಕೇಂದ್ರ ಮತ್ತು ರಾಜ್ಯದ ನಡುವೆ ತೆರಿಗೆಗಳನ್ನು ಹಂಚಿಕೆ ಮಾಡುವ ಹಣಕಾಸು ಆಯೋಗಕ್ಕೆ ಸಂಬಂಧಿಸಿದೆ?

A. ಅನುಚ್ಛೇದ 280



B. ಅನುಚ್ಛೇದ 283

C. ಅನುಚ್ಛೇದ 281

D. ಅನುಚ್ಛೇದ 282

Q71 General Awareness

ಚೈತನ್ಯ ಮಹಾಪ್ರಭು ಅವರು ಈ ಕೆಳಗಿನ ಯಾವ ಧಾರ್ಮಿಕ ಪಂಥಕ್ಕೆ ಸಂಬಂಧಿಸಿದ್ದರು?

A. ಕಪಾಲಿಕ

B. ವೈಷ್ಣವ



C. ತಂತ್ರ

D. ಶೈವ

Q72 General Awareness

ಈ ಕೆಳಗಿನ ಯಾವ ಹೇಳಿಕೆಯು ಹಣದ ನಿಯಂತ್ರಣದಲ್ಲಿ ನೈತಿಕ ಅನುನಯದ ಪಾತ್ರವನ್ನು ನಿಖರವಾಗಿ ವಿವರಿಸುತ್ತದೆ?

A. ಇದು, ಬ್ಯಾಂಕುಗಳ ಸಾಲ ನೀಡುವ ವರ್ತನೆಯ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರಲು ಆರ್.ಬಿ.ಐ. ಬಳಸುವ ಅನುನಯ ಮತ್ತು ಒತ್ತಡಗಳ ಒಂದು ಸಂಯೋಜನೆಯಾಗಿದೆ.



B. ಇದು, ಬ್ಯಾಂಕಿನ ಸಾಲದ ಹಂಚಿಕೆಯನ್ನು ನಿಯಂತ್ರಿಸುವುದಕ್ಕಾಗಿ ಶಾಸನಬದ್ಧ ದ್ರವ್ಯತೆ ಅನುಪಾತದಲ್ಲಿ ಮಾಡಲಾಗುವ ವ್ಯತ್ಯಯವಾಗಿದೆ.

C. ಇದು, ಹಣದ ಪೂರೈಕೆಯ ಮೇಲೆ ಪ್ರಭಾವ ಬೀರಲು ಸರ್ಕಾರದ ಬಂಡವಾಳ ಪತ್ರಗಳ ಮಾರಾಟ ಮತ್ತು ಖರೀದಿಯನ್ನು ಒಳಗೊಂಡಿದೆ.

D. ಇದು, ಬಡ್ಡಿ ದರಗಳನ್ನು ನಿಗದಿಗೊಳಿಸುವ ಮೂಲಕ ಹಣದ ಪೂರೈಕೆಯನ್ನು ನಿಯಂತ್ರಿಸಲು ಆರ್.ಬಿ.ಐ. ಬಳಸುವ ಒಂದು ಪ್ರತ್ಯಕ್ಷ ಸಾಧನವಾಗಿದೆ.

Q73 General Awareness **ENGLISH**

Every year, Foreign Trade Policy has been declared by which ministry of the Government of India?

A. Ministry of Information

B. Ministry of Home Affairs

C. Ministry of External Affairs

D. Ministry of Commerce and Industry

**General Science**

27 Questions • Answer Key

Q74 General Science

ಸಸ್ಯಗಳಲ್ಲಿ, ಕೇವಲ ತಾಯಿ ಸಸ್ಯವನ್ನು ಒಳಗೊಂಡ ಸಂತಾನೋತ್ಪತ್ತಿ ವಿಧಾನ ಯಾವುದು?

A. ಪರಾಗಸ್ಪರ್ಶ ಕ್ರಿಯೆ

B. ಲೈಂಗಿಕ ಸಂತಾನೋತ್ಪತ್ತಿ

C. ಅಲೈಂಗಿಕ ಸಂತಾನೋತ್ಪತ್ತಿ



D. ಫಲೀಕರಣ (Fertilisation)

Q75 General Science

ಸ್ವಕೀಯ ಪರಾಗಸ್ಪರ್ಶ ಕ್ರಿಯೆಯು ಈ ಕೆಳಗಿನದರಲ್ಲಿ ಮಾತ್ರ ಸಾಧ್ಯವಾಗುತ್ತದೆ:

A. ಕೇಸರ ಮತ್ತು ಶಲಾಕೆಗಳು ಒಂದೇ ಸಮಯದಲ್ಲಿ ಪಕ್ಷಗೊಳ್ಳುವ ದ್ವಿಲಿಂಗಿ ಹೂವುಗಳಲ್ಲಿ



B. ಕೇಸರ ಮತ್ತು ಶಲಾಕೆಗಳು ಬೇರೆ ಬೇರೆ ಸಮಯದಲ್ಲಿ ಪಕ್ಷಗೊಳ್ಳುವ ದ್ವಿಲಿಂಗಿ ಹೂವುಗಳಲ್ಲಿ

C. ಕೇಸರವು ಮೊದಲಿಗೆ ಪಕ್ಷಗೊಳ್ಳುವ ಏಕಲಿಂಗಿ ಹೂವುಗಳಲ್ಲಿ

D. ಶಲಾಕೆಯು ಮೊದಲಿಗೆ ಪಕ್ಷಗೊಳ್ಳುವ ಏಕಲಿಂಗಿ ಹೂವುಗಳಲ್ಲಿ



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Q76 General Science **ENGLISH**

The power in a circuit having voltage V and current I during time interval t is:

- A. $(I \times t)/V$
- B. I/V
- C. $I \times V$ ✓
- D. V/I

Q77 General Science **ENGLISH**

In a parallel circuit, how does the voltage across each resistor compare to the total voltage supplied by the battery?

- A. It is inversely proportional to the resistance.
- B. It is zero.
- C. It is divided according to the resistance values.
- D. It is the same for each resistor. ✓

Q78 General Science

pH ಮಾಪಕದಲ್ಲಿ ಗಾಢ ನೀಲಿ ಬಣ್ಣವು _____ ಅನ್ನು ಸೂಚಿಸುತ್ತದೆ.

- A. ಪ್ರಬಲ ಆಮ್ಲೀಯ ದ್ರಾವಣ
- B. ತರಸ್ಥ ದ್ರಾವಣ
- C. ದುರ್ಬಲ ಪ್ರತ್ಯಾಮ್ಲ ದ್ರಾವಣ ✓
- D. ಪ್ರಬಲ ಪ್ರತ್ಯಾಮ್ಲ ದ್ರಾವಣ

Q79 General Science **ENGLISH**

What is the relationship between current (I), power (P), and voltage (V)?

- A. $I = V \div P$
- B. $I = P \div V$ ✓
- C. $I = PV$
- D. $I = P2V$

Q80 General Science **ENGLISH**

Which of the following is the product of the neutralisation of hydrochloric acid (HCl) with sodium hydroxide (NaOH)?

- A. Sodium hydroxide and water
- B. Sodium chloride and water ✓
- C. Sodium chloride and hydrogen gas
- D. Sodium hydroxide and hydrochloric acid

Q81 General Science **ENGLISH**

An emf is induced whenever there is a change in the magnetic field linked with electric circuits. This is stated by the:

- A. Gravitation law
- B. Faraday's law ✓
- C. Newton's law
- D. Ohm's law

Q82 General Science

ಈ ಕೆಳಗಿನ ಯಾವ ಕ್ರಿಯೆಯು ತಟಸ್ಥೀಕರಣ ಕ್ರಿಯೆಯನ್ನು ಪ್ರತಿನಿಧಿಸುವುದಿಲ್ಲ?

- A. $\text{Na}_2\text{CO}_3 + \text{HCl} \rightarrow \text{NaCl} + \text{CO}_2 + \text{H}_2\text{O}$ ✓
- B. $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
- C. $\text{H}_2\text{SO}_4 + \text{Ca(OH)}_2 \rightarrow \text{CaSO}_4 + 2\text{H}_2\text{O}$
- D. $\text{CH}_3\text{COOH} + \text{NaOH} \rightarrow \text{CH}_3\text{COONa} + \text{H}_2\text{O}$

Q83 General Science

ಇಂಗಾಲದ ಯಾವ ಗುಣವು ದೊಡ್ಡದಾದ ಸರಪಳಿಗಳು ಮತ್ತು ಉಂಗುರಗಳನ್ನು ರೂಪಿಸಲು ಅನುವು ಮಾಡಿಕೊಡುತ್ತದೆ?

- A. ಇತರ ಧಾತುಗಳೊಂದಿಗೆ ಸ್ಥಿರ ಬಂಧಗಳನ್ನು ರೂಪಿಸುವ ಸಾಮರ್ಥ್ಯ
- B. ಸಹವೇಲೆನ್ಸಿಯ ಬಂಧಗಳನ್ನು ರೂಪಿಸುವ ಸಾಮರ್ಥ್ಯ
- C. ಏಕ ಬಂಧಗಳನ್ನು ರೂಪಿಸುವ ಪ್ರವೃತ್ತಿ
- D. ಬಹು ಬಂಧಗಳನ್ನು ರೂಪಿಸುವ ಸಾಮರ್ಥ್ಯ ✓

Q84 General Science

ಮನೆಗಳಲ್ಲಿ ಅಳವಡಿಸುವ ವಿದ್ಯುತ್ ಮಂಡಲದಲ್ಲಿರುವ ವಿದ್ಯುತ್ ಪೂರೈಕೆ ಮುಖ್ಯ ಕಾರ್ಯವೇನು?

- A. ವಿದ್ಯುತ್ ಹರಿವನ್ನು ಹೆಚ್ಚಿಸುವುದು
- B. ವಿದ್ಯುತ್ ಮಂಡಲದಲ್ಲಿನ ರೋಧವನ್ನು ಕಡಿಮೆ ಮಾಡುವುದು
- C. ಓವರ್ ಲೋಡಿಂಗ್ ಮತ್ತು ಶಾರ್ಟ್ ಸರ್ಕ್ಯೂಟ್‌ಗಳನ್ನು ತಡೆಗಟ್ಟುವುದು ✓
- D. ವೋಲ್ಟೇಜ್ ಪೂರೈಕೆಯನ್ನು ನಿಯಂತ್ರಿಸುವುದು

Q85 General Science **ENGLISH**

What is the pH range of a strongly acidic solution?

- A. 7-8
- B. 10-11
- C. 12-14
- D. 0-3 ✓



Q86 General Science

ಒಂದು ವಿದ್ಯುತ್ ಸಾಧನವನ್ನು 180-V ವೋಲ್ಟೇಜ್ ಇರುವ ಒಂದು ವಿದ್ಯುತ್ ಮೂಲಕ್ಕೆ ಜೋಡಿಸಿದಾಗ ಅದು 1.75 A ವಿದ್ಯುತ್ ಅನ್ನು ಸೆಳೆದುಕೊಳ್ಳುತ್ತದೆ. ಹಾಗಾದರೆ ಈ ಸಾಧನದ ವಿದ್ಯುತ್ ರೇಟಿಂಗ್ ಎಷ್ಟು?

A. 315 W



B. 440 W

C. 225 W

D. 105 W

Q87 General Science

ಈ ಕೆಳಗಿನವುಗಳಲ್ಲಿ ಯಾವುದು ಬೀಜಗಳ ಚದುರುವಿಕೆಯ ಕಾರಕ ಅಲ್ಲ?

A. ನೀರು

B. ಪ್ರಾಣಿ

C. ಗಾಳಿ

D. ಸೂರ್ಯನ ಬೆಳಕು

**Q88 General Science** **ENGLISH**

What are regenerative cells used by Hydra for?

A. Hydra uses regenerative cells for reproduction by fragmentation.

B. Hydra uses regenerative cells for reproduction by sexual reproduction.

C. Hydra uses regenerative cells for reproduction by spore formation.

D. Hydra uses regenerative cells for reproduction by budding.

**Q89 General Science**

ರೋಧಕಗಳ ಸರಣಿ ಸಂಯೋಜನೆಯಲ್ಲಿ, ಪ್ರತಿ ರೋಧಕಕ್ಕೆ ವೋಲ್ಟೇಜ್ ಅನ್ನು ಹೇಗೆ ಹಂಚಲಾಗುತ್ತದೆ?

A. ರೋಧಕ್ಕೆ ವಿಲೋಮಾನುಪಾತದಲ್ಲಿ

B. ರೋಧಕ್ಕೆ ನೇರಾನುಪಾತದಲ್ಲಿ



C. ರೋಧದ ಮೌಲ್ಯಗಳು ಯಾವುದೇ ಪರಿಣಾಮ ಬೀರುವುದಿಲ್ಲ

D. ಎಲ್ಲಾ ರೋಧಕಗಳಲ್ಲಿ ಒಂದೇ ರೀತಿ

Q90 General Science

ಎಲೆಕ್ಟ್ರಿಕ್ ಮೋಟರಿನಲ್ಲಿರುವ ದಿಕ್ಪರಿವರ್ತಕವನ್ನು ಯಾವುದಕ್ಕೆ ಬಳಸಲಾಗುತ್ತದೆ ?

A. ಕಾಂತಕ್ಷೇತ್ರದ ದಿಕ್ಕನ್ನು ಬದಲಿಸಲು

B. ಮಂಡಲದಲ್ಲಿನ ಕಾಂತಕ್ಷೇತ್ರವನ್ನು ನಿರ್ವಹಿಸಲು

C. ಮಂಡಲದಲ್ಲಿ ವಿಭವಾಂತರವನ್ನು ನಿರ್ವಹಿಸಲು

D. ಸುರಳಿಯ ಮೂಲಕ ಹರಿಯುವ ವಿದ್ಯುತ್ ಪ್ರವಾಹದ ದಿಕ್ಕನ್ನು ಹಿಮ್ಮುಖಗೊಳಿಸಲು

**Q91 General Science**

ವಿದ್ಯುತ್ ಮೋಟರ್‌ನಲ್ಲಿ ವಿದ್ಯುತ್ ಪ್ರವಹಿಸುವ ವಾಹಕದ ಮೇಲಿನ ಬಲದ ದಿಕ್ಕನ್ನು ನಿರ್ಧರಿಸಲು ಈ ಕೆಳಗಿನ ಯಾವ ನಿಯಮವನ್ನು ಬಳಸಲಾಗುತ್ತದೆ?

A. ಆಂಪಿಯರ್ ನಿಯಮ

B. ಬಲಗೈ ಹೆಬ್ಬರಳ ನಿಯಮ

C. ಫ್ಲೆಮಿಂಗನ ಬಲಗೈ ನಿಯಮ

D. ಫ್ಲೆಮಿಂಗನ ಎಡಗೈ ನಿಯಮ

**Q92 General Science**

ಕುಡಿಯುವ ನೀರಿನಲ್ಲಿ ರೋಗಾಣು ನಾಶಮಾಡಲು ಬ್ಲೀಚಿಂಗ್ ಪೌಡರ್ ಅನ್ನು ಏಕೆ ಬಳಸಲಾಗುತ್ತದೆ?

A. ಇದು ನೀರಿನ ಗಡಸುತನವನ್ನು ಕಡಿಮೆ ಮಾಡುತ್ತದೆ.

B. ಇದು ಆಮ್ಲೀಯ ಮಾಧ್ಯಮವನ್ನು ಒದಗಿಸುತ್ತದೆ.

C. ಇದು ಕ್ಲೋರಿನ್ ಅನ್ನು ಬಿಡುಗಡೆ ಮಾಡುತ್ತದೆ ಹಾಗೂ ಅದು ರೋಗಾಣು ಕ್ರಿಮಿಗಳನ್ನು ಕೊಲ್ಲುತ್ತದೆ.



D. ಇದು ನೀರನ್ನು ತಟಸ್ಥಗೊಳಿಸುತ್ತದೆ.

Q93 General Science

ಮಾನವರಲ್ಲಿ ಮಗುವಿನ ಲಿಂಗವನ್ನು ಯಾವುದು ನಿರ್ಧರಿಸುತ್ತದೆ?

A. ಆನುವಂಶಿಕ ರಚನೆ



B. ಫಲೀಕರಣ ಹೊಂದಿದ ಮೊಟ್ಟೆಗಳನ್ನು ಇಟ್ಟಿರುವ ಜಾಗದ ತಾಪಮಾನ

C. ಭ್ರೂಣದ ಹಣೆಬರಹ

D. ಪರಿಸರ ಸೂಚನೆಗಳು



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Q94 General Science

ಒಂದು ವೇಳೆ ಒಂದು ಮಗುವು ತಂದೆಯಿಂದ Y ಕ್ರೋಮೋಸೋಮ್ ಅನ್ನು ಅನುವಂಶಿಕವಾಗಿ ಪಡೆದರೆ, ಮಗುವಿನ ಲಿಂಗ ಯಾವುದು?

- A. ಉಭಯಲಿಂಗ
- B. ಹೆಣ್ಣು
- C. ನಿರ್ಧರಿಸಲು ಸಾಧ್ಯವಿಲ್ಲ
- D. ಗಂಡು ✓

Q95 General Science **ENGLISH**

What is the process by which sodium hydroxide is prepared?

- A. Chlor-alkali process ✓
- B. Solvay's process
- C. Contact process
- D. Haber's process

Q96 General Science

ವಿದ್ಯುತ್ ಸಾಗಿಸುತ್ತಿರುವ ಉದ್ದನೆಯ, ನೇರ ಸೋಲೆನಾಯ್ಡ್ ನ ಒಳಗಿನ ಕಾಂತ ಕ್ಷೇತ್ರವು _____ ಆಗಿರುತ್ತದೆ.

- A. ಶೂನ್ಯ
- B. ಏಕರೂಪ ಮತ್ತು ಸೋಲೆನಾಯ್ಡ್ ನ ಅಕ್ಷಕ್ಕೆ ಸಮಾಂತರ ✓
- C. ವಿದ್ಯುತ್ಪ್ರವಾಹಕ್ಕೆ ವಿಲೋಮ ಅನುಪಾತ
- D. ತುದಿಗಳ ಪಕ್ಕದಲ್ಲಿ ಪ್ರಬಲ

Q97 General Science

ಸೋಲ್ವೆ ಪ್ರಕ್ರಿಯೆಯಲ್ಲಿ ವಾಷಿಂಗ್ ಸೋಡಾವನ್ನು ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) ಯಾವ ಸಂಯುಕ್ತದಿಂದ ಪಡೆಯಲಾಗುತ್ತದೆ?

- A. ಸೋಡಿಯಂ ಸಲ್ಫೇಟ್
- B. ಸೋಡಿಯಂ ಕ್ಲೋರೈಡ್
- C. ಸೋಡಿಯಂ ಬೈಕಾರ್ಬೋನೇಟ್ ✓
- D. ಸೋಡಿಯಂ ಹೈಡ್ರಾಕ್ಸೈಡ್

Q98 General Science

ಈ ಕೆಳಗಿನ ಯಾವ ವೈರಾಣು ಸೋಂಕು ಲೈಂಗಿಕ ಸಂಪರ್ಕದ ಮೂಲಕ ಹರಡುತ್ತದೆ?

- A. ಸಿಫಿಲಿಸ್
- B. ಎಚ್.ಐ.ವಿ - ಐಡ್ಸ್ ✓
- C. ಕ್ಷಯ
- D. ಗೊನೋರಿಯಾ

Q99 General Science **ENGLISH**

Which of the following reactions represents the combustion of methane?

- A. $\text{CH}_4 + \text{Cl}_2 \rightarrow \text{CH}_3\text{Cl} + \text{HCl}$
- B. $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO} + \text{H}_2\text{O}$
- C. $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$ ✓
- D. $\text{CH}_4 + \text{H}_2\text{O} \rightarrow \text{CO} + \text{H}_2$

Q100 General Science

ಉತ್ಕರ್ಷಣದ ಸಂದರ್ಭದಲ್ಲಿ, ಬೆಳ್ಳಿಯು ತನ್ನ ಬಣ್ಣವನ್ನು _____ ಬಣ್ಣಕ್ಕೆ ಬದಲಾಯಿಸುತ್ತದೆ ಮತ್ತು ತಾಮ್ರವು ತನ್ನ ಬಣ್ಣವನ್ನು _____ ಬಣ್ಣಕ್ಕೆ ಬದಲಾಯಿಸುತ್ತದೆ.

- A. ಕಪ್ಪು; ಹಸಿರು ✓
- B. ಬೂದು; ನೀಲಿ
- C. ಕಪ್ಪು; ನೀಲಿ
- D. ಬೂದು; ಹಸಿರು



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Mathematics

31 Questions • Answer Key

Q1 Mathematics ENGLISH

If a 1352 m long train crosses a pole in 169 seconds, then find the time (in seconds) taken by the train to cross a 256 m long platform.

A. 195

B. 201

C. 193

D. 205

Q2 Mathematics ENGLISH

A man sold an article for ₹390 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 ₹3900, then what is the value of d ?

A. 48

B. 45

C. 50

D. 41

Q3 Mathematics ENGLISH

What is the average of all the natural numbers from 1 to 87?

A. 44.5

B. 43.5

C. 45

D. 44

Q4 Mathematics ENGLISH

Two numbers are in the ratio 7 : 5. If the first number is increased by 14 and the second number is decreased by 5, then the ratio becomes 4 : 2. What is the sum of the original two numbers?

A. 106

B. 96

C. 115

D. 111

Q5 Mathematics ENGLISH

If the interest earned during the 2nd year on a certain sum is ₹9911, and the rate of interest is 10% per annum compounded annually, then the sum is:

A. ₹90100

B. ₹90055

C. ₹90115

D. ₹90080

Q6 Mathematics ENGLISH

A and B complete a work in 17 days. If A alone can do it in 34 days then, B alone can do in _____ (days).

A. 34

B. 35

C. 36

D. 33

Q7 Mathematics ENGLISH

A shopkeeper bought an article for ₹760. At what price (in ₹) should he sell the article to make 30% profit?

A. 988

B. 532

C. 976

D. 1000

Q8 Mathematics ENGLISH

Aman completes his journey in 14 hours. He covers half the distance at 39 km/h and the rest at 45 km/h. What is the length of the journey (in Km)?

A. 592

B. 585

C. 594

D. 591



Q9 Mathematics ENGLISH

A number when increased by 50 %, gives 3030. The number is:

- A. 1010
- B. 4040
- C. 6060
- D. 2020

**Q10 Mathematics** ENGLISH

Find the simple interest (in closest integral ₹) on ₹3000 at 8% per annum rate of interest for the period from 22 February 2024 to 23 April 2024

- A. 38
- B. 40
- C. 39
- D. 41

**Q11 Mathematics** ENGLISH

PN is a secant intersecting a circle at points M and N such that $PN > PM$. A tangent PT is drawn to the circle touching it at T. If $PM = 32$ cm and $PT = 40$ cm, what is the length (in cm) of the chord MN?

- A. 20
- B. 36
- C. 50
- D. 18

**Q12 Mathematics** ENGLISH

Among five people named A, B, C, D and E, each has a certain age. D is four times the age of C. A is two times the age of C. D is five times the age of B. The age of B is 12. If E is thrice the age of A, what is the age of E?

- A. 90
- B. 92
- C. 88
- D. 94

**Q13 Mathematics** ENGLISH

44 men can do a piece of work in 48 days. The number of men required to complete the same work in 8 days is:

- A. 264
- B. 260
- C. 266
- D. 261

**Q14 Mathematics** ENGLISH

The marks scored by 10 students are given below.
14, 15, 16, 17, 10, 17, 19, 13, 14, 14
The mode of the data is:

- A. 17
- B. 15
- C. 14
- D. 16

**Q15 Mathematics** ENGLISH

Write the expanded form of $(6a + 5b + 8c)^2$.

- A. $36a^2 + 25b^2 + 64c^2 + 64ab + 80bc + 96ac$
- B. $36a^2 + 25b^2 + 64c^2 + 60ab + 80bc + 106ac$
- C. $36a^2 + 25b^2 + 64c^2 + 60ab + 80bc + 96ac$
- D. $36a^2 + 25b^2 + 64c^2 + 60ab + 75bc + 96ac$

**Q16 Mathematics** ENGLISH

Sangeeta and Hemlata invest in a business in the ratio 1 : 3. If total profit is Rs. 2568, then what is difference between the profit (in Rs.) of Sangeeta and Hemlata?

- A. 1184
- B. 1334
- C. 1284
- D. 1384



Q17 Mathematics ENGLISH

Write the expanded form of $(5a + 7b + 3c)^2$.

A. $25a^2 + 49b^2 + 9c^2 + 70ab + 42bc + 30ac$ ✓

B. $25a^2 + 49b^2 + 9c^2 + 74ab + 42bc + 30ac$

C. $25a^2 + 49b^2 + 9c^2 + 70ab + 37bc + 30ac$

D. $25a^2 + 49b^2 + 9c^2 + 70ab + 42bc + 40ac$

Q18 Mathematics ENGLISH

The cost of a washing machine is 40% less than the cost of a TV. If the cost of the washing machine increases by 64% and that of the TV decreases by 20%, then what is the change in the total cost of 5 washing machines and 7 TVs?

A. Decrease by 5%

B. Increase by 13%

C. Decrease by 4%

D. Increase by 5.2% ✓

Q19 Mathematics ENGLISH

The average price of three items of furniture is Rs 16845. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 10107 ✓

B. 5615

C. 7861

D. 3369

Q20 Mathematics ENGLISH

The length of each of the two equal sides of an isosceles triangle is 89 cm each and the length of its base is 78 cm. The area (in cm^2) of the triangle is:

A. 3139

B. 3134

C. 3102

D. 3120 ✓

Q21 Mathematics ENGLISH

Write the expanded form of $(8a + 5b + 9c)^2$.

A. $64a^2 + 25b^2 + 81c^2 + 80ab + 85bc + 144ac$

B. $64a^2 + 25b^2 + 81c^2 + 80ab + 90bc + 154ac$

C. $64a^2 + 25b^2 + 81c^2 + 84ab + 90bc + 144ac$

D. $64a^2 + 25b^2 + 81c^2 + 80ab + 90bc + 144ac$ ✓

Q22 Mathematics ENGLISH

Evaluate 184^2

A. 33856 ✓

B. 33866

C. 33806

D. 33836

Q23 Mathematics ENGLISH

Evaluate: $16 + 18 \div 6 - 2 \times 3$

A. 12

B. 15

C. 13 ✓

D. 16

Q24 Mathematics ENGLISH

The average marks of a student in six subjects is 94. After re-evaluation in three subjects the marks were changed to 89 from 75, 90 from 82 and 88 from 80. In the remaining subjects, the marks remained unchanged. Find the new average marks.

A. 95

B. 97

C. 98

D. 99 ✓



Q25 Mathematics ENGLISH

Express the value of $35.63 - 47.058 + 10.36 - 24.28 + 5.316 \times 5$ as a vulgar fraction.

A. $1\frac{29}{125}$



B. $2\frac{13}{58}$

C. $1\frac{31}{48}$

D. $1\frac{21}{47}$

Q26 Mathematics ENGLISH

If the radius of a hemisphere is increased by 50%, then find the percentage increase in the volume. (Take $\pi = \frac{22}{7}$)

A. 137.5%

B. 125%



C. 150%

D. 112.5%

Q27 Mathematics ENGLISH

If the mean of the following data is 37, then the value of X is:

xi	20	30	40	85
fi	19	X	13	24

A. 106

B. 107

C. 124



D. 125

Q28 Mathematics ENGLISH

If 214 apples were distributed among Ajay, Amit, and Amar in the ratio $\frac{1}{5} : \frac{1}{7} : \frac{1}{6}$, how many apples did the Amar get?

A. 40

B. 70



C. 100

D. 80



Q29 Mathematics ENGLISH

$\frac{(a^{10} \times b^3 \times c^9)}{(a^9 \times b^6 \times c^9)}$ in simplified form is:

A. $(a^{-1}) \times (b^{-9}) \times (c^{-8})$

B. $(a^{-1}) \times (b^{-3}) \times (c^{-10})$

C. $(a^1) \times (b^{-3}) \times (c^0)$ ✓

D. $(a^1) \times (b^{-9}) \times (c^{-7})$

Q30 Mathematics ENGLISH

By selling an article at $\frac{2}{5}$ of its actual selling price, Manav incurs a loss of 27%. If he sells it at 84% of its actual selling price, then the profit percentage is:

A. 56.9%

B. 52.6%

C. 53.3% ✓

D. 55.5%

Q31 Mathematics ENGLISH

Find the value of $\frac{\cos 35^\circ}{\sin 55^\circ} - \frac{\sin 11^\circ}{\cos 79^\circ} + \cos 28^\circ \operatorname{cosec} 62^\circ + \cos 0^\circ$.

A. 0

B. 2 ✓

C. 1

D. -1



Q32 General Intelligence and Reasoning **ENGLISH**

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 conclusion(s) logically follow(s) from the statements.

Statements:

All ovals are bins. No bin is a car. No bin is a plum.

Conclusions:

(I): No oval is a car.

(II): Some plums are cars.

A. Both conclusions (I) and (II) follow.

B. Only conclusion (I) follows. ✓

C. Only conclusion (II) follows.

D. Neither conclusion (I) nor (II) follows.

Q33 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

VCF PWZ JQT DKN ?

A. EHX

B. XEH ✓

C. XHE

D. EXH

Q34 General Intelligence and Reasoning **ENGLISH**

Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

OHA MFY KDW IBU ?

A. GZS ✓

B. GSZ

C. SGZ

D. SZG

Q35 General Intelligence and Reasoning **ENGLISH**

Pratap starts from Point A and drives 16 km towards south. He then takes a right turn, drives 13 km, turns right and drives 18 km. He then takes a right turn and drives 18 km. He takes a final right turn, drives 2 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)

A. 6 km to the west

B. 3 km to the west

C. 7 km to the west

D. 5 km to the west ✓

Q36 General Intelligence and Reasoning **ENGLISH**

If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−', then what will be come in place of the question mark (?) in the following equation?

13 D 32 C 36 B 49 A 49 = ?

A. 19

B. 15

C. 18

D. 17 ✓

Q37 General Intelligence and Reasoning **ENGLISH**

Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 7 5 ^ 5 + % 5 6 \$ 2 3 * 6 + 3 & 4 ? \$ # 6 1 2 3 & 6 3 % @ (Right)

How many such symbols are there each of which is immediately preceded by a number and immediately followed by another symbol?

A. 4

B. 1

C. 3 ✓

D. 2



Q38 General Intelligence and Reasoning **ENGLISH**

What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and '+' and 'x' are interchanged?

$$10 + 52 - 13 \times 4 \div 18 = ?$$

A. 19

B. 26 ☒

C. 22

D. 24

Q39 General Intelligence and Reasoning **ENGLISH**

A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

A, B, C, D and E are sitting in a straight line facing north. Who sits on the extreme left end?

(I) Exactly 2 people sit between A and E.

(II) Exactly 2 people sit between B and C.

Both Statements I and II put together (and not

A. independently) are sufficient to answer the question.

Data in Statement I alone is sufficient to answer

B. the question, while data in Statement II alone is not.

C. Both Statements I and II put together are not sufficient to answer the question. ☒

D. Data in Statement II alone is sufficient to answer the question, while data in Statement I alone is not.

Q40 General Intelligence and Reasoning **ENGLISH**

L is brother of K. Q is married to N. Z is mother of L. N is daughter of Z. P is wife of K. How is Q related to K?

A. Sister's husband ☒

B. Mother's father

C. Father's brother

D. Brother

Q41 General Intelligence and Reasoning **ENGLISH**

Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) $6 \$ < 8 1^{\wedge} 3 * 2 @ 7 \# 4 \& 5 \% @ 9$ (Right)

If all the symbols are dropped from the series, which of the following will be fifth from right?

A. 2 ☒

B. 7

C. 4

D. 5

Q42 General Intelligence and Reasoning **ENGLISH**

In a certain code language, 'PLOT' is coded as '9137' and 'LIFE' is coded as '4872'. What is the code for 'L' in the given code language?

A. 7 ☒

B. 1

C. 4

D. 3

Q43 General Intelligence and Reasoning **ENGLISH**

Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

OQP : PTO

VWV : WZU

A. HFN : IIM ☒

B. NEO : OHL

C. KND : LQF

D. QEK : RHI

Q44 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: DHJ :: BFH : %

A. # = JNP, % = VZB ☒

B. # = JNP, % = WZB

C. # = KNP, % = VZB

D. # = JNP, % = VZO



Q45 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. CJSX

B. BIRW

C. JQZF



D. UBKP

Q46 General Intelligence and Reasoning **ENGLISH**

Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

NGJ : OJE

MHK : NKF

A. XHJ : YKF

B. KNI : LQD



C. JJK : KME

D. LMO : MOJ

Q47 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

18 49 18 45 18 41 18 ?

A. 31

B. 34

C. 37



D. 29

Q48 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

180 131 90 57 32 ?

A. 22

B. 20

C. 17

D. 15

**Q49** General Intelligence and Reasoning **ENGLISH**

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. E lives on an even numbered floor but not 6. The sum of floors on which A and E live is 7. F lives immediately above B. The sum of floors on which E and D live is 3. How many people live between A and D?

A. 1

B. 2

C. 3



D. 4

Q50 General Intelligence and Reasoning **ENGLISH**

L, K, M, N, O and P are sitting around a circular table facing the centre. L sits fourth to the right of O. M sits second to the left of L. N is not the immediate neighbour of M. K sits second to the right of N. How many people are sitting between P and N, when counted from the left of N?

A. None

B. One



C. Two

D. Three

Q51 General Intelligence and Reasoning **ENGLISH**

A, B, C, D, E, F and G live on seven different floors of the same building. The lowermost floor on the building is numbered 1, the floor above it, number 2 and so on, till the topmost floor is numbered 7. C lives on the sixth floor. Only three people live between C and F. A lives on an even numbered floor. D lives on one of the floors below B but immediately above F. E lives on one of the floors above C. Who lives on the lowermost floor?

A. G



B. F

C. E

D. B



Q52 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. NJ – SO



B. VQ – ZU

C. GB – KF

D. MH – QL

Q53 General Intelligence and Reasoning **ENGLISH**

In a certain code, 'silence gold words' is coded as 'nu mh ke', 'gold is precious' is coded as 'mh bi py' and 'silence is calm' is coded as 'nu py gh'. What is the possible code for 'gold silence' in that language?

A. mh nu



B. nu ke

C. bi ke

D. mh bi

Q54 General Intelligence and Reasoning **ENGLISH**

Select the option in which the numbers share the same relationship as that shared by the given pairs of numbers.

(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.)

18, 111

13, 81

A. 15, 93



B. 19, 114

C. 12, 69

D. 17, 104

Q55 General Intelligence and Reasoning **ENGLISH**

Select the option in which the numbers share the same relationship as that shared by the given pair of numbers.

(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, 113

15, 140

A. 14, 126

B. 8, 67

C. 17, 136

D. 11, 104

**General Awareness**

25 Questions • Answer Key

Q56 General Awareness **ENGLISH**

Which of the following states is also known as the 'Molassis basin', which is made up of soft unconsolidated deposits?

A. Tripura

B. Assam

C. Mizoram



D. Meghalaya

Q57 General Awareness **ENGLISH**

What was the venue of the 23rd meeting of the Shanghai Cooperation Organisation (SCO) in 2024?

A. Islamabad, Pakistan



B. Dhaka, Bangladesh

C. Sanghai, China

D. New Delhi, India



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Q58 General Awareness **ENGLISH**

Why is the depletion of the ozone layer a concern for humans?

- A. It promotes plant growth.
- B. It leads to increased water pollution.
- C. It protects us from harmful radiation. ✓
- D. It increases soil fertility.

Q59 General Awareness **ENGLISH**

Which of the following categories are NOT a class of consumers?

- A. Carnivores
- B. Herbivores
- C. Parasites
- D. Producers ✓

Q60 General Awareness **ENGLISH**

In May 2024, the Indian Air Force successfully tested its Arogya Maitri Disaster Management Cube in _____.

- A. Pokhran
- B. Agra ✓
- C. Bhuj
- D. Mysuru

Q61 General Awareness **ENGLISH**

What is the name of the Lunar Polar Exploration Mission, a collaboration with Japan's JAXA which was approved by India's National Space Commission in October 2024?

- A. Lupex ✓
- B. Mopex
- C. SpaceX
- D. Moonet

Q62 General Awareness **ENGLISH**

Which of the following Constitution Amendments empowers Parliament to establish common High court for two or more than two States?

- A. 6th Constitutional Amendment Act
- B. 8th Constitutional Amendment Act
- C. 7th Constitutional Amendment Act ✓
- D. 9th Constitutional Amendment Act

Q63 General Awareness **ENGLISH**

Who is the author of 'Fiction as History: The Novel and the City in Modern North India,' published in 2019?

- A. Vasudha Dalmia ✓
- B. Arundhati Roy
- C. Salman Rushdie
- D. Jhumpa Lahiri

Q64 General Awareness **ENGLISH**

Why do non-biodegradable wastes cause environmental problems?

- A. They are toxic to plants only.
- B. They remain in the environment for a long time. ✓
- C. They increase soil fertility.
- D. They can be easily recycled.

Q65 General Awareness **ENGLISH**

The Khilafat committee was formed in Bombay, to defend temporal powers of Khalifa, in _____.

- A. July 1919
- B. June 1919
- C. March 1919 ✓
- D. January 1919



Q66 General Awareness **ENGLISH**

According to the Annual Report 2019-20 of the Ministry of Textiles, India's textile industry contributes what percentage to the industry output, in value terms?

A. 7%



B. 6%

C. 15%

D. 18%

Q67 General Awareness **ENGLISH**

Ravi has purchased an aquarium and was surprised to know that regular cleaning of aquariums is essential. Why does it have to be regularly cleaned?

A. Dead fish and plants may spoil the electric supply of the aquarium.

B. Dead fish and plants are decomposed by microorganisms and smell bad.

C. Dead fish and plants may spoil the aeration system of the aquarium.

D. Dead fish and plants should be disposed of in the soil, not in water.



Q68 General Awareness **ENGLISH**

Garden is an ecosystem because:

A. it has both plants, trees and animals like insects, frogs, birds, etc., as biotic components

B. the living organisms in it interact with each other and are not affected by abiotic components

C. the living organisms in it interact with each other and are affected by abiotic components



D. it has only biotic components like plants, trees and flowers

Q69 General Awareness **ENGLISH**

In which of the following cases did the Supreme Court mention that the Fundamental Right to Primary Education is the Right to Life under Article 21 of the Indian Constitution?

A. P Sambamurthy vs Union of India

B. Navtej Singh Johar vs Union of India

C. Unni Krishnan vs State of Andhra Pradesh



D. Shreya Singhal vs Union of India

Q70 General Awareness **ENGLISH**

Manyakheta was the capital of which of following dynasties during the eighth century AD?

A. Rashtrakuta



B. Pratiharas

C. Chera

D. Pala

Q71 General Awareness **ENGLISH**

What impact does human activities have on the environment?

A. They help in waste disposal

B. Only a positive impact

C. They contribute to environmental pollution



D. No impact

Q72 General Awareness **ENGLISH**

How many seats did the Bhartiya Janata Party win in the Jammu & Kashmir assembly elections held in 2024?

A. 39

B. 19

C. 29



D. 49

Q73 General Awareness **ENGLISH**

Rashi wants to make compost for her kitchen garden. She plans to use kitchen wastes. Which set of articles is best suited for her work?

A. Peels of fruits, leftover vegetables, paper, packing sheets.

B. Peels of fruits, leftover vegetables, plastic waste, old mobile phone.

C. Peels of fruits, leftover vegetables, paper, torn cotton clothes.



D. Peels of fruits, leftover vegetables, plastic waste, thermocol cups.



Q74 General Awareness **ENGLISH**

Thermocol disposables are being widely used in parties and restaurants. By promoting this practice _____.

- A. we are reducing expenses; disposables are cheap to use
- B. we are increasing the hygiene concern in us
- C. we are making the waste biodegradable
- D. we are increasing non-biodegradable waste ✓

Q75 General Awareness **ENGLISH**

Which of the following is/are responsible for the depletion of the ozone layer in the atmosphere?

- A. Ethane
- B. Hydrofluorocarbons
- C. Methane
- D. Chlorofluorocarbons ✓

Q76 General Awareness **ENGLISH**

Which of the following articles deals with the office of the special officer for Linguistic Minorities?

- A. 350-B ✓
- B. 351-B
- C. 351-A
- D. 350-A

Q77 General Awareness **ENGLISH**

Which of the following teams won the 17th Edition of Indian Premier League?

- A. Kolkata Knight Riders ✓
- B. Delhi Capitals
- C. Mumbai Indians
- D. Chennai Superkings

Q78 General Awareness **ENGLISH**

Mohan went to a cafe and ordered a soft drink. The waiter brought his order in a plastic glass with a plastic straw. Mohan, being environment friendly, is not happy as:

- A. plastic glass and plastic straw is non biodegradable and persists in soil for a long time ✓
- B. a plastic glass and plastic straw does not add to the standard of the cafe
- C. the plastic glass and plastic straw were not of his favourite colour
- D. plastic glass and plastic straw spoils the taste of the drink

Q79 General Awareness **ENGLISH**

What is the primary function of 'viharas' in Buddhist architecture?

- A. To serve as meditation halls
- B. To house relics
- C. To serve as residential places for Buddhist priests ✓
- D. To hold public gatherings



Match the Following:

Column A	Column B
1. Marginal Efficiency of Capital	A. Spending on consumer goods
2. Autonomous Investment	B. Tendency for employment to fluctuate
3. Consumption Function	C. Expected rate of return on investment
4. Paradox of Thrift	D. Investment independent of income
5. Cyclical Unemployment	E. Increased saving reduces total demand

A. 1 - E, 2 - D, 3 - A, 4 - C, 5 - B

B. 1 - B, 2 - D, 3 - A, 4 - E, 5 - C

C. 1 - C, 2 - D, 3 - A, 4 - E, 5 - B



D. 1 - A, 2 - D, 3 - C, 4 - E, 5 - B

General Science

20 Questions • Answer Key

Q81 General Science **ENGLISH**

An electric motor converts electrical energy into:

A. electron energy

B. magnetic energy

C. mechanical energy



D. nuclear energy

Q82 General Science **ENGLISH**

Consider a conductor in the plane of the paper with current going from bottom to the top. What will be the direction of the magnetic field lines to the left of the conductor?

A. Perpendicular to the plane of the paper and going in.

B. Opposite to the direction of the current.

C. In the direction of the current.

D. Perpendicular to the plane of the paper and coming out.



Q83 General Science **ENGLISH**

Which ion reduces at the cathode during electrolysis of fresh brine solution?

A. Na^+

B. OH^-

C. H^+



D. Cl^-

Q84 General Science **ENGLISH**

Which metal is placed at the top of the reactivity series?

A. Copper

B. Iron

C. Silver

D. Potassium



Q85 General Science **ENGLISH**

Which of the following best describes why ionic compounds like potassium bromide (KBr) do NOT conduct electricity in solid form but do in molten form?

- A. Solid KBr consists of neutral atoms with no free electrons.
- B. Solid KBr has weak ions that do not conduct electricity.
- C. Ionic bonds prevent ion movement in solid KBr. ✓
- D. In molten form, KBr decomposes into gaseous atoms.

Q86 General Science **ENGLISH**

What industrial method is most typically used to produce sodium hydroxide (NaOH)?

- A. Electrolysis of brine ✓
- B. Castner-Kellner process
- C. Contact process
- D. Haber process

Q87 General Science **ENGLISH**

Which of the following options represents the correct Lewis structure for methane (CH₄)?

- A. A carbon atom bonded to two hydrogen atoms with double bonds
- B. A carbon atom bonded to four hydrogen atoms with single bonds ✓
- C. A carbon atom bonded to one hydrogen atom with a double bond
- D. A carbon atom bonded to four hydrogen atoms with triple bonds

Q88 General Science **ENGLISH**

If a conductor follows the Ohm's law, then the graph between current and voltage will be a/an _____.

- A. ellipse
- B. hyperbola
- C. parabola
- D. straight line ✓

Q89 General Science **ENGLISH**

A wire has a resistance of R. If its length is increased by a factor of 8 and its cross-sectional area is decreased by a factor of 4, what is its new resistance (R')?

- A. $R' = 2 R$
- B. $R' = 8 R$
- C. $R' = 32 R$ ✓
- D. $R' = 16 R$

Q90 General Science **ENGLISH**

What is formed when ammonium dichromate is heated?

- A. Chromium oxide and water
- B. Chromium and oxygen
- C. Chromium oxide and nitrogen
- D. Nitrogen, oxygen and chromium oxide ✓

Q91 General Science **ENGLISH**

Combination reaction can be represented as:

- A. $AB + C \rightarrow ABC$ ✓
- B. $ABC \rightarrow AB + C$
- C. $AB + CD \rightarrow AD + CD$
- D. $AB + C \rightarrow CB + A$

Q92 General Science **ENGLISH**

What is the pH value of pure water at 25°C?

- A. 7 ✓
- B. 5
- C. 3
- D. 1

Q93 General Science **ENGLISH**

If a resistor of 15 Ω carries a current of 2.5 A for 12 seconds, the heat produced is ____ joules.

- A. 900
- B. 1125 ✓
- C. 1800
- D. 450



Q94 General Science **ENGLISH**

A conductor has a current of 150 mA flowing through it with a resistance of $0.8\ \Omega$. Find the potential difference across the conductor.

- A. 120 V
- B. 0.12 V
- C. 18.75 V
- D. 5.3 V

**Q95** General Science **ENGLISH**

If a wire is stretched to quadruple its length without changing its area, what will happen to its resistivity?

- A. It remains the same.
- B. It doubles.
- C. It halves.
- D. It quadruples.

**Q96** General Science **ENGLISH**

Which of the following is the correct definition of a homologous series?

- A. A series of compounds having different functional groups
- B. A series of compounds having the same functional group and similar chemical properties
- C. A series of compounds having identical physical properties
- D. A series of compounds with the same molecular mass

**Q97** General Science **ENGLISH**

What do the magnetic field lines around a bar magnet represent?

- A. The gravitational field
- B. The flow of air around the magnet
- C. The direction and strength of the magnetic field
- D. The movement of electrons around the magnet

**Q98** General Science **ENGLISH**

The Fleming's right hand rule is used to find the:

- A. direction of the magnetic field associated with a current carrying conductor
- B. direction of the gravitational field
- C. direction of the current of a current carrying conductor
- D. direction of the motion of the current carrying conductor

**Q99** General Science **ENGLISH**

In a redox reaction, reduction can be described as:

- A. loss of electrons
- B. addition of an electronegative element
- C. addition of oxygen
- D. addition of hydrogen

**Q100** General Science **ENGLISH**

The potential difference, V , across the ends of a given metallic wire in an electric circuit is directly proportional to the current flowing through it, provided its temperature remains the same. This is known as:

- A. Ohm's law
- B. Ampere's law
- C. Newton's law
- D. Resistance law



Mathematics

31 Questions • Answer Key

Q1 Mathematics ENGLISH

If 'M' is the smallest perfect square number, which is exactly divisible by 12, 15 and 18, then find the sum of the digits of the quotient obtained, when M is divided by 25.

A. 9



B. 7

C. 8

D. 6

Q2 Mathematics ENGLISH

Find the simple interest (in closest integral ₹) on ₹3000 at 8% per annum rate of interest for the period from 25 February 2024 to 26 April 2024

A. 39

B. 41

C. 40



D. 38

Q3 Mathematics ENGLISH

Evaluate: $16 + 18 \div 3 - 3 \times 3$

A. 12

B. 13



C. 15

D. 16

Q4 Mathematics ENGLISH

Two taps can fill a cistern in 2 hours and 47 hours respectively. A third tap can empty it in 47 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

A. 3

B. 5

C. 4

D. 2



Q5 Mathematics ENGLISH

Write the expanded form of $(3a + 5b + 7c)^2$.

A. $9a^2 + 25b^2 + 49c^2 + 34ab + 70bc + 42ac$ B. $9a^2 + 25b^2 + 49c^2 + 30ab + 70bc + 42ac$ C. $9a^2 + 25b^2 + 49c^2 + 30ab + 70bc + 52ac$ D. $9a^2 + 25b^2 + 49c^2 + 30ab + 65bc + 42ac$

Q6 Mathematics ENGLISH

The average age of Mohan and his four friends is 36 years. Mohan is 5 years older than the average age of his four friends. Determine Mohan's age in years.

A. 44

B. 42

C. 40



D. 38

Q7 Mathematics ENGLISH

Which of the following ratio is smallest?

A. 15 : 33

B. 10 : 36



C. 17 : 39

D. 23 : 48

Q8 Mathematics ENGLISH

If at same rate of interest, in 2 years, the simple interest is ₹56 and compound interest is ₹72, then what is the principal (in ₹)?

A. 42

B. 49



C. 53

D. 44



Q9 Mathematics **ENGLISH**

Akshat completes his journey in 10 hours. He covers half the distance at 72 km/h and the rest at 36 km/h. What is the length of the journey (in Km)?

A. 471

B. 473

C. 481

D. 480

**Q10 Mathematics** **ENGLISH**

A number when increased by 50 %, gives 2910. The number is:

A. 3880

B. 970

C. 1940



D. 5820

Q11 Mathematics **ENGLISH**

Write the expanded form of $(4a + 6b + 9c)^2$.

A. $16a^2 + 36b^2 + 81c^2 + 48ab + 108bc + 72ac$



B. $16a^2 + 36b^2 + 81c^2 + 52ab + 108bc + 72ac$

C. $16a^2 + 36b^2 + 81c^2 + 48ab + 103bc + 72ac$

D. $16a^2 + 36b^2 + 81c^2 + 48ab + 108bc + 82ac$

Q12 Mathematics **ENGLISH**

The average price of three items of furniture is Rs 16800. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 10080



B. 7840

C. 5600

D. 3360

Q13 Mathematics **ENGLISH**

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 4835176, what will be the sum of the digits which are second from the left and second from the right?

A. 10

B. 12

C. 14



D. 11

Q14 Mathematics **ENGLISH**

If A's salary is 37 % more than that of B, then how much percent is B's salary less than that of A (correct to 2 decimal places)?

A. 30.86%

B. 27.01%



C. 29.85%

D. 29.04%

Q15 Mathematics **ENGLISH**

A shopkeeper sells an item for ₹287.7 after giving two successive discounts of 86% and 85% on its marked price. Had he not given any discount, he would have earned a profit of 37%. What is the cost price (in ₹) of the item?

A. 10046

B. 10038

C. 10000



D. 9958

Q16 Mathematics **ENGLISH**

A vendor bought lemons at 40 for a rupee. How many must he sell for a rupee to gain 25%?

A. 33

B. 32



C. 36

D. 34



Q17 Mathematics ENGLISH

Find the total time taken by boat to travel upstream and downstream, if the distance travel in each direction (upstream and downstream) is 270km. If speed of boat is 24 km/h and speed of current is 21 km/h.

A. 87 hours

B. 96 hours

C. 106 hours

D. 104 hours

Q18 Mathematics ENGLISH

Write the expanded form of $(3a + 6b + 5c)^2$.

A. $9a^2 + 36b^2 + 25c^2 + 36ab + 55bc + 30ac$

B. $9a^2 + 36b^2 + 25c^2 + 36ab + 60bc + 40ac$

C. $9a^2 + 36b^2 + 25c^2 + 40ab + 60bc + 30ac$

D. $9a^2 + 36b^2 + 25c^2 + 36ab + 60bc + 30ac$

Q19 Mathematics ENGLISH

The average price of three items of furniture is Rs 16875. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 10125

B. 7875

C. 5625

D. 3375

Q20 Mathematics ENGLISH

What is the median of the following data?

50, 48, 40, 73, 29, 14, 89, 14, 51, 76, 78

A. 51

B. 49.5

C. 50

D. 50.5

Q21 Mathematics ENGLISH

If x is inversely proportional to y, and $y = 7$ when $x = 5$, find the value of x, when $y = 90$.

A. $\frac{7}{19}$

B. $\frac{9}{21}$

C. $\frac{8}{19}$

D. $\frac{7}{18}$



Q22 Mathematics ENGLISH

The mean marks of the following distribution is:

Marks Obtained	No. of Students
83	9
73	5
20	18
82	16

A. 50

B. 57

C. 58



D. 78

Q23 Mathematics ENGLISH

A cylindrical rod has an outer curved surface area of 4500 cm^2 . If the length of the rod is 39 cm, then the outer radius (in

cm) of the rod, correct to two places of decimal, is: $\text{Take } \pi = \frac{22}{7}$

A. 20.48

B. 20.93

C. 18.36



D. 18.25

Q24 Mathematics ENGLISH

Two pipes can fill a tank in 20 hours and 90 hours, respectively. The time (in hours) required to fill the tank when both pipes are opened simultaneously is:

A. $\frac{183}{8}$

B. $\frac{177}{13}$

C. $\frac{179}{9}$

D. $\frac{180}{11}$



Q25 Mathematics **ENGLISH**

The selling price of 25 books is equal to the cost price of 41 books. Find the loss or gain percentage.

A. 64 % gain



B. $\frac{100}{16}\%$ gain

C. $\frac{100}{16}\%$ loss

D. 64 % loss

Q26 Mathematics **ENGLISH**

Find the value of $2.5 \times 4 + 3.68 \div 4 - 8.46 \times 2 + 7.365 \times 4 + 2.8 \times 3 - 1.675 \times 2$.

A. 28.51



B. 27.21

C. 27.98

D. 28.96

Q27 Mathematics **ENGLISH**

If $\sin\theta = \frac{12}{13}$, then what is the value of $26 \sin\theta - 10 \sec\theta$?

A. 0

B. 1

C. 2

D. -2

**Q28** Mathematics **ENGLISH**

What is the perimeter of a sector of a circle (in cm) if the radius of the circle is 10.5 cm and the angle subtended at the centre of the circle is 60° ?

(Use $\pi = \frac{22}{7}$)

A. 41

B. 37

C. 43

D. 32



Q29 Mathematics ENGLISH

If x varies inversely as $y^3 - 1$ and is equal to 7 when $y = 2$, find x when $y = 6$.

A. $\frac{50}{216}$

B. $\frac{51}{215}$

C. $\frac{49}{215}$ ✓

D. $\frac{49}{216}$

Q30 Mathematics ENGLISH

$\frac{(a^5 \times b^9 \times c^1)}{(a^6 \times b^3 \times c^8)}$ in simplified form is:

A. $(a^4) \times (b^{-10}) \times (c^1)$

B. $(a^{-10}) \times (b^{-5}) \times (c^{-8})$

C. $(a^{-5}) \times (b^3) \times (c^{-6})$

D. $(a^{-1}) \times (b^6) \times (c^{-7})$ ✓

Q31 Mathematics ENGLISH

If the ratio of four angles of a quadrilateral is $\angle A : \angle B : \angle C : \angle D :: 2 : 3 : 5 : 8$, what is the value of $\angle B$?

A. 60° ✓

B. 90°

C. 40°

D. 50°



Q32 General Intelligence and Reasoning **ENGLISH**

7 is related to 9.8 following a certain logic. Following the same logic, 11 is related to 15.4. To which of the given options is 9 related, following the same logic?

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

A. 13.8

B. 12.4

C. 12.6 ☒

D. 11.6

Q33 General Intelligence and Reasoning **ENGLISH**

A question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and select the most appropriate answer.

Question:

Five friends, P, Q, R, S and T, are sitting around a circular table facing the centre. Who is sitting second to the left of T?

Statements:

(I) S sits second to the right of P. T sits to the immediate left of P.

(II) Only one person sits between Q and R. P sits to the immediate left of R.

A. Data in statements I and II together are not sufficient to answer the question.

B. Data in statements I and II together are sufficient to answer the question.

C. Data in statement I alone is sufficient to answer the question while data in statement II is not. ☒

D. Data in statement II alone is sufficient to answer the question while data in statement I is not.

Q34 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

29 11 29 15 29 19 29 23 29 ?

A. 31

B. 25

C. 29

D. 27 ☒**Q35** General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. SV-ZF

B. FI-NS ☒

C. VY-CI

D. HK-OU

Q36 General Intelligence and Reasoning **ENGLISH**

Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 2 3 \$ 7 5 & 6 % 3 \$ # 9 @) 7 + 6 ? > ? 4 7 5 \$

(Right)

How many such numbers are there each of which is immediately preceded by a symbol and also immediately followed by another symbol?

A. 5 ☒

B. 4

C. 6

D. 7



Q37 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

305 251 206 170 143 ?

A. 130

B. 125



C. 120

D. 115

Q38 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

GNK IPM KRO MTQ ?

A. OUS

B. OUR

C. OVR

D. OVS

**Q39** General Intelligence and Reasoning **ENGLISH**

P is the son of Q's brother R. S is the wife of Q and T is the son of S. How is P related to S?

A. Father's brother

B. Brother's son

C. Father's brother's son



D. Father's son

Q40 General Intelligence and Reasoning **ENGLISH**

B, C, D, F and H have different marks. Only one person has scored between B and D. Only three people have scored between H and B. No one has scored between F and B and F's score is more than B's score. How many people have scored less than C?

A. Two

B. Three



C. Four

D. One

Q41 General Intelligence and Reasoning **ENGLISH**

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

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

6-36-46-92; 7-49-59-118

A. 5-25-35-70



B. 4-16-26-62

C. 3-9-29-58

D. 8-64-74-138

Q42 General Intelligence and Reasoning **ENGLISH**

In a certain code language, 'fast and furious' is coded as 'bo li ke', 'quick is furious' is coded as 'ke ra ng' and 'fast but quick' is coded as 'ng li ty'. What is the code for 'furious' in that language?

A. bo

B. ra

C. li

D. ke

**Q43** General Intelligence and Reasoning **ENGLISH**

S, T, U, V, W, X and Y are sitting around a circular table facing the centre. S sits fourth to the left of W. T sits second to the right of S. V is neither the immediate neighbour of T nor S. X sits third to the right of V. Y is not the immediate neighbour of W. How many people are sitting between S and T, when counted from the left of S?

A. Four



B. Three

C. Two

D. One



Q44 General Intelligence and Reasoning ENGLISH

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

$$51 - 8 \div 2 + 6 \times 2 = ?$$

A. 70

B. 66

C. 64



D. 71

Q45 General Intelligence and Reasoning ENGLISH

Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

DMO : HPM

LIF : PLD

A. VFP : ZIN



B. RKY : VNV

C. ENZ : IQY

D. NEL : RGJ

Q46 General Intelligence and Reasoning ENGLISH

Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)

A. NK - GD

B. RV - KJ



C. TQ - MJ

D. ZW - SP

Q47 General Intelligence and Reasoning ENGLISH

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: IBX :: HAW : %

A. # = FYU, % = NDZ

B. # = FYU, % = KDZ



C. # = FUU, % = KDZ

D. # = FYU, % = KDO

Q48 General Intelligence and Reasoning ENGLISH

In a certain code,
'floor door room' is coded as 'bn la mt',
'door chair table' is coded as 'wd bn ka' and
'chair room window' is coded as 'ka bz la'.
All the codes are two-letter code only.

What is room coded as?

A. bz

B. ka

C. la



D. bn

Q49 General Intelligence and Reasoning ENGLISH

In a row of people all facing north, Shakshi is 11th from the left end. Ravi is 12th from the left end. Ravi is exactly between Shakshi and Ron. If Ron is 14th from the right end of the row, how many people are there in the row?

A. 25

B. 26



C. 27

D. 28



Q50 General Intelligence and Reasoning **ENGLISH**

Q, R, S, T, U 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. S lives on the third floor. Only two people live between S and U. R lives on one of the floors below U but immediately above Q. Q does not live on the fourth floor. V lives on an odd numbered floor. How many people live between T and Q?

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

Q51 General Intelligence and Reasoning **ENGLISH**

Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.
(Left) 7 % > 9 2 & 4 < 3 # 8 \$ 5 * 6 ^ # 1 (Right)
If all the symbols are dropped from the series, which of the following will be third from the left?

- A. 2
- B. 4
- C. 3
- D. 8

Q52 General Intelligence and Reasoning **ENGLISH**

Select the option in which the triads share the same relationship as that shared by the given triads.

HAND - ANDH - NDHA
BIRD - IRDB - RDBI

- A. ROSE - OSER - SERO
- B. FROG - ROGF - ROFG
- C. CUBE - CEBU - BUEC
- D. DUCK - CKDU - CUKD

Q53 General Intelligence and Reasoning **ENGLISH**

Keshav starts from Point A and drives 22 km towards the South. He then takes a left turn, drives 24 km, turns left and drives 27 km. He then takes a left turn and drives 25 km. He takes a final left turn, drives 5 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90 degrees turns only unless specified)

- A. 3 km to the east
- B. 4 km to the east
- C. 1 km to the east
- D. 2 km to the east

Q54 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

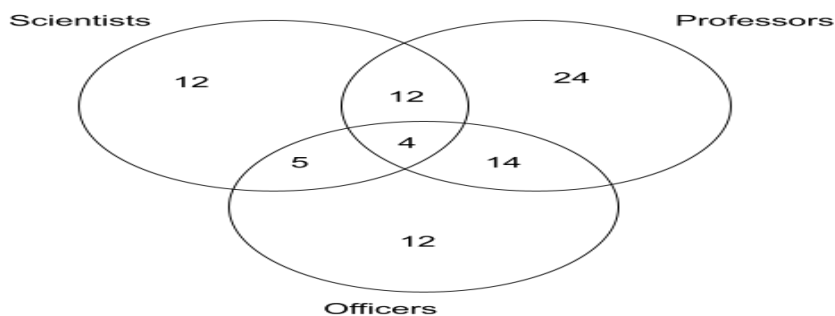
QTW 13, MPS 19, ILO 25, EHK 31, ADG 37, ?

- A. WZC 47
- B. ZZC 43
- C. WGC 43
- D. WZC 43



Q55 General Intelligence and Reasoning **ENGLISH**

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



How many such officers exist that are also scientists but not professors?

- A. 12
- B. 16
- C. 4
- D. 5



General Awareness

15 Questions • Answer Key

Q56 General Awareness **ENGLISH**

The Moplah Rebellion of 1921 took place in which of the following regions?

- A. Punjab
- B. Kerala
- C. Assam
- D. Bengal



Q57 General Awareness **ENGLISH**

At which of the following places is the tomb of Sher Shah located?

- A. Lahore
- B. Agra
- C. Sasaram
- D. Patna



Q58 General Awareness **ENGLISH**

What was the venue of the 57th ASEAN Foreign Ministers' Meeting?

- A. Jakarta, Indonesia
- B. Vientiane, Lao People's Democratic Republic
- C. Kuala Lumpur, Malaysia
- D. Naypyidaw, Myanmar



Q59 General Awareness **ENGLISH**

The Great Stupa at Sanchi is an important site in which religion?

- A. Hinduism
- B. Islam
- C. Buddhism
- D. Jainism



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Q60 General Awareness **ENGLISH**

Which of the following are the 6 accounts that have a role in the economic classification of the budget?

- A. Accounts A to F: Transaction in goods, services, and capital
- B. Accounts X to XV: Transaction in current and capital assets
- C. Accounts 1 to 6: Transaction in commodities and services and transfers
- D. Accounts I to VI: Transaction in commodities, revenue, and capital ✓

Q61 General Awareness **ENGLISH**

Which of the following statements is/are correct about the PM Vishwakarma Yojana?

- 1) The PM Vishwakarma Yojana was launched by the Hon'ble Prime Minister on 17 September 2023.
- 2) Scheme aims to provide end-to-end support to artisans and craftspeople who work with their hands and tools.
- 3) The Scheme components include recognition through PM Vishwakarma Certificate and ID Card, Skill Upgradation, Toolkit Incentive, Credit Support, Incentive for Digital Transactions, and Marketing Support.

A. 1, 2 and 3 ✓

B. 2 only

C. 1 only

D. 3 only

Q62 General Awareness **ENGLISH**

Who among the following is the leader of the house in the Lok Sabha?

A. Prime Minister ✓

B. Opposition Leader

C. Lok Sabha Speaker

D. President of India

Q63 General Awareness **ENGLISH**

According to the Citizenship Amendment Act of 2019, individuals who entered India on or before _____ and belong to the Hindu, Sikh, Buddhist, Jain, Parsi or Christian community from Pakistan, Afghanistan or Bangladesh are eligible for citizenship.

A. 31 December 2015

B. 31 December 2016

C. 31 December 2014 ✓

D. 31 December 2017

Q64 General Awareness **ENGLISH**

What is the correct sequence of following mountain ranges of India from north to south?

1. Vindhya Range 2. Aravalli Range 3. Ajanta Range 4. Satpura Range

A. 2, 1, 3, 4

B. 1, 2, 4, 3

C. 2, 1, 4, 3 ✓

D. 1, 2, 3, 4

Q65 General Awareness **ENGLISH**

Where was the Swachh Vayu Diwas celebrated in India to combat air pollution in 2024?

A. Indore

B. Jaipur ✓

C. Chandigarh

D. Bhopal

Q66 General Awareness **ENGLISH**

Which of the following is NOT a private sector company in India?

A. Bajaj Auto Limited

B. Dabur

C. Bharat Heavy Electricals Limited ✓

D. Tata Iron and Steel Company



Q67 General Awareness **ENGLISH**

Which of the following is related to Article 84 of the Constitution?

A. Qualification for membership of Parliament ✓

B. Disqualification for membership

C. Annual Financial Statement

D. Ordinance making Power of President

Q68 General Awareness **ENGLISH**

Who among the following secured a gold medal for India at the Paris Paralympics 2024?

A. Hokato Hotozhe Sema

B. Sachin Khilari

C. Navdeep Singh ✓

D. Pranav Soorma

Q69 General Awareness **ENGLISH**

Who is the author of 'Segar: Autobiography with Paintings,' published in 2013?

A. Jhumpa Lahiri

B. Githa Hariharan

C. Salman Rushdie

D. D Raja Segar ✓

Q70 General Awareness **ENGLISH**

Space Kidz India has launched the ShakthiSAT mission to train _____ girls aged 14-18 from 108 countries in space technology, aiming for a satellite launch under ISRO's Chandrayaan-4 mission in 2026.

A. 5000

B. 10,000

C. 12,000 ✓

D. 7500

General Science

30 Questions • Answer Key

Q71 General Science **ENGLISH**

Covalent molecules have low melting and boiling point because:

A. they have weak intermolecular forces ✓

B. they have strong electrostatic intermolecular forces

C. they have strong bonds within the molecule

D. they are generally gaseous in nature

Q72 General Science **ENGLISH**

Which of the following is the correct formula for the first member of the alkene series?

A. C_2H_4 ✓

B. C_4H_8

C. C_3H_6

D. C_5H_{10}

Q73 General Science **ENGLISH**

Which of the following metals is least likely to corrode in moist air?

A. Magnesium

B. Copper ✓

C. Zinc

D. Iron

Q74 General Science **ENGLISH**

Which of the following is true regarding the bud development process in Hydra?

A. Formation of spore

B. Splitting of cytoplasm

C. Cell divisions at one site ✓

D. Splitting of nucleus



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Q75 General Science **ENGLISH**

What is the thread-like structure in Rhizopus?

- A. Blobs
- B. Sporangia
- C. Spores
- D. Hyphae



Q76 General Science **ENGLISH**

Which of the following best describes a combination reaction?

- A. A reaction where a product releases gas
- B. A compound breaks down into simpler substances
- C. Ions exchange between two compounds
- D. Two elements combine to form a compound



Q77 General Science **ENGLISH**

If two resistors in series are equal, say R each, what is the total resistance?

- A. R
- B. R^2
- C. $R/2$
- D. $2R$



Q78 General Science **ENGLISH**

After fertilisation, the zygote divides multiple times to form which structure within the ovule?

- A. Fruit
- B. Seed
- C. Style
- D. Embryo



Q79 General Science **ENGLISH**

In plants, spore formation is a mode of reproduction that involves the production of spores. Which of the following statements about spore formation is true?

- A. Spores are formed through sexual reproduction in plants.
- B. Spores are produced by non-flowering plants like ferns and mosses, and they grow into new plants.
- C. Spores are a form of vegetative propagation in angiosperms only.
- D. Spores are produced by flowers, and they grow into seeds.



Q80 General Science **ENGLISH**

What is the final product of sexual reproduction in plants?

- A. Flowers
- B. Seeds
- C. Fruits
- D. Leaves



Q81 General Science **ENGLISH**

The knowledge of which two subjects played key role in formulating laws of Inheritance?

- A. Geography and Philosophy
- B. Maths and Science
- C. Philosophy and Science
- D. Maths and History



Q82 General Science **ENGLISH**

What is the role of the stigma in the process of fertilisation?

- A. Developing into a seed
- B. Fusing with the egg cell
- C. Serving as the site where pollen lands
- D. Producing pollen



Q83 General Science **ENGLISH**

Double displacement reactions usually occur in:

- A. gaseous state
- B. solid state
- C. all three states
- D. aqueous solution ✓

Q84 General Science **ENGLISH**

Why does a compass needle get deflected when brought near a bar magnet?

- A. The compass needle is non-magnetic.
- B. The compass needle is a small bar magnet. ✓
- C. The compass needle is made of iron.
- D. The compass needle has electric charge.

Q85 General Science **ENGLISH**

Which of the following is called a motile germ cell?

- A. Female gamete
- B. Male gamete ✓
- C. Embryo
- D. Zygote

Q86 General Science **ENGLISH**

Which of the following helps a developing embryo to expel waste products in case of humans?

- A. Oviduct
- B. Placenta ✓
- C. Ovary
- D. Cervix

Q87 General Science **ENGLISH**

Why might surgical family planning methods be risky if not done correctly?

- A. They can increase fertility.
- B. They may cause hormonal side effects.
- C. They might prevent ovulation.
- D. They can lead to infections or complications. ✓

Q88 General Science **ENGLISH**

In the reaction $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$, what is being reduced?

- A. Hydrogen (H)
- B. Oxygen (O)
- C. Manganese (Mn) ✓
- D. Chlorine (Cl)

Q89 General Science **ENGLISH**

Which of the following chemical equations is balanced?

- A. $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$ ✓
- B. $\text{H}_2\text{O} + \text{O}_2 \rightarrow \text{H}_2\text{O}_2$
- C. $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
- D. $\text{H}_2 + 2\text{O}_2 \rightarrow 2\text{H}_2\text{O}$

Q90 General Science **ENGLISH**

When an atom of sodium reacts with an atom of chlorine to form sodium chloride, each sodium atom:

- A. loses one electron ✓
- B. loses one proton
- C. gains one electron
- D. gains one proton

Q91 General Science **ENGLISH**

Resistance is the property of a material that _____.

- A. converts electrical energy to mechanical energy
- B. generates electricity
- C. opposes the flow of current ✓
- D. allows the flow of current

Q92 General Science **ENGLISH**

Which of the following statements is true about the pH of a neutral solution at 25°C?

- A. The pH is greater than 7.
- B. The pH is less than 7.
- C. The pH is not equal to 7.
- D. The pH is equal to 7. ✓



Q93 General Science **ENGLISH**

In the case of a thin lens, how are the centres of curvature typically positioned relative to the optical centre?

- A. They are equidistant from the optical centre.** ✓
- B. They are closer to the edge than to the optical centre.
- C. They coincide with the optical centre.
- D. They are located on the lens surface itself.

Q94 General Science **ENGLISH**

In which of the following scenarios does the focal length of a concave mirror vary?

- A. When placed in water
- B. When placed in air
- C. Focal length does not vary in any media** ✓
- D. When placed in a vacuum

Q95 General Science **ENGLISH**

Which of the following reactions leads to the production of bleaching powder?

- A. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$
- B. $\text{Ca(OH)}_2 + \text{Cl}_2 \rightarrow \text{CaOCl}_2 + \text{H}_2\text{O}$** ✓
- C. $\text{CaCO}_3 + \text{HCl} \rightarrow \text{CaCl}_2 + \text{CO}_2 + \text{H}_2\text{O}$
- D. $\text{Ca(OH)}_2 + \text{CO}_2 \rightarrow \text{CaCO}_3 + \text{H}_2\text{O}$

Q96 General Science **ENGLISH**

The current through a resistor is:

- A. inversely proportional to the resistance** ✓
- B. directly proportional to the resistance
- C. proportional to the square of the resistance
- D. proportional to the square root of the resistance

Q97 General Science **ENGLISH**

In which case will a lens produce a magnification of exactly 1?

- A. When the object is placed between centre of curvature and focal point
- B. When the object is at infinity
- C. When the object is placed at the focal point
- D. When the object is placed at twice the focal length** ✓

Q98 General Science **ENGLISH**

Which of the following factors directly affects the resistance of a conductor?

- A. Power of the conductor
- B. Current through the conductor
- C. Length of the conductor** ✓
- D. Voltage across the conductor

Q99 General Science **ENGLISH**

Which factor does NOT affect the electric power consumed by an electric device?

- A. Frequency of the device** ✓
- B. Resistance of the device
- C. Voltage applied to the device
- D. Current passing through the device

Q100 General Science **ENGLISH**

When light exits a prism, what is the result of its interaction with the prism surfaces?

- A. Light is only absorbed.
- B. Light is only reflected.
- C. Light passes through without any change.
- D. Light is refracted.** ✓



Mathematics

32 Questions • Answer Key

Q1 Mathematics ENGLISH

Mahesh purchased 10 kg of rice at the rate of ₹35 per kg and 38 kg of rice at ₹46 per kg. He sold the mixture at the rate of ₹43.5 per kg. Find his loss (in ₹).

A. 10



B. 5

C. 15

D. 18

Q2 Mathematics ENGLISH

What is the average of all the natural numbers from 1 to 98?

A. 49.5



B. 49

C. 50.5

D. 50

Q3 Mathematics ENGLISH

A vertical stick 11 m long casts a shadow 7 m long on the ground. At the same time, a tower casts a shadow of 35 m long on the ground. The height of the tower is:

A. 52 m

B. 55 m



C. 50 m

D. 60 m

Q4 Mathematics ENGLISH

Two numbers are in the ratio 2 : 4. If the first number is increased by 4 and the second number is decreased by 14, then the ratio becomes 8 : 5. What is the sum of the original two numbers?

A. 36



B. 41

C. 24

D. 38

Q5 Mathematics ENGLISH

Shalini travels a distance of 138 km with speed of 46 km/h and 438 km with 73 km/h by her car. Find the average speed (in km/h) of Shalini.

A. 68

B. 70

C. 56

D. 64



Q6 Mathematics ENGLISH

Which of the following ratio is smallest?

A. 28 : 39

B. 22 : 47

C. 21 : 49

D. 20 : 51



Q7 Mathematics ENGLISH

Among five people named A, B, C, D and E, each has a certain age. C is thrice the age of D. The age of A is 6. D is half the age of E. B is twice the age of A. If E is four times the age of B, what is the age of C?

A. 75

B. 70

C. 76

D. 72



Q8 Mathematics ENGLISH

A man sold an article for ₹330 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 ₹1320, then what is the value of d?

A. 37.5



B. 36.9

C. 41.1

D. 38.4



Q9 Mathematics ENGLISH

If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 2687531, then how many digits will appear more than once in the new number thus formed?

A. Four

B. Three

C. Two ✓

D. One

Q10 Mathematics ENGLISH

Write the expanded form of $(6a + 8b + 3c)^2$.

A. $36a^2 + 64b^2 + 9c^2 + 96ab + 48bc + 36ac$ ✓B. $36a^2 + 64b^2 + 9c^2 + 96ab + 43bc + 36ac$ C. $36a^2 + 64b^2 + 9c^2 + 96ab + 48bc + 46ac$ D. $36a^2 + 64b^2 + 9c^2 + 100ab + 48bc + 36ac$ **Q11 Mathematics** ENGLISH

₹4800 were divided among P, Q and R, such that 6 times of P = 3 times of Q = 8 times of R. Find the share of R.

A. ₹1034

B. ₹815

C. ₹1068

D. ₹960 ✓

Q12 Mathematics ENGLISH

Five bells toll together initially and then continue to toll at time intervals of 4, 8, 12, 16 and 20 seconds respectively. If they start tolling simultaneously at 12:00 p.m., then find how many times they will toll together between 12:00 p.m. to 3:00 p.m.

A. 54

B. 42

C. 62

D. 46 ✓

Q13 Mathematics ENGLISH

What is the average of all the natural numbers from 1 to 59?

A. 31

B. 30.5

C. 30 ✓

D. 29.5

Q14 Mathematics ENGLISH

Write the expanded form of $(7a + 9b + 4c)^2$.

A. $49a^2 + 81b^2 + 16c^2 + 130ab + 72bc + 56ac$ B. $49a^2 + 81b^2 + 16c^2 + 126ab + 72bc + 56ac$ ✓C. $49a^2 + 81b^2 + 16c^2 + 126ab + 67bc + 56ac$ D. $49a^2 + 81b^2 + 16c^2 + 126ab + 72bc + 66ac$ **Q15 Mathematics** ENGLISH

Two taps can fill a cistern in 2 hours and 45 hours respectively. A third tap can empty it in 45 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

A. 3

B. 5

C. 4

D. 2 ✓

Q16 Mathematics ENGLISH

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 3 hours 15 minutes. He would have gained 3 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

A. 7 hours 30 minutes

B. 6 hours 15 minutes ✓

C. 5 hours 15 minutes

D. 6 hours 45 minutes



Q17 Mathematics ENGLISH

Evaluate: $32 \div 12 \times 3 - 3 \times 4$

A. -5

B. -2

C. -4



D. -1

Q18 Mathematics ENGLISH

A number when increased by 50 %, gives 2760. The number is:

A. 3680

B. 920

C. 1840



D. 5520

Q19 Mathematics ENGLISH

Evaluate: $16 + 16 \div 4 - 3 \times 4$

A. 11

B. 8



C. 7

D. 10

Q20 Mathematics ENGLISH

If at same rate of interest, in 2 years, the simple interest is ₹56 and compound interest is ₹64, then what is the principal (in ₹)?

A. 93

B. 91

C. 98



D. 102

Q21 Mathematics ENGLISH

A and B can do a piece of work in 8 days and 37 days, respectively. The number of days [Correct to one decimal place] required to complete the work if both A and B work together is:

A. 7.1

B. 10.7

C. 6.5



D. 7.7

Q22 Mathematics ENGLISH

Write the expanded form of $(5a + 6b + 8c)^2$.

A. $25a^2 + 36b^2 + 64c^2 + 64ab + 96bc + 80ac$

B. $25a^2 + 36b^2 + 64c^2 + 60ab + 96bc + 90ac$

C. $25a^2 + 36b^2 + 64c^2 + 60ab + 91bc + 80ac$

D. $25a^2 + 36b^2 + 64c^2 + 60ab + 96bc + 80ac$

**Q23 Mathematics ENGLISH**

The median of 7, 18, 22, 12, 14, 7, 23, 16 and 3 is:

A. 18

B. 14



C. 22

D. 7

Q24 Mathematics ENGLISH

A man spends 76% of his monthly salary (in ₹) on the rent of his house. If every month he also spends ₹813 on his conveyance and ₹2508 on his grocery and saves the remaining ₹687, his monthly salary (in ₹) is:

A. 16617

B. 16700



C. 16621

D. 16611

Q25 Mathematics ENGLISH

If the area of a trapezium is 80 cm^2 and the parallel sides are 13.5 and 6.5 cm, then the distance between them (in cm) is ____.

A. 12

B. 8



C. 9

D. 10



Q26 Mathematics ENGLISH

The average score of a cricketer in 20 matches is 40 runs. If his highest score in a match was 78 runs, what is the average of his scores in the remaining 19 matches?

A. 36

B. 34

C. 38



D. 40

Q27 Mathematics ENGLISH

Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 11 February 2024 to 12 April 2024

A. 35



B. 36

C. 33

D. 34

Q28 Mathematics ENGLISH

Find the arithmetic mean of the following data (correct to two places of decimals).

Class-interval	5-15	15-25	25-35	35-45	45-55	55-65
Frequency	12	18	8	14	16	8

A. 22.38

B. 33.68



C. 43.72

D. 39.45

Q29 Mathematics ENGLISH

The diameters of two concentric circles are 34 cm and 50 cm. A straight line, CAPF, intersects the larger circle at points C and F and intersects the smaller circle at points A and P. If $AP = 16$ cm, find the length of CF.

A. 40 cm



B. 50 cm

C. 30 cm

D. 34 cm

Q30 Mathematics ENGLISH

The volume (in cm^3) of a wire of diameter 56 cm and length 3 m is:

$$\text{take } \pi = \frac{22}{7}$$

A. 740200

B. 739700

C. 739200



D. 739400



Q31 Mathematics ENGLISH

If $\frac{3x}{1 + \frac{1}{1 + \frac{x}{1-x}}} = 12$, then find the value of 'x'.

- A. 1.4
- B. 1.8
- C. 1.6
- D. 1.2



Q32 Mathematics ENGLISH

The selling price of 30 books is equal to the cost price of 45 books. Find the loss or gain percentage.

- A. 50 % gain
- B. $\frac{100}{15} \% \text{ gain}$
- C. 50 % loss
- D. $\frac{100}{15} \% \text{ loss}$



General Intelligence and Reasoning

23 Questions • Answer Key

Q33 General Intelligence and Reasoning ENGLISH

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: RXT :: FLH : %

- A. # = OGT, % = IKH
- B. # = GHT, % = INY
- C. # = OUQ, % = IOK
- D. # = OUP, % = KIU



Q34 General Intelligence and Reasoning ENGLISH

Anmol starts from Point A and drives 23 km towards the west. He then takes a right turn, drives 27 km, turns right and drives 29 km. He then takes a right turn and drives 32 km. He takes a final right turn, drives 6 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)

- A. 4 km to the north
- B. 6 km to the north
- C. 5 km to the north
- D. 3 km to the north



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Q35 General Intelligence and Reasoning **ENGLISH**

Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)

A. OF - NG ☒

B. CT - AU

C. SJ - QK

D. HY - FZ

Q36 General Intelligence and Reasoning **ENGLISH**

In a certain code language,

'A + B' means 'A is the son of B',

'A - B' means 'A is the brother of B',

'A × B' means 'A is the wife of B' and

'A % B' means 'A is the father of B'.

How is S related to H if 'S × D + F % G - H'?

A. Daughter

B. Brother's daughter

C. Wife

D. Brother's wife ☒**Q37** General Intelligence and Reasoning **ENGLISH**

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

$$26 + 43 - 32 \times 23 \div 46 = ?$$

A. 45

B. 47 ☒

C. 49

D. 48

Q38 General Intelligence and Reasoning **ENGLISH**

In a certain code language, 'batter ball six' is coded as 'lo ka di', 'bowler ball wicket' is coded as 'ka mi th' and 'batter cricket bowler' is coded as 'lo th qy'. What is the possible code for 'cricket ball' in that language?

A. ka th

B. ka qy ☒

C. th lo

D. qy lo

Q39 General Intelligence and Reasoning **ENGLISH**

In a row of 38 students facing north, Sunil is 20th from the left end. If Harsh is 10th to the right of Sunil, what is Harsh's position from the right end of the row?

A. 6thB. 7thC. 8thD. 9th ☒**Q40** General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

19 30 52 96 184 ?

A. 360 ☒

B. 362

C. 361

D. 359

Q41 General Intelligence and Reasoning **ENGLISH**

Select the option in which the triads share the same relationship as that shared by the given triads.

JINX - JXIN - JNXI

COZY - CYOZ - CZYO

A. EVIL - EIVL - ELIV

B. FAIR - FARI - FIAR

C. DRUG - DGUR - DUGR

D. JAWS - JSAW - JWSA ☒

Q42 General Intelligence and Reasoning **ENGLISH**

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 conclusion(s) logically follow(s) from the statements.

Statements:

All plums are lamps. Some lamps are ants. All ants are meats.

Conclusions:

(I): All meats are lamps.

(II): Some meats are plums.

A. Both conclusions (I) and (II) follow.

B. Only conclusion (I) follows.

C. Only conclusion (II) follows.

D. Neither conclusion (I) nor (II) follows. ✓

Q43 General Intelligence and Reasoning **ENGLISH**

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

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

8-24-72-216; 6-18-54-162

A. 9-27-81-343

B. 7-21-63-189 ✓

C. 11-33-99-287

D. 12-36-108-216

Q44 General Intelligence and Reasoning **ENGLISH**

This question is based on five, four-digit numbers given below.

(Example- 6970 – First digit = 6, second digit = 9, third digit = 7 and fourth digit=0)

2314 7651 3245 9072 8062

How many numbers are there wherein the sum of first and second digits is equal to the sum of third and fourth digits?

A. Three ✓

B. Two

C. Four

D. One

Q45 General Intelligence and Reasoning **ENGLISH**

18 is related to 62 following a certain logic. Following the same logic, 22 is related to 78. To which of the given options is 15 related to, following the same logic?

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

A. 45

B. 50 ✓

C. 55

D. 60



Q46 General Intelligence and Reasoning **ENGLISH**

A question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and select the most appropriate answer.

Question:

Five trees, S, M, N, O and A, are of different heights. Which among them is the tallest tree?

Statements:

- (I) N is taller than A. A is taller than M.
(II) S is taller than M. S is shorter than O.

- A. Data in statement II alone is sufficient to answer the question while data in statement I is not.
- B. Data in statement I alone is sufficient to answer the question while data in statement II is not.
- C. Data in statements I and II together are sufficient to answer the question.
- D. Data in statements I and II together are not sufficient to answer the question. ✓

Q47 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

NTZ 14, KQW 23, HNT 32, EKQ 41, BHN 50, ?

- A. YEK 58
- B. ZEK 59
- C. YKK 59
- D. YEK 59 ✓

Q48 General Intelligence and Reasoning **ENGLISH**

Seven boxes, R, S, T, U, X, Y and Z, are kept one over the other but not necessarily in the same order. Only T is kept above X. Only Z is kept between X and Y. Only U is kept below R. How many boxes are kept between S and U?

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

Q49 General Intelligence and Reasoning **ENGLISH**

In a certain code, 'air water land' is coded as 'dy ph mt', 'fire land ice' is coded as 'lp ph st', and 'water fire grass' is coded as 'st bq dy'. What is the code for 'land' in that language?

(Note: All the codes are two letter coded only.)

- A. st
- B. dy
- C. mt
- D. ph ✓

Q50 General Intelligence and Reasoning **ENGLISH**

Seven people, B, D, E, F, P, Q and R, are sitting in a row, facing north. No one sits to the left of E. Only four people sit between E and R. Only three people sit to the right of D. F sits to the immediate left of B. P is not an immediate neighbour of D.

Who sits third to the left of P?

- A. R
- B. B
- C. D ✓
- D. F

Q51 General Intelligence and Reasoning **ENGLISH**

Refer to the following number, symbol series and answer the question. Counting to be done from left to right only.

(Left) € \$ 7 1 5 * 9 % 2 £ 5 \$ 6 £ € 8 8 4 6 £ % 8 (Right)

How many such symbols are there each of which is immediately preceded by a number and also immediately followed by a number?

- A. 5
- B. 3
- C. 4 ✓
- D. 6



Q52 General Intelligence and Reasoning **ENGLISH**

Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)

A. LO - KN

B. FD - LK ☒

C. FI - EH

D. QT - PS

Q53 General Intelligence and Reasoning **ENGLISH**

Select the term from among the given options that can replace the question mark (?) in the following series.

PKI 23, MHF 31, JEC 47, GBZ 79, DYW 143, ?

A. AVT 270

B. AVT 271 ☒

C. AYT 271

D. UVT 271

Q54 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: ZWP :: FCV : %

A. # = VSL, % = JGO

B. # = VSL, % = JGZ ☒

C. # = USL, % = JGZ

D. # = VSU, % = JGZ

Q55 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

136 117 122 103 108 89 ?

A. 108

B. 94 ☒

C. 70

D. 84

General Awareness

15 Questions • Answer Key

Q56 General Awareness **ENGLISH**

Which of the following is NOT an essential qualification for being elected as the President?

A. Citizen of India

B. Completion of 35 years

C. Qualified for election as a member of the House of the People

D. Highly educated ☒**Q57** General Awareness **ENGLISH**

Which of the following received the top honour in the Best Urban Local Body category at the 5th National Water Awards for its innovative water conservation initiatives?

A. Bhopal, Madhya Pradesh

B. Surat, Gujarat ☒

C. Indore, Madhya Pradesh

D. Pune, Maharashtra

Q58 General Awareness **ENGLISH**

The National Health Authority (NHA) and _____ signed a Memorandum of Understanding (MoU) on 11th September. The partnership aims to revolutionise artificial intelligence in health research with an innovative data platform.

A. IIT Kharagpur

B. IIT Delhi

C. IIT Kanpur ☒

D. IIT Madras

Q59 General Awareness **ENGLISH**

Which of the following was the venue of the 46th session of the UNESCO World Heritage Committee?

A. New Delhi, India ☒

B. New York, United States

C. Paris, France

D. Dubai, United Arab Emirates



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Q60 General Awareness **ENGLISH**

One of the famous Kali temples in India, Kalighat, is located in which of the following Indian states?

A. West Bengal



B. Odisha

C. Assam

D. Maharastra

Q61 General Awareness **ENGLISH**

Who is the author of "Postcolonial Elements in Amitav Ghosh's 'The Shadow Lines,'" published in 2018?

A. Arundhati Roy

B. Nivedhaa Nivi



C. Amitav Ghosh

D. Salman Rushdie

Q62 General Awareness **ENGLISH**

Which of the following statements is INCORRECT?

A. Amit Shah assumed charge as Union Home Minister and Minister of Cooperation in June 2024.

B. Om Birla is elected as the Speaker of the 18th Lok Sabha.

C. Narendra Modi took oath as the Prime Minister of India in June 2024.

D. Sonia Gandhi became the Leader of Opposition in the 18th Lok Sabha.



Q63 General Awareness **ENGLISH**

Which Indian cricketer was appointed as the brand ambassador for MotoGP in India in July 2024?

A. Rohit Sharma

B. Shikhar Dhawan



C. Virat Kohli

D. Jasprit Bumrah

Q64 General Awareness **ENGLISH**

The concepts no double jeopardy, no self incrimination and no ex post facto are mentioned under ____ of the Indian Constitution.

A. Article 20



B. Article 23

C. Article 19

D. Article 21

Q65 General Awareness **ENGLISH**

Which of the following is the National Waterway 2 in India?

A. Kakinada canal (Kakinada to Rajahmundry)

B. Brahmaputra river



C. West Coast canal and Champakara and Udyogmandal canals

D. East Coast canal and Matai river

Q66 General Awareness **ENGLISH**

What was the name of the movement started in 1927 in Maharashtra, led by Dr. BR Ambedkar to access public resources such as water bodies, temples and schools?

A. Shahada Movement

B. Bombay Peasants Revolt

C. Mahad Satyagraha



D. Kheda Satyagraha

Q67 General Awareness **ENGLISH**

Who among the following was the first attorney General of Independent India?

A. MC Setalvad



B. SV Gupta

C. Niren de

D. Soli Sorabjee



Q68 General Awareness **ENGLISH**

Quwwat-al-Islam mosque is located in which of the following cities?

A. New Delhi



B. Sikar

C. Hyderabad

D. Ajmer

Q69 General Awareness **ENGLISH**

Which of the following is an example of a natural monopoly?

A. Apple store in Delhi

B. Railways



C. Malls

D. Bookshop

Q70 General Awareness **ENGLISH**

Which of the following rivers is ephemeral?

A. Beas

B. Chambal

C. Yamuna

D. Luni



General Science

30 Questions • Answer Key

Q71 General Science **ENGLISH**

Samples of four metals A, B, C and D were taken and added to a solution individually. The results obtained have been listed as follows.

- A can displace B from its solution
- B can displace D from its solution
- C can displace D from its solution
- C can displace A from its solution

Which is the most reactive metal?

A. D

B. C



C. A

D. B

Q72 General Science **ENGLISH**

The pattern of the magnetic field lines of a solenoid is similar to that of a:

A. ring magnet

B. bar magnet



C. horseshoe magnet

D. button magnet

Q73 General Science **ENGLISH**

When several resistors are joined in series, the equivalent resistance of the combination is:

A. greater than the sum of the individual resistances

B. equal to the product of the individual resistances

C. equal to the sum of the individual resistances



D. less than the sum of the individual resistances

Q74 General Science **ENGLISH**

What is the role of the ovary in the process of fertilisation in plants?

A. To produce pollen

B. To produce the egg cell



C. To store the male gametes

D. To provide nutrients to the pollen grains



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Q75 General Science **ENGLISH**

Mendel had selected garden pea for certain favourable reasons. Which of the following is NOT a reason for his choice required for his experiments?

- A. They have easily observable traits.
- B. They can be self-pollinated and cross-pollinated.
- C. They have a long generation time. ✓
- D. They produce many offsprings.

Q76 General Science **ENGLISH**

Which combination of factors would result in the lowest resistance for a conductor?

- A. Short length and large cross-sectional area ✓
- B. Short length and small cross-sectional area
- C. Long length and small cross-sectional area
- D. Long length and large cross-sectional area

Q77 General Science **ENGLISH**

Seeds that are dispersed by animals often:

- A. have hooks or edible flesh ✓
- B. have wings or parachutes
- C. can float easily in water
- D. are very small and light weight

Q78 General Science **ENGLISH**

In the process of vegetative propagation, which part of the plant is used in grafting?

- A. Leaf
- B. Stem ✓
- C. Root
- D. Seed

Q79 General Science **ENGLISH**

How do hormonal contraceptives prevent pregnancy?

- A. By creating a physical barrier
- B. By increasing sperm production
- C. By blocking the fallopian tubes
- D. By changing the hormonal balance to prevent egg release ✓

Q80 General Science **ENGLISH**

In the reaction: $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$, what happens to zinc?

- A. Zinc is oxidised. ✓
- B. Zinc does not change.
- C. Zinc loses electrons.
- D. Zinc is reduced.

Q81 General Science **ENGLISH**

In which process multicellular organisms break into smaller pieces upon maturation?

- A. Sporulation
- B. Fission
- C. Regeneration
- D. Fragmentation ✓

Q82 General Science **ENGLISH**

Which of the following describes the relationship between the aperture of a lens and its radius of curvature in the context of thin lenses?

- A. The aperture equals the radius of curvature.
- B. The aperture is much larger than the radius of curvature.
- C. The aperture is independent of the radius of curvature.
- D. The aperture is much smaller than the radius of curvature. ✓

Q83 General Science **ENGLISH**

The balanced equation which shows the decomposition of hydrogen peroxide is:

- A. $2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$ ✓
- B. $2\text{HO}_2 \rightarrow 2\text{HO} + \text{O}_2$
- C. $\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$
- D. $\text{H}_2\text{O}_2 \rightarrow \text{H}_2\text{O} + \text{O}_2$



Q84 General Science **ENGLISH**

What is formed when sodium sulfate reacts with barium chloride in a double displacement reaction?

- A. Sodium chloride and barium hydroxide
- B. Sodium hydroxide and barium chloride
- C. Sodium sulfate and barium chloride
- D. Sodium chloride and barium sulfate ✓

Q85 General Science **ENGLISH**

A piece of zinc is placed in three different solutions: lead nitrate, aluminium sulphate and silver nitrate. Which solution(s) will zinc be able to displace the metal from its solution?

- A. Aluminium sulphate and silver nitrate
- B. Lead nitrate and aluminium sulphate
- C. Lead nitrate and silver nitrate ✓
- D. Only silver nitrate

Q86 General Science **ENGLISH**

Which of the following statements is true for a balanced chemical equation?

- A. The total mass of molecules is unequal on both sides.
- B. The total number of moles is the same on both sides.
- C. The total number of atoms of each element is the same on both sides. ✓
- D. The total number of molecules is the same on both sides.

Q87 General Science **ENGLISH**

Pollen grains are transferred to which part of pistil?

- A. Style
- B. Ovule
- C. Stigma ✓
- D. Ovary

Q88 General Science **ENGLISH**

Which of the following best describes a common industrial use of washing soda?

- A. Cement production
- B. Fertiliser manufacturing
- C. Vinegar production
- D. Glass manufacturing ✓

Q89 General Science **ENGLISH**

Why are danger signals typically red in colour?

- A. Red light is more reflective than other colours.
- B. Red light has a longer wavelength and is scattered the least, making it visible from a distance. ✓
- C. Red light is easier to produce artificially.
- D. The colour red is aesthetically pleasing.

Q90 General Science **ENGLISH**

Which of the following statements is NOT a reason for the versatile nature of carbon?

- A. Carbon has tetravalency
- B. Carbon can form single, double, and triple bonds
- C. Carbon can form ionic bonds with itself ✓
- D. Carbon exhibits catenation

Q91 General Science **ENGLISH**

An object is placed 12 cm in front of a convex mirror with a focal length of 8 cm. What is the image distance (v)?

- A. -20 cm
- B. -4.8 cm
- C. +20 cm
- D. +4.8 cm ✓



Q92 General Science **ENGLISH**

Suppose a gardener wants to plant pea which should be of the dwarf varieties. What do you suggest for the choice of the parent plant seeds by the gardener?

- A. Any kind of seed can be used.
- B. All seeds should be of mixed varieties.
- C. All seeds should be of tall varieties.
- D. All seeds should be of dwarf varieties. ✓

Q93 General Science **ENGLISH**

An electric fan is connected to a 220 V generator. The current is 0.50 A. What is the power used by the fan?

- A. 440 Watt
- B. 11 Watt
- C. 220 Watt
- D. 110 Watt ✓

Q94 General Science **ENGLISH**

Which of the following statements is true about the physical properties of compounds in a homologous series?

- A. Their physical properties do not change.
- B. Their boiling points decrease as the number of carbon atoms increase.
- C. They have a regular change in melting and boiling points. ✓
- D. They have identical melting and boiling points.

Q95 General Science **ENGLISH**

What are the two versions of a gene controlling a trait called?

- A. Chromosomes
- B. Proteins
- C. Alleles ✓
- D. Mutations

Q96 General Science **ENGLISH**

20 ml of NaOH is neutralised by 10 ml of HNO_3 . How much NaOH will be required to neutralise 15 ml of HNO_3 ?

- A. 25 ml
- B. 30 ml ✓
- C. 20 ml
- D. 40 ml

Q97 General Science **ENGLISH**

The first fundamental factor for evolution is:

- A. genetic variation ✓
- B. healthy offsprings
- C. competition among individuals
- D. cell division for growth

Q98 General Science **ENGLISH**

If an image is formed by a spherical mirror with a magnification of +1, which of the following statements is true?

- A. The image is real and equal in size to the object.
- B. The image is real and twice the size of the object.
- C. The image is virtual and equal in size to the object. ✓
- D. The image is virtual and half the size of the object.

Q99 General Science **ENGLISH**

Which of these is NOT a property of magnetic field lines?

- A. They travel from south to north inside the magnet.
- B. They never intersect.
- C. They repel each other. ✓
- D. They are continuous closed loops.



Q100 General Science **ENGLISH**

Equipment such as geysers and air conditioners, compared to light bulbs and fans, require:

- A. less power
- B. less voltage
- C. higher voltage
- D. higher power



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Mathematics

30 Questions • Answer Key

Q1 Mathematics ENGLISH

Simplify the given expression.

$$(\sin A + \operatorname{cosec} A)^2 + (\cos A - \sec A)^2 + 3$$

A. $1 + \tan^2 A + \cot^2 A$

B. $6 + \tan^2 A + \cot^2 A$ ✓

C. $3 + \tan^2 A + \cot^2 A$

D. $\tan^2 A + \cot^2 A$

Q2 Mathematics ENGLISH

A number when increased by 50 %, gives 2790. The number is:

A. 1860 ✓

B. 5580

C. 930

D. 3720

Q3 Mathematics ENGLISH

If the distance between A and B is 1253 Km. From A, Chaman goes to B with speed 93 km/h and return to A with the speed 95 km/h. Find the average speed of Chaman.(rounded off to two decimal place)

A. 103.98 km/h

B. 93.99 km/h ✓

C. 90.46 km/h

D. 94.47 km/h

Q4 Mathematics ENGLISH

Two taps can fill a cistern in 2 hours and 53 hours respectively. A third tap can empty it in 53 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

A. 2 ✓

B. 4

C. 3

D. 5

Q5 Mathematics ENGLISH

Shalini travels a distance of 270 km with speed of 54 km/h and 300 km with 30 km/h by her car. Find the average speed (in km/h) of Shalini.

A. 43

B. 44

C. 38 ✓

D. 47

Q6 Mathematics ENGLISH

35 men can do a piece of work in 48 days. The number of men required to complete the same work in 21 days is:

A. 77

B. 72

C. 80 ✓

D. 79

Q7 Mathematics ENGLISH

The difference in the age of two people is 24 years. If 6 years ago, the older of the two was four times as old as the younger one, then find their present ages.

A. 12 and 36 years

B. 16 and 40 years

C. 15 and 39 years

D. 14 and 38 years ✓

Q8 Mathematics ENGLISH

Which of the following ratio is smallest?

A. 29 : 55

B. 15 : 47

C. 18 : 42

D. 19 : 60 ✓



Q9 Mathematics ENGLISH

The average of four consecutive odd numbers is 36. What is the greatest of these numbers?

A. 41

B. 39



C. 43

D. 37

Q10 Mathematics ENGLISH

A six-digit number is divisible by 91. If 143 is added to this number, the resulting number is divisible by which of the following number?

A. 7

B. 13



C. 11

D. 91

Q11 Mathematics ENGLISH

The radius of the base of a right circular cone is 21 m and its curved surface area is 1914 m^2 . Find the volume (in m^3) of the cone.

A. 10250

B. 9240



C. 9549

D. 8549

Q12 Mathematics ENGLISH

What is the average of all the natural numbers from 1 to 95?

A. 48.5

B. 48



C. 49

D. 47.5

Q13 Mathematics ENGLISH

A shopkeeper lists the price of a fan at 25% above its cost price and offers a 10% discount on its list price. If he earns a profit of ₹117, then what is the list price (in ₹) of the fan?

A. 896

B. 1308

C. 1170



D. 1346

Q14 Mathematics ENGLISH

Amit purchased 10 kg of rice at the rate of ₹35 per kg and 39 kg of rice at ₹44 per kg. He sold the mixture at the rate of ₹42 per kg. Find his loss (in ₹).

A. 16

B. 13

C. 8



D. 3

Q15 Mathematics ENGLISH

If the interest earned during the 2nd year on a certain sum is ₹3726, and the rate of interest is 15% per annum compounded annually, then the sum is:

A. ₹21185

B. ₹20835

C. ₹20885

D. ₹21600

**Q16 Mathematics** ENGLISH

The average price of three items of furniture is Rs 16440. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 3288

B. 7672

C. 9864



D. 5480



Q17 Mathematics ENGLISH

The sum of the ages of Ram and Ramesh is 48 years. Four years ago the age of Ram was three times the age of Ramesh. What will be the age of Ramesh five years from now?

A. 21 years

B. 19 years ✓

C. 14 years

D. 18 years

Q18 Mathematics ENGLISH

Find the HCF of 84, 126 and 210.

A. 70

B. 14

C. 21

D. 42 ✓

Q19 Mathematics ENGLISH

The population of a town in 1927 was 232300. If its population increased in two successive decades by 30% in each decade, the population of the town in 1947 was:

A. 392587 ✓

B. 392585

C. 392583

D. 392592

Q20 Mathematics ENGLISH

The numbers of children in 10 families of a locality are 2, 1, 3, 4, 2, 3, 5, 1, 1, 3.

The number of children per family is:

A. 2.8

B. 2.5 ✓

C. 3

D. 2.4

Q21 Mathematics ENGLISH

Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 5 February 2024 to 6 April 2024

A. 33

B. 35 ✓

C. 34

D. 36

Q22 Mathematics ENGLISH

What is the sum of the numbers between 250 and 450, such that when it is divided by 8, 12 and 18, it leaves no remainder?

A. 1008

B. 936

C. 1152

D. 1080 ✓

Q23 Mathematics ENGLISH

If $A:B = 1:3$, $B:C = 4:3$ and $C:D = 6:7$, then $A:B:C:D$ is

A. 8:24:16:21

B. 8:22:18:21

C. 8:24:18:21 ✓

D. 6:24:18:21

Q24 Mathematics ENGLISH

A man sold an article for ₹533 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 ₹1025, then what is the value of d ?

A. 24 ✓

B. 29

C. 21

D. 22



Q25 Mathematics ENGLISH

If the mean of the following data is 40, then the value of X is:

xi	10	25	70	85
fi	21	X	22	35

A. 107



B. 120

C. 134

D. 112

Q26 Mathematics ENGLISH

Let O be the incentre of a triangle PQR and S be a point on the side QR such that $OS \perp QR$. If $\angle QOS = 15^\circ$, then $\angle PQR = ?$

A. 75° B. 130° C. 150° D. 65°

Q27 Mathematics ENGLISH

The solution of the system of linear equations is:

$$x + y + z = 6, 2x - y + 3z = 14, -x + 2y - z = -2$$

A. $x = \frac{4}{3}, y = \frac{-4}{3}, z = 5$

B. $x = \frac{-4}{3}, y = \frac{4}{3}, z = 6$



C. $x = \frac{-5}{3}, y = \frac{5}{3}, z = -6$

D. $x = \frac{5}{3}, y = \frac{-5}{3}, z = 6$



Q28 Mathematics **ENGLISH**

If x is inversely proportional to y , and $y = 6$ when $x = 7$, find the value of x , when $y = 64$.

A. $\frac{21}{32}$



B. $\frac{21}{33}$

C. $\frac{22}{33}$

D. $\frac{23}{35}$

Q29 Mathematics **ENGLISH**

Find the value of $8.25 \times 6 - 3.14 \times 7 + 2.758$ of $2.5 - 4.365 \times 5$.

A. 11.05

B. 12.59



C. 12.97

D. 11.82

Q30 Mathematics **ENGLISH**

The ratio of the lengths of two corresponding sides of two similar triangles is $17 : 13$. The ratio of the areas of these two triangles, in the order mentioned, is:

A. $290 : 170$

B. $289 : 169$



C. $17\sqrt{17} : 13$

D. $17 : 13$

General Intelligence and Reasoning

25 Questions • Answer Key

Q31 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

78 79 83 92 108 ?

A. 133



B. 132

C. 135

D. 134

Q32 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

TUR FGD RSP DEB ?

A. NPQ

B. PQN



C. PNQ

D. NQP



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Q33 General Intelligence and Reasoning **ENGLISH**

Each of D, E, F, K, L, M and N has an exam on a different day of a week, starting from Monday and ending on Sunday of the same week.

N has exam on Thursday. L has an exam two days before N. Only four people have exams between F and L. M has an exam on one of the days after L. D has an exam on the day immediately before E.

How many people have exams between E and M?

A. Two



B. Four

C. Three

D. One

Q34 General Intelligence and Reasoning **ENGLISH**

If 'A' stands for ' $\div$ ', 'B' stands for ' $\times$ ', 'C' stands for '+' and 'D' stands for '-', then what will be come in place of the question mark (?) in the following equation?

$$30 \text{ C } 48 \text{ D } 36 \text{ B } 50 \text{ A } 20 = ?$$

A. -14

B. -10

C. -12



D. -11

Q35 General Intelligence and Reasoning **ENGLISH**

GJBF is related to ILDH in a certain way based on the English alphabetical order. In the same way, JMEI is related to LOGK. To which of the following is MPHL related, following the same logic?

A. ORNJ

B. RONJ

C. ORJN



D. ROJN

Q36 General Intelligence and Reasoning **ENGLISH**

This question is based on the five, four-digit numbers given below.

(Left) 5479 3126 6785 9254 1630 (Right)

(Example: 697 – First digit = 6, second digit = 9 and third digit = 7)

NOTE: All the operations to be performed from left to right.

What will be the resultant if the fourth digit of the second-greatest number is added to the third digit of the smallest number?

A. 12

B. 8



C. 14

D. 10

Q37 General Intelligence and Reasoning **ENGLISH**

If ' $\times$ ' means 'addition', '+' means 'subtraction', '-' means 'division' and ' $\div$ ' means 'multiplication', then what will come in place of the question mark (?) in the following equation?

$$14 + 1 \div 7 \times 32 - 8 = ?$$

A. 12

B. 11



C. 14

D. 13

Q38 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

$$160 \ 151 \ 141 \ 130 \ 118 \ ?$$

A. 105



B. 101

C. 95

D. 91



Q39 General Intelligence and Reasoning **ENGLISH**

In a row of 25 students facing north, Manoj is 15th from the right end. If Harish is 10th to the left of Manoj, what is Harish's position from the left end of the row?

- A. 1st ✓
- B. 2nd
- C. 3rd
- D. 4th

Q40 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

FMK HOM JQO LSQ ?

- A. NUR
- B. NVR
- C. NUS ✓
- D. NVS

Q41 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. KSVA
- B. ENPU ✓
- C. CKNS
- D. HPSX

Q42 General Intelligence and Reasoning **ENGLISH**

P, Q, R, S, T and U are sitting around a circular table facing the centre. U sits third to the left of T. R sits second to the right of Q. Q is not the immediate neighbour of T. P is not the immediate neighbour of R. Who sits third to the left of Q?

- A. P
- B. T
- C. S ✓
- D. U

Q43 General Intelligence and Reasoning **ENGLISH**

In a certain code language,
'hat tie watch' is coded as 'zm ph mt',
'belt bow tie' is coded as 'la oe zm',
'bow watch clip' is coded as 'oe mt dy'.

What is the code for 'hat' in that language? (Note: All the codes are two-letter coded only.)

- A. mt
- B. zm
- C. oe
- D. ph ✓

Q44 General Intelligence and Reasoning **ENGLISH**

P is the daughter of Q's sister R. S is the wife of Q and T is the son of S. How is P related to T?

- A. Sister's daughter
- B. Father's daughter
- C. Father's mother
- D. Father's sister's daughter ✓

Q45 General Intelligence and Reasoning **ENGLISH**

Refer to the following number, symbol series and answer the question. Counting to be done from left to right only.

(Left) 3 8 9 5 £ 6 3 @ 3 % @ 7 * 1 # 2 6 9 2 7 & £ (Right)

How many such symbols are there each of which is immediately preceded by a number and also immediately followed by a number?

- A. 5
- B. 4 ✓
- C. 3
- D. 6



Q46 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: DGJ :: EHK : %

A. # = MZC, % = LOR

B. # = WZC, % = LOP

C. # = WZC, % = LOR



D. # = WXC, % = LOR

Q47 General Intelligence and Reasoning **ENGLISH**

A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

Q. A, B, C, D and E are sitting in a straight line facing north. Who sits on the extreme left end?

(I) A sits fourth to the right of E.

(II) Exactly 1 person sits between B and C.

Data in Statement I alone is sufficient to

A. answer the question, while data in Statement II is not.



B. Both Statements I and II put together are not sufficient to answer the question.

C. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.

D. Both Statements I and II put together (and not independently) are sufficient to answer the question.

Q48 General Intelligence and Reasoning **ENGLISH**

KL91 is related to CD66 in a certain way. In the same way, MN81 is related to EF56. To which of the following is OP71 related, following the same logic?

A. GH56

B. GH46



C. HG46

D. HG56

Q49 General Intelligence and Reasoning **ENGLISH**

15 is related to 35 following a certain logic. Following the same logic, 21 is related to 49. To which of the given options is 27 related, following the same logic?

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

A. 63



B. 69

C. 65

D. 51

Q50 General Intelligence and Reasoning **ENGLISH**

B, C, E, F and H have different heights. B is taller than C. Only E is shorter than F. H is taller than B. How many people are taller than C?

A. Four

B. One

C. Three

D. Two

**Q51** General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. MO – RT

B. DF – IK

C. JL – OQ

D. VW – XZ



Q52 General Intelligence and Reasoning **ENGLISH**

In a certain code,
'red blue green' is coded as 'dy ph mt',
'blue violet black' is coded as 'lp ph st' and
'black red white' is coded as 'st bq dy'.
All the codes are two-letter codes only.
What is white coded as?

A. bq



B. dy

C. st

D. ph

Q53 General Intelligence and Reasoning **ENGLISH**

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

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

12-60-120-130; 14-70-140-150

A. 11-55-110-130

B. 13-65-130-120

C. 15-75-150-140

D. 16-80-160-170

**Q54** General Intelligence and Reasoning **ENGLISH**

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 conclusion(s) logically follow(s) from the statements.

Statements:

All waters are liquids.

All liquids are juices.

All juices are fruits.

Conclusions:

(I) All waters are fruits.

(II) Some fruits are liquids.

A. Only conclusion (I) follows.

B. Both conclusions (I) and (II) follow.



C. Neither conclusion (I) nor (II) follows.

D. Only conclusion (II) follows.

Q55 General Intelligence and Reasoning **ENGLISH**

Manur starts from Point A and drives 12 km towards the East. He then takes a right turn, drives 11 km, turns right and drives 13 km. He then takes a right turn and drives 17 km. He takes a final right turn, drives 1 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90 degrees turns only unless specified)

A. 3 km to the South

B. 2 km to the South

C. 5 km to the South

D. 6 km to the South

**General Awareness**

16 Questions • Answer Key

Q56 General Awareness **ENGLISH**

Kapil Parmar created history by securing India's first-ever medal in which game at the Paralympic Games 2024?

A. Fencing

B. Table Tennis

C. Shooting

D. Judo

**Q57** General Awareness **ENGLISH**

When the pH of rainwater falls below 5.6, it is commonly referred to as:

A. hard water

B. mineral rain

C. alkaline rain

D. acid rain



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Q58 General Awareness **ENGLISH**

What is the primary reason for a central bank to increase the reserve requirement ratio of commercial banks?

- A. To decrease the money supply in the economy** ✓
- B. To increase the money supply in the economy
- C. To decrease the profitability of commercial banks
- D. To encourage banks to lend more

Q59 General Awareness **ENGLISH**

Correctly match the following Biosphere Reserves to their respective states.

Biosphere Reserves States

- 1. Nokrek a. Meghalaya
- 2. Panna b. Madhya Pradesh
- 3. Manas c. Assam

- A. 1-a, 2-c, 3-b**
- B. 1-b, 2-a, 3-c
- C. 1-c, 2-b, 3-a
- D. 1-a, 2-b, 3-c** ✓

Q60 General Awareness **ENGLISH**

How many members of the Rajya Sabha are nominated by the President of India?

- A. 10
- B. 12** ✓
- C. 15
- D. 8

Q61 General Awareness **ENGLISH**

Which of the following rights is NOT part of the Right to Life under Article 21 of the Indian Constitution?

- A. Right to Property** ✓
- B. Right to Free Legal Aid
- C. Right to Privacy
- D. Right to Livelihood

Q62 General Awareness **ENGLISH**

In which language was the classic Indian novel 'Chandrakanta' originally written?

- A. Bengali
- B. Hindi** ✓
- C. Urdu
- D. Tamil

Q63 General Awareness **ENGLISH**

With respect to Quad Leaders' Summit, which of the following statements is/are correct?

- 1) The Quad Leaders' Summit was held in Wilmington (US) in 2024.
- 2) The year 2024 marks 22 years since the formation of the grouping.
- 3) India will host the 2025 Quad Leaders Summit.

- A. 1 and 3 only** ✓
- B. 2 and 3 only
- C. 1 only
- D. 1 and 2 only

Q64 General Awareness **ENGLISH**

Which of the following statements is INCORRECT about the Annual Financial Statement 2024-25?

- 1) The Budget 2024-25 will focus on four castes.
- 2) 1 crore farmers across the country will be initiated into natural farming, supported by certification and branding in the next 2 years.
- 3) 20,000 need-based bio-input resource centres to be established.
- 4) 1,000 Industrial Training Institutes will be upgraded in hub and spoke arrangements with outcome orientation.

- A. 2 only
- B. 4 only
- C. 3 only** ✓
- D. 1 only



Q65 General Awareness **ENGLISH**

What is one of the main attractions of 'Mamallapuram' apart from the dance festival?

- A. Local handicrafts
- B. Architectural beauty of temples ✓
- C. Wildlife sanctuaries
- D. Modern art galleries

Q66 General Awareness **ENGLISH**

In Delhi Sultanate, the holder of an 'iqta', who also worked as the administrative head of his 'iqta', was designated as _____.

- A. wazir
- B. muqti ✓
- C. ariz
- D. qazi

Q67 General Awareness **ENGLISH**

Which status was conferred upon Shipping Corporation of India (SCI) by the Government of India in August 2008?

- A. Navratna ✓
- B. Miniratna
- C. Maharatna
- D. Dashratna

Q68 General Awareness **ENGLISH**

Which of the following Articles of the Indian Constitution states that there shall be a Legislative Assembly for the National Capital Territory and the seats in such Assembly shall be filled by members chosen by direct election from territorial constituencies in the National Capital Territory?

- A. Article 239 AA ✓
- B. Article 239 B
- C. Article 239 AB
- D. Article 239A

Q69 General Awareness **ENGLISH**

Which of the following Ministries launched the electric mobility promotion scheme in March 2024 to provide short term support to Electric Vehicles?

- A. Ministry of Corporate Affairs
- B. Ministry of Road Transport and Highways
- C. Ministry of Heavy Industries ✓
- D. Ministry of Environment, Forest and Climate Change

Q70 General Awareness **ENGLISH**

Hindustan Socialist Republican Association (HSRA) was founded in 1928 in which of the following cities?

- A. Pune
- B. Lahore
- C. Calcutta
- D. Delhi ✓

Q71 General Awareness **ENGLISH**

Students and professors of which IIT have developed an innovative fire rescue drone in June 2024?

- A. IIT Mandi
- B. IIT Madras
- C. IIT Delhi
- D. IIT Dharwad ✓



Q72 General Science **ENGLISH**

If the resistance in a circuit is increased while the voltage remains constant, the current will _____.

- A. decrease** ✓
- B. remain constant
- C. double
- D. increase

Q73 General Science **ENGLISH**

In surgical procedures for contraception in males, sperm transfer gets prevented if which of the following is blocked?

- A. Testes
- B. Fallopian tubes
- C. Vas deferens** ✓
- D. Ovary

Q74 General Science **ENGLISH**

When a metal and sulphuric acid react with each other, metal displaces hydrogen, which is higher in the reactivity series. Identify the metal for which the bubbling of hydrogen gas will be the fastest.

- A. Zinc
- B. Magnesium** ✓
- C. Iron
- D. Aluminium

Q75 General Science **ENGLISH**

The special reproductive structures in fungi like Rhizopus, which germinate to form new individuals, are called:

- A. Pollens
- B. Spores** ✓
- C. Anthers
- D. Gemmules

Q76 General Science **ENGLISH**

The magnetic field lines of a bar magnet may NOT be drawn using:

- A. a magnetic compass
- B. another bar magnet
- C. wood particles** ✓
- D. iron filings

Q77 General Science **ENGLISH**

What are the number of chromosomes in a human male germ cell?

- A. 23 Chromosomes** ✓
- B. 46 Chromosomes
- C. 46 pairs of Chromosomes
- D. 23 pairs of Chromosomes

Q78 General Science **ENGLISH**

Which of the following diseases can be prevented by using a mechanical barrier contraceptive method?

- A. AIDS** ✓
- B. Typhoid
- C. TB
- D. Malaria

Q79 General Science **ENGLISH**

Mendel studied traits such as flower colour and seed shape in pea plants. These traits are called as:

- A. progeny units
- B. dominant characteristics
- C. visible characters** ✓
- D. genetic codes

Q80 General Science **ENGLISH**

What is the molecular formula of washing soda?

- A. NaCl
- B. NaHCO₃
- C. Na₂CO₃
- D. Na₂CO₃·10H₂O** ✓



Q81 General Science **ENGLISH**

If the object is placed beyond the center of curvature (C) in front of a concave mirror, the image formed will be _____.

- A. real, inverted and enlarged
- B. virtual, upright and enlarged
- C. virtual, upright and diminished
- D. real, inverted and diminished ✓

Q82 General Science **ENGLISH**

A double displacement reaction typically involves the exchange of:

- A. ions ✓
- B. protons
- C. electrons
- D. neutrons

Q83 General Science **ENGLISH**

The number of $176\text{-}\Omega$ resistors (in parallel) required to carry 5 A on a 220-V line is:

- A. 8
- B. 4 ✓
- C. 16
- D. 2

Q84 General Science **ENGLISH**

What is the result when sodium chloride and silver nitrate are mixed in a double displacement reaction?

- A. Formation of a precipitate ✓
- B. Formation of a salt
- C. Formation of a gas
- D. Formation of water

Q85 General Science **ENGLISH**

Which of the following is true for a balanced chemical equation?

- A. The number of molecules on each side is always equal.
- B. The products have more atoms than the reactants.
- C. The mass of reactants is always greater than the mass of products.
- D. The total number of atoms for each element is the same on both sides of the equation. ✓

Q86 General Science **ENGLISH**

Besides being a barrier method of contraception, condoms also serve which of the following purposes?

- A. Prevent transmission of STDs such as gonorrhoea ✓
- B. Decrease sexual desire
- C. Prevent diseases that spread through skin-to-skin contact
- D. Help in transmission of STDs such as gonorrhoea

Q87 General Science **ENGLISH**

Which electrical appliance helps preserve food by maintaining low temperatures?

- A. Electric kettle
- B. Toaster
- C. Microwave
- D. Refrigerator ✓

Q88 General Science **ENGLISH**

If the refractive index of water is 1.33, then the speed of light in water is approximately _____.

- A. 5×10^8 m/s
- B. 26×10^8 m/s ✓
- C. 4×10^8 m/s
- D. 3×10^8 m/s



Q89 General Science **ENGLISH**

What is the pH of a solution containing significant concentrations of H^+ ions?

- A. Greater than 7
- B. Less than 7 ✓
- C. Cannot be determined
- D. 7

Q90 General Science **ENGLISH**

Which of the following statements is true regarding the refractive index?

- A. Refractive index of glass is less than 1.
- B. Refractive index of a given medium is independent of the wavelength of the light.
- C. Refractive index depends only on the speed of light in vacuum.
- D. Refractive index of water is always greater than 1. ✓

Q91 General Science **ENGLISH**

Which of the following statements is correct regarding magnets?

- A. A magnet can have either north or south pole.
- B. A magnet can attract an electron.
- C. A magnet is a dipole with north and south poles. ✓
- D. A magnet produces magnetic as well as electric fields.

Q92 General Science **ENGLISH**

Which of the following is a primary reason why all multi-cellular organisms do not reproduce by fragmentation?

- A. Their cells are loosely organised.
- B. They have a random arrangement of cells.
- C. They are unicellular.
- D. They have specialised cells organised into tissues and organs. ✓

Q93 General Science **ENGLISH**

Which of the following statements best describes what happens in a double displacement reaction?

- A. Two elements combine to form a compound.
- B. Electrons are transferred between atoms.
- C. A compound breaks down into simpler substances.
- D. Ions in two compounds switch places to form two new compounds. ✓

Q94 General Science **ENGLISH**

Which of the following is NOT a homologous series?

- A. C_2H_2 , C_2H_4 , C_3H_6 , C_4H_8
- B. C_3H_7OH , C_4H_9OH , $C_5H_{11}OH$, $C_6H_{11}OH$
- C. CH_4 , C_2H_6 , C_3H_8 , C_4H_{10}
- D. C_2H_4 , C_2H_6 , C_3H_6 , C_4H_8 ✓

Q95 General Science **ENGLISH**

What develops into fruit after fertilisation?

- A. Anther
- B. Style
- C. Ovary ✓
- D. Stigma

Q96 General Science **ENGLISH**

Which of the following is true about asexual reproduction?

- A. It results in offspring genetically identical to the parent. ✓
- B. It requires fertilisation.
- C. It involves two parent organisms.
- D. It requires complex reproductive organs.



Q97 General Science **ENGLISH**

A wire of given material having length L and area of cross-section A has a resistance of $4\ \Omega$. The resistance of another wire of the same material having length $L/2$ will be:

A. $1\ \Omega$

B. $8\ \Omega$

C. $4\ \Omega$

D. $2\ \Omega$ ✓

Q98 General Science **ENGLISH**

What is the difference between baking powder and baking soda?

A. Baking powder is a mixture of baking soda and hydrochloric acid.

B. Baking powder is a mixture of baking soda and tartaric acid. ✓

C. Baking soda is a mixture of baking powder and hydrochloric acid.

D. Baking soda is a mixture of baking powder and tartaric acid.

Q99 General Science **ENGLISH**

Which of the following statements about AIDS is FALSE?

A. AIDS affects the immune system of the body.

B. AIDS is caused by the HIV virus.

C. AIDS can be prevented by practising safe sex.

D. AIDS can be transmitted through mosquito bites. ✓

Q100 General Science **ENGLISH**

For a concave mirror, where is the centre of curvature located relative to the mirror?

A. Behind the mirror

B. At the mirror's surface

C. At the mirror's focal point

D. In front of the mirror ✓



Mathematics

30 Questions • Answer Key

Q1 Mathematics ENGLISH

A car rental company rents small cars at \$50 per day and large cars at \$80 per day. If a total of 13 cars were rented for \$920 in one day, how many large cars were rented?

A. 9



B. 4

C. 11

D. 6

Q2 Mathematics ENGLISH

A and B can do a piece of work in 4 days and 46 days, respectively. The number of days [Correct to one decimal place] required to complete the work if both A and B work together is:

A. 5.5

B. 6.9

C. 6.8

D. 3.6



Q3 Mathematics ENGLISH

The population of a town in 1974 was 222900. If its population increased in two successive decades by 50% in each decade, the population of the town in 1994 was:

A. 501525



B. 501526

C. 501521

D. 501520

Q4 Mathematics ENGLISH

If the distance between A and B is 1089 Km. From A, Vishal goes to B with speed 104 km/h and return to A with the speed 125 km/h. Find the average speed of Vishal.(rounded off to two decimal place)

A. 117.44 km/h

B. 111.79 km/h

C. 120.89 km/h

D. 113.54 km/h



Q5 Mathematics ENGLISH

Evaluate: $32 \div 12 \times 3 - 2 \times 4$

A. 2

B. 3

C. -1

D. 0



Q6 Mathematics ENGLISH

The average age of 40 boys in a class is 18 years. One boy, aged 26 years left the class, and two new boys joined the class. If the average age of all boys now in the class remains 18 years, then find the average age of the two newcomers.

A. 24 years

B. 20 years

C. 22 years



D. 21 years

Q7 Mathematics ENGLISH

A number when increased by 50 %, gives 3120. The number is:

A. 1040

B. 6240

C. 2080



D. 4160

Q8 Mathematics ENGLISH

Find the cost (in ₹) of digging a cuboidal pit 9 m long, 5 m broad and 4 m deep at the rate of ₹20 per m^3 .

A. 3,900

B. 3,800

C. 3,700

D. 3,600



Q9 Mathematics ENGLISH

What is the median of the following data?

17, 54, 51, 64, 13, 39, 23, 40, 78, 66, 96

A. 52

B. 51



C. 51.5

D. 50.5

Q10 Mathematics ENGLISH

The LCM of two numbers is seven times of their HCF. If the product of two numbers is 448, then find the difference between LCM and HCF.

A. 48



B. 30

C. 54

D. 42

Q11 Mathematics ENGLISH

A man sold an article for ₹687 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 ₹1145, then what is the value of d?

A. 19

B. 23

C. 20



D. 16

Q12 Mathematics ENGLISH

What is the average of all the natural numbers from 1 to 97?

A. 50

B. 49



C. 49.5

D. 48.5

Q13 Mathematics ENGLISH

Suman invested a sum of ₹3500 at 20% per annum compound interest, compounded annually. If she received an amount of ₹6048 after n years, the value of n is:

A. 4

B. 2

C. 3



D. 2.6

Q14 Mathematics ENGLISH

A trader lost 10% by selling a shirt for ₹840. He will gain x%' by selling it for ₹1540, the value of x is:

A. 75

B. 65



C. 55

D. 80

Q15 Mathematics ENGLISH

Anamika travels a distance of 183 km with speed of 61 km/h and 225 km with 45 km/h by her car. Find the average speed (in km/h) of Anamika.

A. 56

B. 54

C. 59

D. 51

**Q16 Mathematics** ENGLISH

Among five people named A, B, C, D and E, each has a certain age. C is twice the age of A. A is three times the age of D. D is one fifth the age of B. The age of B is 45. If E is equal the age of C, what is the age of E?

A. 58

B. 54



C. 56

D. 52



Q17 Mathematics ENGLISH

Pooja and Ritu invest in a business in the ratio 4 : 1. If total profit is Rs. 1480, then what is difference between the profit (in Rs.) of Pooja and Ritu?

A. 988

B. 938

C. 888 ✓

D. 788

Q18 Mathematics ENGLISH

₹3300 were divided among P, Q and R, such that 4 times of P = 7 times of Q = 2 times of R. Find the share of R.

A. ₹2046

B. ₹1848 ✓

C. ₹2028

D. ₹2024

Q19 Mathematics ENGLISH

The average price of three items of furniture is Rs 15765. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

A. 5255

B. 3153

C. 22071 ✓

D. 7357

Q22 Mathematics ENGLISH

A trader claims to sell rice at a profit of 74%, but also dishonestly uses a weight which is 9% 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. 91% ✓

B. 89%

C. 87%

D. 94%

Q20 Mathematics ENGLISH

Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 3 February 2024 to 4 April 2024

A. 34

B. 35 ✓

C. 33

D. 36

Q21 Mathematics ENGLISH

Two taps can fill a cistern in 2 hours and 46 hours respectively. A third tap can empty it in 46 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

A. 2 ✓

B. 3

C. 4

D. 5



Q23 Mathematics **ENGLISH**

If x is inversely proportional to y , and $y = 5$ when $x = 2$, find the value of x , when $y = 41$.

A. $\frac{11}{42}$

B. $\frac{10}{41}$ ✓

C. $\frac{10}{42}$

D. $\frac{12}{44}$

Q24 Mathematics **ENGLISH**

What is the mean of the following distribution?

Marks	13	23	51	61	96
No. of Students	51	34	62	87	17

A. 46 ✓

B. 37

C. 34

D. 72

Q25 Mathematics **ENGLISH**

Find the value of $1.356 + 4.25 \times 8 - 3.562 \times 6 + 7.5 \times 4$.

A. 43.012

B. 42.237

C. 41.625

D. 43.984 ✓

Q26 Mathematics **ENGLISH**

What is the difference between the hypotenuse and the base of an isosceles right triangle that has an area of 392 m^2 (use $\sqrt{2} = 1.4$)?

A. 12.4 m

B. 11.2 m ✓

C. 11.9 m

D. 10.9 m



Q27 Mathematics **ENGLISH**

The solution of the system of the given linear equations is:

$$2x + 3y - z = 5, x - 2y + 4z = -2, 3x + y + 2z = 7$$

A. $x = \frac{-44}{7}, y = \frac{27}{7}, z = -4$

B. $x = \frac{44}{7}, y = \frac{-27}{7}, z = -4$ ✓

C. $x = \frac{44}{7}, y = \frac{-27}{7}, z = -8$

D. $x = \frac{-44}{7}, y = \frac{-27}{7}, z = 4$

Q28 Mathematics **ENGLISH**

The angle of elevation of a tower from a point which is at a distance of 44 m from it's foot is 60° . Find the height of the tower. (use $\sqrt{3} = 1.73$)

A. 48 m

B. 56.37 m

C. 68 m

D. 76.12 m ✓

Q29 Mathematics **ENGLISH**

If two parallel lines are cut by a transversal, and one pair of the corresponding angles formed are $(x + 30)^\circ$ and $(2x - 10)^\circ$, then find the value of x.

A. 35

B. 45

C. 40 ✓

D. 30

Q30 Mathematics **ENGLISH**

AB and CD are parallel straight lines and HI is the transversal intersecting AB at E and CD at F. G is a point between the lines AB and CD but not on HI, such that $m\angle EGF = 65^\circ$. If $\frac{2}{5} \times m\angle BEG = \frac{3}{5} \times m\angle DFG$, and $m\angle DFG = \frac{1}{3} \times m\angle DFE$, what is the measure of $\angle FEG$?

A. 63° ✓

B. 52°

C. 62°

D. 69°



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Q31 General Intelligence and Reasoning **ENGLISH**

A question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and select the most appropriate answer.

Question:

Five boxes, V, W, X, Y and Z, have different weights. Which box among them is the second heaviest?

Statements:

(I) Y is heavier than W. Only three boxes are lighter than Z.

(II) X is heavier than W. X is heavier than V.

Data in statement I alone is sufficient to

A. answer the question while data in statement II is not. ✓

B. Data in statements I and II together are not sufficient to answer the question.

C. Data in statements I and II together are sufficient to answer the question.

D. Data in statement II alone is sufficient to answer the question while data in statement I is not.

Q32 General Intelligence and Reasoning **ENGLISH**

In a certain code language,

'actor singer dancer' is coded as 'ma ph st',

'dancer doctor engineer' is coded as 'cd le ma' and

'engineer actor cricketer' is coded as 'st bq cd'.

(All the codes are two-letter codes only.)

What is the code for 'actor' in that language?

A. st ✓

B. ma

C. cd

D. bq

Q33 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. CM-JL

B. LV-TU ✓

C. OY-VX

D. GQ-NP

Q34 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four are alike in a certain way and thus form a group. Which is the one that DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. SWV

B. DGF ✓

C. OSR

D. HLK

Q35 General Intelligence and Reasoning **ENGLISH**

Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

WJT : ZNO

KAK : NEF

A. NKH : QOC ✓

B. LBL : OEG

C. MTK : PXG

D. TFV : WJR



Q36 General Intelligence and Reasoning **ENGLISH**

Mayank starts from Point A and drives 18 km towards east. He then takes a right turn, drives 19 km, turns right and drives 21 km. He then takes a right turn and drives 25 km. He takes a final right turn, drives 3 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)

A. 5 km to the south

B. 6 km to the south

C. 8 km to the south

D. 4 km to the south

Q37 General Intelligence and Reasoning **ENGLISH**

Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

CYU XTP SOK NJF ?

A. ERT

B. EAI

C. IEA

D. IAI

Q38 General Intelligence and Reasoning **ENGLISH**

In a certain code, 'copy book pencil' is coded as 'fd rl sg', 'pencil crayon eraser' is coded as 'bz xw rl', and 'crayon copy pen' is coded as 'xw sg xo'. What is the code for 'book' in that language?

(Note: All the codes are two letter coded only.)

A. rl

B. xo

C. sg

D. fd

Q39 General Intelligence and Reasoning **ENGLISH**

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

$$17 + 9 - 3 \times 3 \div 7 = ?$$

A. 49

B. 40

C. 43

D. 47

Q40 General Intelligence and Reasoning **ENGLISH**

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 conclusion(s) logically follow(s) from the statements.

Statements: All hens are juices. Some juices are nests. All pins are nests.

Conclusions:

(I): Some pins are hens.

(II): Some pins are juices

A. Only conclusion (II) follows.

B. Neither conclusion (I) nor (II) follows.

C. Only conclusion (I) follows.

D. Both conclusions (I) and (II) follow.

Q41 General Intelligence and Reasoning **ENGLISH**

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

$$11 + 37 - 5 \times 40 \div 24 = ?$$

A. -23

B. -25

C. -21

D. -22



Q42 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

FDW LJC RPI XVO ?

- A. BUD
- B. DUB
- C. BDU
- D. DBU

**Q43** General Intelligence and Reasoning **ENGLISH**

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

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

6-18-72-102; 8-20-80-110

- A. 7-19-76-106
- B. 11-22-88-116
- C. 4-16-64-84
- D. 9-21-84-94

**Q44** General Intelligence and Reasoning **ENGLISH**

YT21 is related to TO19 in a certain way based on the English alphabetical order. In the same way, PL17 is related to KG15. To which of the following is KF13 related, following the same logic?

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

- A. FA11
- B. FO11
- C. AE11
- D. FT17

**Q45** General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: GJM :: FIL : %

- A. # = XAD, % = ORU
- B. # = XAD, % = ORP
- C. # = XAD, % = MRU
- D. # = YAD, % = ORU

**Q46** General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

68 76 86 98 112 ?

- A. 122
- B. 125
- C. 128
- D. 132



Q47 General Intelligence and Reasoning **ENGLISH**

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.

Only four people live between D and F. C lives on an even numbered floor but not on floor number 2. E lives immediately below A but above D.

How many people live below B?

A. Four



B. Three

C. One

D. Two

Q48 General Intelligence and Reasoning **ENGLISH**

O, P, Q, R, S and T are sitting around a circular table facing the centre. P sits second to the left of T. Q is the immediate neighbour of P and R. S is not the immediate neighbour of R. Who sits to the immediate left of R?

A. S

B. Q

C. O



D. T

Q49 General Intelligence and Reasoning **ENGLISH**

Select the option in which the numbers share the same relationship as that shared by the given pairs of numbers.

(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.)

185, 113

170, 98

A. 165, 103

B. 112, 50

C. 146, 74



D. 136, 62

Q50 General Intelligence and Reasoning **ENGLISH**

Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 6 # 1 * 8 & 7 & 5 4 Ω 3 % 9 6 @ 2 \$ 9 £ 3 (Right)

How many such symbols are there each of which is immediately preceded by an odd number but NOT immediately followed by an even number?

A. One



B. Two

C. Three

D. Four

Q51 General Intelligence and Reasoning **ENGLISH**

In a certain code language,

'A + B' means 'A is the son of B',

'A – B' means 'A is the brother of B',

'A × B' means 'A is the wife of B' and

'A ÷ B' means 'A is the father of B'.

How is S related to H if 'S – D + F ÷ G × H'?

A. Brother

B. Father

C. Wife's Brother



D. Wife's Father

Q52 General Intelligence and Reasoning **ENGLISH**

Seven boxes, I, J, K, L, W, X and Y, are kept one over the other but not necessarily in the same order. Only K is kept above L. Only two boxes are kept between W and J. Only L is kept below I. J is not kept immediately below Y. How many boxes are kept between X and L?

A. Two



B. Four

C. Three

D. One



Q53 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

86 78 64 56 42 34 ?

A. 20



B. 22

C. 26

D. 28

Q54 General Intelligence and Reasoning **ENGLISH**

Refer to the following number and symbol series and answer the question that follows. (Counting to be done from left to right only.)

(Left) 2 @ 4 + = 3 1 # 3 @ \$ 9 8 * 9 4 2 8 7 6 5 (Right)

How many such symbols are there, each of which is immediately preceded by and also immediately followed by a number?

A. One

B. Four

C. Three



D. Two

Q55 General Intelligence and Reasoning **ENGLISH**

$\frac{(a^9 \times b^3 \times c^6)}{(a^{10} \times b^6 \times c^3)}$ in simplified form is:

A. $(a^{-1}) \times (b^{-3}) \times (c^3)$



B. $(a^1) \times (b^1) \times (c^5)$

C. $(a^{-7}) \times (b^{-9}) \times (c^4)$

D. $(a^1) \times (b^6) \times (c^{-9})$

General Awareness

16 Questions • Answer Key

Q56 General Awareness **ENGLISH**

NATO will establish a new land command in _____ near the Russian border in 2025 to oversee northern European land operations during potential conflicts.

A. Kyrgyzstan

B. Ukraine

C. Turkmenistan

D. Finland



Q58 General Awareness **ENGLISH**

The Indian Constitution guarantees Fundamental Rights to its citizens under which of the following Articles?

A. Only Articles 14 to 32

B. Only Articles 15 to 35

C. Only Articles 12 to 35



D. Only Articles 12 to 30

Q57 General Awareness **ENGLISH**

India has reduced the windfall tax on crude oil to ₹ _____ per metric tonne from ₹4,600, effective 17 August 2024.

A. 2,600

B. 1,800

C. 2,100



D. 3,600

Q59 General Awareness **ENGLISH**

The pH of acid rain is:

A. more than 7

B. more than 5.6 but less than 7

C. less than 5.6



D. equal to 7



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Q60 General Awareness **ENGLISH**

In which year was 'Heirloom Treasures: The Cultural Tapestry of India: A Compilation of Selected Articles from India Beckons: Volume 1,' by Arunima Hoskote, published?

A. 2021

B. 2018

C. 2020



D. 2019

Q61 General Awareness **ENGLISH**

Which of the following waterways is located on the Tapi river?

A. NW-10

B. NW-100



C. NW-91

D. NW-1

Q62 General Awareness **ENGLISH**

What is the name of the famous temple complex in Tamil Nadu, known for its Dravidian architecture and 1,000-pillar hall?

A. Meenakshi Temple



B. Brihadeeswarar Temple

C. Kanchipuram Temple

D. Jagannath Temple

Q63 General Awareness **ENGLISH**

Which Article of the Indian Constitution permits the Supreme Court to review its judgement or order?

A. Article 135

B. Article 137



C. Article 132

D. Article 138

Q64 General Awareness **ENGLISH**

At which of the following points does each firm employ labour?

Each firm employs labour up to the point where
A. the marginal revenue product of labour minus the wage rate.

Each firm employs labour up to the point
B. where the marginal revenue product of labour equals the wage rate.



C. Each firm employs labour up to the point where the marginal cost of labour equals the wage rate.

Each firm employs labour up to the point where
D. the marginal revenue product of labour multiplies the wage rate.

Q65 General Awareness **ENGLISH**

What was the venue of the 13th Ministerial Conference of the World Trade Organization in 2024?

A. New Delhi, India

B. Abu Dhabi, United Arab Emirates



C. London, England

D. Paris, France

Q66 General Awareness **ENGLISH**

Which of the following statements are correct with respect to Arunachal Himalaya?

Statement 1: These extend from the east of the Bhutan Himalayas up to the Diphu pass in the east.

Statement 2: The general direction of the mountain range is from southwest to northeast.

Statement 3: Some of the important mountain peaks of the region are K2 and Annapurna.

Statement 4: These ranges are dissected by fast-flowing rivers from the north to the south, forming deep gorges.

A. Statements 1, 2 and 3 are correct.

B. Only statements 2 and 3 are correct.

C. Statements 1, 2 and 4 are correct.



D. Statements 2, 3 and 4 are correct.



Q67 General Awareness **ENGLISH**

Which team clinched the Irani Cup title for the season 2024-25?

A. Mumbai



B. Rest of India

C. Karnataka

D. Railways

Q68 General Awareness **ENGLISH**

The first President of the Indian National Congress was _____.

A. Gopal Krishna Gokhale

B. Ras Behari Bose

C. Dada Bhai Naoroji

D. Womesh Chandra Banerjee



Q69 General Awareness **ENGLISH**

Who among the following was the ruler of Gujarat when Humayun attacked the kingdom in 1532?

A. Bahadur Shah



B. Muzaffar Shah II

C. Sikandar Shah

D. Zafar Khan Muzaffar

Q70 General Awareness **ENGLISH**

In which of the following cases did the Supreme Court of India enunciate the 'Doctrine of Basic Structure'?

A. Golaknath case

B. AK Gopalan case

C. Keshvanand Bharti case



D. Menka Gandhi case

Q71 General Awareness **ENGLISH**

What is the name (acronym) of the software developed by ISRO, through its Vikram Sarabhai Space Centre (VSSC), a Computational Fluid Dynamics (CFD) tool aimed at facilitating aerodynamic design and analysis for aerospace vehicles?

A. PraYoGa

B. PraVaHa



C. PraViNa

D. PraNaMa

General Science

29 Questions • Answer Key

Q72 General Science **ENGLISH**

As the concentration of hydronium ions increases, the pH value _____.

A. increases

B. decreases



C. decreases and then increases

D. remains the same

Q73 General Science **ENGLISH**

Oxidation of metals in the presence of acids or moisture is called:

A. neutralisation

B. corrosion



C. rancidity

D. rusting

Q74 General Science **ENGLISH**

Leishmania reproduces by:

A. binary fission in two equal halves

B. binary fission in only vertical planes

C. binary fission in any plane

D. binary fission in a definite plane



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Q75 General Science **ENGLISH**

If the resistance of a conductor is doubled while the current remains the same, how will the heat produced per unit time change?

- A. It will double.** ✓
- B. It will quadruple.
- C. It will be halved.
- D. It will remain the same.

Q76 General Science **ENGLISH**

Yeast reproduces through which asexual mode of reproduction?

- A. Fusion
- B. Vegetative propagation
- C. Fission
- D. Budding** ✓

Q77 General Science **ENGLISH**

What is the role of chlorine gas in the preparation of bleaching powder?

- A. It is used as a catalyst for the reaction.
- B. It is used to neutralise calcium hydroxide.
- C. It reacts with water to produce hydrogen peroxide.
- D. It reacts with dry slaked lime to form bleaching powder.** ✓

Q78 General Science **ENGLISH**

Contraception is one of the main goals of which health care programme?

- A. Indradhanush Immunisation Programme
- B. Reproductive Health Programme** ✓
- C. Pulse Polio Programme
- D. Mental Health Programme

Q79 General Science **ENGLISH**

When Plaster of Paris is mixed with water, it undergoes which of the following changes?

- A. It dissolves completely.
- B. It loses all its water molecules.
- C. It produces a gas.
- D. It changes to gypsum.** ✓

Q80 General Science **ENGLISH**

What is the unit of electric power commonly used to measure household energy consumption?

- A. Watts
- B. Kilowatt-hours** ✓
- C. Joules
- D. Amperes

Q81 General Science **ENGLISH**

Which of the following steps is the first step in balancing a chemical equation?

- A. Writing the skeleton equation** ✓
- B. Balancing hydrogen atoms
- C. Adding coefficients randomly
- D. Balancing oxygen atoms

Q82 General Science **ENGLISH**

Which of the following factors is primarily responsible for survival of species?

- A. Niche
- B. Temperature
- C. Mutation
- D. Variations** ✓



Q83 General Science **ENGLISH**

Which of the following is correct with regard to resistances in a series circuit?

- A. Total resistance is equal to the product of all resistances.
- B. Total resistance is less than any individual resistance.
- C. Total resistance is equal to the sum of all individual resistances. ✓
- D. Total resistance is inversely proportional to each resistance.

Q84 General Science **ENGLISH**

Which of the following is an example of a decomposition reaction that occurs due to the application of electric current?

- A. Heating calcium carbonate
- B. Electrolysis of water ✓
- C. Decomposition of potassium permanganate by heat
- D. Decomposition of sodium bicarbonate by heat

Q85 General Science **ENGLISH**

Which of the following is NOT a method of pollination?

- A. Water pollination
- B. Self-pollination
- C. Wind pollination
- D. Asexual pollination ✓

Q86 General Science **ENGLISH**

Which part of the Bryophyllum plant develops new plants via vegetative propagation?

- A. Roots
- B. Flowers
- C. Leaves ✓
- D. Stems

Q87 General Science **ENGLISH**

How can you experimentally determine the focal length of a concave mirror?

- A. Measure the diameter of the mirror.
- B. Measure the distance between the pole and the centre of curvature.
- C. Measure the angle of reflection.
- D. Measure the distance between the mirror and the image of a distant object formed by it. ✓

Q88 General Science **ENGLISH**

A tube like structure grows down from the pollen grain to the style and reaches the ovule. This pollen tube is responsible for:

- A. carrying the male germ cell to the female germ cell in the ovary ✓
- B. carrying oxygen to the female germ cell in the ovary
- C. carrying nutrition to the female germ cell in the ovary
- D. carrying carbon dioxide to the female germ cell in the ovary

Q89 General Science **ENGLISH**

A homologous series is a group of organic compounds that have:

- A. the same molecular formula
- B. the same structural formula
- C. the same functional group but differ by a CH_2 group ✓
- D. no relation to each other

Q90 General Science **ENGLISH**

Which of the following options is INCORRECT with relation to the given statement?

The magnetic field lines of a bar magnet may be drawn using:

- A. another bar magnet
- B. a magnetic compass
- C. wood particles ✓
- D. iron filings



Q91 General Science **ENGLISH**

What happens when zinc (Zn) reacts with hydrochloric acid (HCl)?

- A. Hydrogen is oxidised.
- B. Zinc is reduced.
- C. Zinc is oxidised. ✓
- D. Both Zinc and Hydrogen are oxidised.

Q92 General Science **ENGLISH**

Which of the following materials will have the least resistance at room temperature?

- A. Aluminum
- B. Copper ✓
- C. Nichrome
- D. Iron

Q93 General Science **ENGLISH**

What is the purpose of using devices like Copper-T in family planning?

- A. To alter hormonal levels in women
- B. To block sperm transfer in males
- C. To prevent fertilised eggs from implanting in the uterus ✓
- D. To act as a physical barrier to sperm

Q94 General Science **ENGLISH**

What is the angle formed between two lateral faces of a triangular glass prism called?

- A. Angle of the prism ✓
- B. Angle of incidence
- C. Angle of deviation
- D. Angle of refraction

Q95 General Science **ENGLISH**

Where does the image form when an object is positioned at the centre of curvature of a concave mirror?

- A. At the pole
- B. At the focal point
- C. At infinity
- D. At the centre of curvature ✓

Q96 General Science **ENGLISH**

When an aqueous solution of potassium iodide reacts with lead nitrate, what type of product is formed?

- A. Lead iodide (precipitate) ✓
- B. Lead nitrate
- C. Lead chloride
- D. Sodium nitrate

Q97 General Science **ENGLISH**

In a convex mirror, the principal focus is located ____.

- A. at the centre of curvature
- B. behind the mirror ✓
- C. in front of the mirror
- D. at the pole of the mirror

Q98 General Science **ENGLISH**

The measure of how much a material resists the flow of charges is known as:

- A. resistivity ✓
- B. power generated
- C. current
- D. potential difference

Q99 General Science **ENGLISH**

Which scientist(s) established the laws of Inheritance?

- A. Thomas Hunt Morgan
- B. Charles Darwin
- C. Gregor Johann Mendel ✓
- D. Watson and Crick



Q100 General Science **ENGLISH**

Rose flower pollen has reached Sunflower stigma through pollination. The pollen will be rejected by the stigma because:

- A. pollen was of rose flower
- B. pollen has nothing to do with stigma
- C. pollen was not of sunflower ☒
- D. stigma has nothing to do with pollen

Blackbook



Mathematics

30 Questions • Answer Key

Q1 Mathematics ENGLISH

Write the expanded form of $(5a + 4b + 9c)^2$.

A. $25a^2 + 16b^2 + 81c^2 + 40ab + 72bc + 90ac$ ✓

B. $25a^2 + 16b^2 + 81c^2 + 40ab + 72bc + 100ac$

C. $25a^2 + 16b^2 + 81c^2 + 44ab + 72bc + 90ac$

D. $25a^2 + 16b^2 + 81c^2 + 40ab + 67bc + 90ac$

Q2 Mathematics ENGLISH

₹5400 were divided among P, Q and R, such that 6 times of P = 3 times of Q = 8 times of R. Find the share of R.

A. ₹1080 ✓

B. ₹1245

C. ₹947

D. ₹1235

Q3 Mathematics ENGLISH

A number when increased by 50 %, gives 2850. The number is:

A. 5700

B. 3800

C. 950

D. 1900 ✓

Q4 Mathematics ENGLISH

Sakshi invested a sum of ₹8900 at 10% per annum compound interest, compounded annually. If she received an amount of ₹10769 after n years, the value of n is:

A. 3

B. 1.60000002384186

C. 2 ✓

D. 2.4

Q5 Mathematics ENGLISH

What is the median of the following data?

78, 33, 59, 56, 61, 36, 48, 42, 97, 57, 62

A. 57.5

B. 58

C. 56.5

D. 57 ✓

Q6 Mathematics ENGLISH

The average marks of some students in a class is 75. When five students are included, the average becomes 78 and the marks of those five students are 80, 85, 89, 81 and 82. Find the total number of students.

A. 9 ✓

B. 10

C. 6

D. 8

Q7 Mathematics ENGLISH

The average price of three items of furniture is Rs 16455. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 7679

B. 9873 ✓

C. 5485

D. 3291

Q8 Mathematics ENGLISH

What is the smallest 4-digit number which, when divided by 12, 16, and 20, gives a remainder of 9?

A. 1049

B. 1209 ✓

C. 1017

D. 1217



Q9 Mathematics ENGLISH

Evaluate: $33 \div 9 \times 3 - 2 \times 4$

A. 6

B. 3



C. 5

D. 2

Q10 Mathematics ENGLISH

A shopkeeper sells an item for ₹770.7 after giving two successive discounts of 58% and 80% on its marked price. Had he not given any discount, he would have earned a profit of 25%. What is the cost price (in ₹) of the item?

A. 7322

B. 7353

C. 7340



D. 7315

Q11 Mathematics ENGLISH

The centres of two circles with radii 28 cm and 20 cm are 50 cm apart. What is the length (in cm) of the transverse common tangent?

A. 16

B. 15

C. 14



D. 13

Q12 Mathematics ENGLISH

The cost of a washing machine is 25% less than the cost of a TV. If the cost of the washing machine increases by 82% and that of the TV decreases by 16%, then what is the change in the total cost of 8 washing machines and 9 TVs?

A. Decrease by 24%

B. Increase by 20%

C. Decrease by 21%

D. Increase by 23.2%

**Q13 Mathematics** ENGLISH

If the mean proportional of P and 100 is 50, then find the value of P.

A. 28

B. 25



C. 22

D. 24

Q14 Mathematics ENGLISH

Write the expanded form of $(6a + 2b + 7c)^2$.

A. $36a^2 + 4b^2 + 49c^2 + 28ab + 28bc + 84ac$

B. $36a^2 + 4b^2 + 49c^2 + 24ab + 28bc + 94ac$

C. $36a^2 + 4b^2 + 49c^2 + 24ab + 23bc + 84ac$

D. $36a^2 + 4b^2 + 49c^2 + 24ab + 28bc + 84ac$

**Q15 Mathematics** ENGLISH

A and B complete a work in 18 days. If A alone can do it in 54 days then, B alone can do in _____(days).

A. 26

B. 28

C. 29

D. 27

**Q16 Mathematics** ENGLISH

[Question text / figure not saved in the source paper record. Options and official answer as released.]

A. 20



B. 12

C. 10

D. 8

Q17 Mathematics ENGLISH

The ratio between HCF and LCM of two numbers 62 and 217 is 1 : 14. Find the LCM.

A. 402

B. 439

C. 434



D. 430



Q18 Mathematics ENGLISH

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 6 hours 45 minutes. He would have gained 2 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

- A. 9 hours 15 minutes
- B. 8 hours 30 minutes
- C. 8 hours 45 minutes ✓
- D. 7 hours 45 minutes

Q19 Mathematics ENGLISH

Himani travels a distance of 352 km with speed of 32 km/h and 330 km with 30 km/h by her car. Find the average speed (in km/h) of Himani.

- A. 31 ✓
- B. 26
- C. 21
- D. 39

Q20 Mathematics ENGLISH

Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 14 February 2024 to 15 April 2024

- A. 33
- B. 36
- C. 35 ✓
- D. 34

Q21 Mathematics ENGLISH

Write the expanded form of $(9a + 6b + 4c)^2$.

- A. $81a^2 + 36b^2 + 16c^2 + 108ab + 48bc + 72ac$ ✓
- B. $81a^2 + 36b^2 + 16c^2 + 108ab + 43bc + 72ac$
- C. $81a^2 + 36b^2 + 16c^2 + 112ab + 48bc + 72ac$
- D. $81a^2 + 36b^2 + 16c^2 + 108ab + 48bc + 82ac$

Q22 Mathematics ENGLISH

A trader lost 10% by selling a shirt for ₹850. He will gain x%' by selling it for ₹1360, the value of x is:

- A. 34
- B. 59
- C. 44 ✓
- D. 54

Q23 Mathematics ENGLISH

The sum of 8 numbers is 336. Find their average number.

- A. 42 ✓
- B. 40
- C. 43
- D. 41

Q24 Mathematics ENGLISH

Two numbers are in the ratio 5 : 8. If the first number is increased by 13 and the second number is decreased by 6, then the ratio becomes 4 : 6. What is the sum of the original two numbers?

- A. 665
- B. 650
- C. 681
- D. 663 ✓



Q25 Mathematics ENGLISH

If the mean of the following data is 61, then the value of X is:

xi	55	60	70	95
fi	48	X	31	23

A. 790

B. 799

C. 796

D. 773



Q26 Mathematics ENGLISH

$\frac{(a^1 \times b^7 \times c^7)}{(a^1 \times b^2 \times c^{10})}$ in simplified form is:

A. $(a^4) \times (b^2) \times (c^2)$

B. $(a^0) \times (b^5) \times (c^{-3})$

C. $(a^2) \times (b^4) \times (c^{-5})$

D. $(a^{-8}) \times (b^{-5}) \times (c^{-9})$



Q27 Mathematics ENGLISH

The curved surface area of a cone is 5544 cm^2 , and the diameter is 168 cm. What is its total surface area (in cm^2)? (Use $\pi = \frac{22}{7}$)

A. 25,530

B. 27,720

C. 27,270

D. 23,550



Q28 Mathematics ENGLISH

By selling an article at $\frac{5}{14}$ of its actual selling price, Hitesh incurs a loss of 20%. If he sells it at 80% of its actual selling price, then the profit percentage is:

A. 80.7%

B. 79.2%

C. 81.2%

D. 81.9%



Q29 Mathematics **ENGLISH**

In $\triangle PQR$ and $\triangle XYZ$, $PQ = 5$ cm, $QR = 6$ cm, $PR = 7$ cm, $XY = 5$ cm, $YZ = 6$ cm and $XZ = 7$ cm. Then which of the following is true?

- A. $\triangle PRQ \cong \triangle XYZ$
- B. $\triangle PQR \cong \triangle YXZ$
- C. $\triangle QPR \cong \triangle XYZ$
- D. $\triangle PQR \cong \triangle XYZ$ ✓

Q30 Mathematics **ENGLISH**

Two pipes can fill a tank in 34 hours and 94 hours, respectively. The time (in hours) required to fill the tank when both pipes are opened simultaneously is:

- A. $\frac{799}{32}$ ✓
- B. $\frac{796}{30}$
- C. $\frac{798}{31}$
- D. $\frac{797}{29}$

General Intelligence and Reasoning

25 Questions • Answer Key

Q31 General Intelligence and Reasoning **ENGLISH**

If 1 is added to each odd digit and 1 is subtracted from each even digit in the number 8436152, then what will be the difference between the last and the first digits from the left in the number thus formed?

- A. 3
- B. 5
- C. 4
- D. 6 ✓

Q32 General Intelligence and Reasoning **ENGLISH**

Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

NCG : SFF
SQO : XTN

- A. REV : WHW
- B. IUD : NXA
- C. MKY : RNX ✓
- D. QHX : VKV



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Q33 General Intelligence and Reasoning **ENGLISH**

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

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

19-57-114-134; 21-63-126-146

- A. 17-51-102-112
- B. 18-54-108-118
- C. 16-48-96-116
- D. 20-60-120-180

Q34 General Intelligence and Reasoning **ENGLISH**

A, B, C, D, E, F and G are sitting around a circular table facing the centre. B sits third to the right of F. D sits fourth to the left of B. C is neither the immediate neighbour of B nor D. A sits third to the right of C. E is not the immediate neighbour of D. How many people sit between E and G, when counted from the left of E?

- A. None
- B. One
- C. Two
- D. Three

Q35 General Intelligence and Reasoning **ENGLISH**

B is the father of A. C is the brother of A. D is the wife of C and E is the son of D. How is B related to E?

- A. Father's father
- B. Father's brother
- C. Father
- D. Brother

Q36 General Intelligence and Reasoning **ENGLISH**

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.

Q has the exam on Saturday. Only four people have exams after U. R has the exam immediately before T but not on Monday. S has the exam after P but before U. How many people have exams between R and V?

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

Q37 General Intelligence and Reasoning **ENGLISH**

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

$$34 \div 33 \times 22 + 19 - 40 = ?$$

- A. 70
- B. 72
- C. 73
- D. 74

Q38 General Intelligence and Reasoning **ENGLISH**

B, C, E, F and H have different heights. B is taller than C but shorter than H. H is taller than E but shorter than F. E is taller than C but shorter than B.

How many people are shorter than B?

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



Q39 General Intelligence and Reasoning **ENGLISH**

Tapan starts from Point A and drives 8 km towards the south. He then takes a right turn, drives 5 km, turns right and drives 12 km. He then takes a right turn and drives 9 km. He takes a final right turn, drives 4 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)

- A. 7 km to the west
- B. 6 km to the west
- C. 5 km to the west
- D. 4 km to the west** ✓

Q40 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

FIS38, RUE70, DGQ102, PSC134, ?

- A. BOE166
- B. BOW165
- C. BEO166** ✓
- D. BOQ166

Q41 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

JCF25, KDG34, LEH43, MFI52, ?

- A. NGJ61** ✓
- B. NGI60
- C. NGJ60
- D. NGI61

Q42 General Intelligence and Reasoning **ENGLISH**

In a certain code language,
'fan light door' is coded as 'dy ph mt',
'door window mat' is coded as 'lp ph st',
'mat fan glass' is coded as 'st bq dy'.
What is the code for 'fan' in that language? (Note: All the codes are two-letter coded only.)

- A. mt
- B. bq
- C. dy** ✓
- D. ph

Q43 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- A. OSBG
- B. WAIO** ✓
- C. GKTY
- D. MQZE

Q44 General Intelligence and Reasoning **ENGLISH**

In a certain code language, 'guns and roses' is coded as 'li mh ca', 'for the roses' is coded as 'mh bo ph' and 'guns for colours' is coded as 'ca bo qu'. What is the code for 'roses' in that language?

- A. li
- B. mh** ✓
- C. ca
- D. bo



Q45 General Intelligence and Reasoning **ENGLISH**

Refer to the following number, symbol series and answer the question. Counting to be done from left to right only.

(Left) 9 8 & & © € % 8 \$ 9 8 2 # 5 2 7 7 1 5 £ € % (Right)

How many such numbers are there each of which is immediately preceded by a symbol and also immediately followed by a symbol?

A. 3

B. 2

C. 1



D. 0

Q46 General Intelligence and Reasoning **ENGLISH**

RUON is related to VYSR in a certain way based on the English alphabetical order. In the same way, HKED is related to LOIH. To which of the given options is TWQP related, following the same logic?

A. XATU

B. AXTU

C. XAUT



D. AXUT

Q47 General Intelligence and Reasoning **ENGLISH**

A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

Five people, A, B, C, D and E, have different weights each. Who is the heaviest?

(I) A is heavier than C but lighter than D.

(II) B is not the heaviest and E is not the lightest.

A. Both Statements I and II put together (and not independently) are sufficient to answer the question.

B. Data in Statement I alone is sufficient to answer the question, while data in Statement II is not.

C. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.

D. Both Statements I and II put together are not sufficient to answer the question.

**Q48** General Intelligence and Reasoning **ENGLISH**

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

(Left) 473 987 324 529 648 (Right)

(Example: 697 – First digit = 6, second digit = 9 and third digit = 7)

NOTE: All the operations to be performed from left to right.

The position of how many numbers will remain unchanged if all these numbers are arranged in ascending order?

A. None



B. Two

C. One

D. Three

Q49 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the one that DOES NOT belong to that group?

A. IG – LJ

B. TR – XV



C. EC – HF

D. MK – PN

Q50 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

18 24 34 40 50 ?

A. 55

B. 57

C. 58

D. 56



Q51 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

64 61.7 59.4 57.1 ? 52.5

A. 54.8



B. 53.1

C. 55.4

D. 56.7

Q52 General Intelligence and Reasoning **ENGLISH**

Seven boxes, E, F, G, H, T, U and V, are kept one over the other, but not necessarily in the same order. Only two boxes are kept below E. Only one box is kept above T. Only one box is kept between T and U. G is kept immediately below F. V is kept at some place below H. How many boxes are kept between H and F?

A. One

B. Three

C. Four



D. Two

Q53 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of :: ?

: GOK :: HPL : %

A. # = EMJ, % = JRN

B. # = EMI, % = JSN

C. # = EMI, % = JRN



D. # = EMI, % = JRM

Q54 General Intelligence and Reasoning **ENGLISH**

Select the option in which the numbers share the same relationship as that shared by the given pairs of numbers.

(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.)

96, 12

184, 23

A. 130, 16

B. 144, 18



C. 156, 19

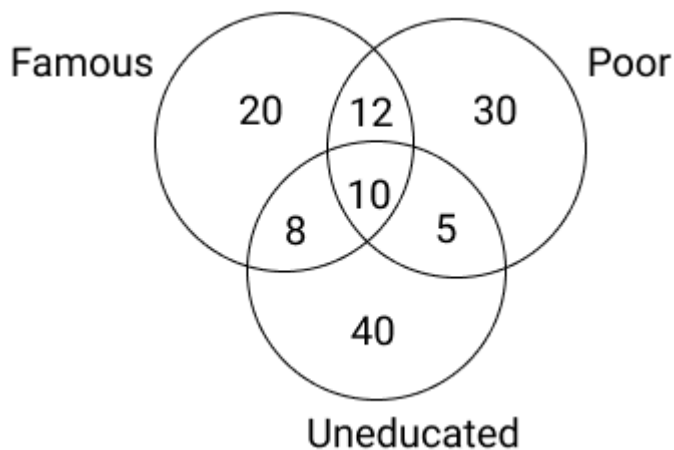
D. 180, 20



Q55 General Intelligence and Reasoning **ENGLISH**

Study the given diagram carefully and answer the questions. The numbers in different sections indicate the number of persons. How many persons are both poor and uneducated but not famous ?

(NOTE: You have to take the given data to be true even if they seem to be at variance from commonly known facts.)



A. 12

B. 30

C. 5

D. 8

General Awareness

26 Questions • Answer Key

Q56 General Awareness **ENGLISH**

Which of the following can be broken down by biological processes?

A. Vegetable peels

B. Aluminium foil

C. Milk packets

D. Plastic bottles

Q58 General Awareness **ENGLISH**

In which year did the amount of ozone begin to drop sharply in the atmosphere?

A. 1980

B. 1960

C. 1970

D. 1950

Q57 General Awareness **ENGLISH**

What would happen to dead plants and animals if decomposers were absent from an ecosystem?

A. They would quickly turn into soil.

B. They would persist, and the natural replenishment of soil would be hindered.

C. They would be eaten by consumers.

D. They would become producers.

Q59 General Awareness **ENGLISH**

Which of the following articles empowers the President to make regulations for the peace, progress and good government of the union territories?

A. Article 244

B. Article 240

C. Article 239

D. Article 243



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Q60 General Awareness **ENGLISH**

Who among the following women started the Women's Indian Association in 1917?

- A. Madam Bhikaji Cama
- B. Sarojini Naidu
- C. Usha Mehta
- D. Annie Besant



Q61 General Awareness **ENGLISH**

Which of the following substances will take the longest time to degrade naturally in the environment?

- A. Paper
- B. Leather
- C. Leaves
- D. Cardboard box



Q62 General Awareness **ENGLISH**

Which of the following can be minimised through the implementation of proper sewage treatment?

- A. Water pollution
- B. Air pollution
- C. Soil pollution
- D. Noise pollution



Q63 General Awareness **ENGLISH**

What role do green plants and certain bacteria play in an ecosystem?

- A. Consumers
- B. Decomposers
- C. Producers
- D. Parasites



Q64 General Awareness **ENGLISH**

For which mission of ISRO has the International Astronautical Federation (IAF) awarded ISRO the World Space Award?

- A. Venus Mission
- B. Aditya-L1
- C. Chandrayaan-3
- D. Chandrayaan-2



Q65 General Awareness **ENGLISH**

Who was appointed as the new head coach of the junior men's hockey team in August 2024?

- A. PR Sreejesh
- B. Shankar Lakshman
- C. Prithipal Singh
- D. Harmanpreet Singh



Q66 General Awareness **ENGLISH**

When was the Indian Remote Sensing Satellite System (IRS) established?

- A. 1972
- B. 1988
- C. 1983
- D. 1959



Q67 General Awareness **ENGLISH**

The author of the famous novel 'Midnight's Children' is:

- A. Salman Rushdie
- B. Ruskin Bond
- C. Khushwant Singh
- D. Shashi Tharoor



Q68 General Awareness **ENGLISH**

The climate of the Thar desert is best described as _____.

- A. tropical rainforest
- B. humid subtropical
- C. temperate
- D. arid



Q69 General Awareness **ENGLISH**

Article 51 A (b) of the Indian Constitution states that it is the duty of the citizens 'to cherish and follow the noble ideals that inspired the _____'.

- A. global values and principles
- B. customs and traditions of India
- C. national struggle for freedom
- D. political ideas of various parties



Q70 General Awareness **ENGLISH**

What is the reason for CFC free refrigerators being manufactured for use throughout the world?

- A. CFC is a synthetic chemical which depletes the ozone layer.** ✓
- B. CFC makes refrigeration a tough process.
- C. CFC is cheap for use in refrigerators.
- D. CFC is tough to handle for the refrigeration industry.

Q71 General Awareness **ENGLISH**

The first ruler of Delhi Sultanate was:

- A. Iltutmish
- B. Qutb-ud-din Aibak** ✓
- C. Alauddin Khalji
- D. Balban

Q72 General Awareness **ENGLISH**

Why is monitoring pH crucial for understanding the impacts of acid rain on soil and water ecosystems?

- A. Acid rain increases the pH of soil and water bodies.
- B. Acid rain decreases the pH, harming aquatic life and soil nutrient availability.** ✓
- C. Acid rain only makes the water taste sour.
- D. Acid rain does not affect soil and water ecosystems.

Q73 General Awareness **ENGLISH**

Which synthetic chemicals are responsible for the depletion of ozone in the atmosphere?

- A. Carbon dioxide
- B. Chlorofluorocarbons (CFCs)** ✓
- C. Methane
- D. Nitrogen oxides

Q74 General Awareness **ENGLISH**

What term can be used for substances that are broken down by biological processes?

- A. Recyclable
- B. Non-biodegradable
- C. Biodegradable** ✓
- D. Compostable

Q75 General Awareness **ENGLISH**

Which of the following statements is/are correct?

- 1) Nari Shakti Vandan Adhiniyam was introduced in 2023.
- 2) Nari Shakti Vandan Adhiniyam ensures 33% reserved seats for women in the Parliament, Legislative Assemblies and Delhi Assembly.
- 3) Nari Shakti Vandan Adhiniyam will be in force for 10 years only.

- A. 1 and 2
- B. 2 and 3** ✓
- C. 1 only
- D. 1 and 3

Q76 General Awareness **ENGLISH**

What was the venue of the North Atlantic treaty Organization (NATO) Summit in July 2024?

- A. New York, United States
- B. Washington, D.C., United States** ✓
- C. Paris, France
- D. London, England

Q77 General Awareness **ENGLISH**

What architectural style is the Meenakshi Amman Temple known for?

- A. Indo-Saracenic
- B. Roman
- C. Gothic
- D. Dravidian** ✓



Q78 General Awareness **ENGLISH**

How many of the following Union territories were created after State Reorganisation Act passed in 1956?

A. 6



B. 4

C. 7

D. 5

Q79 General Awareness **ENGLISH**

Which attribute of a paper cup makes it better than a plastic cup for our environment?

A. Not disposable

B. Biodegradable



C. Non-biodegradable

D. Disposable

Q80 General Awareness **ENGLISH**

Which country gave the name 'Dana' to the cyclone that hit India from the Bay of Bengal?

A. The Maldives

B. Saudi Arabia



C. The United Arab Emirates

D. Oman

Q81 General Awareness **ENGLISH**

With which of the following pricing approaches is a product's price equal to its marginal cost?

A. Price discrimination

B. Factor pricing

C. Mark-up pricing

D. Marginal cost pricing

**General Science**

19 Questions • Answer Key

Q82 General Science **ENGLISH**

In which direction does the force act on a conductor placed in a magnetic field in an electric motor?

A. In the direction of the current

B. Perpendicular to both the current and magnetic field



C. Along the magnetic field

D. Opposite to the magnetic field

Q83 General Science **ENGLISH**

In the reaction $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$, the substance reduced is:

A. Cu

B. H_2

C. CuO



D. H_2O

Q84 General Science **ENGLISH**

Which of the following reactions is an example of a precipitation reaction?

A. $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{NaNO}_3 + \text{AgCl}$



B. $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$

C. $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$

D. $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

Q85 General Science **ENGLISH**

According to experimental results, when does the magnitude of the force on a current-carrying conductor in a magnetic field become the highest?

A. When the current flows at any angle to the magnetic field

B. When the current is perpendicular to the magnetic field



C. When the current is parallel to the magnetic field

D. When the current is opposite to the magnetic field



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Q86 General Science **ENGLISH**

If three resistors of $6\ \Omega$, $3\ \Omega$ and $2\ \Omega$ are connected in parallel, the total equivalent resistance is _____.

- A. $0.5\ \Omega$
- B. $1\ \Omega$ ✓
- C. $2\ \Omega$
- D. $11\ \Omega$

Q87 General Science **ENGLISH**

Fleming's Right-Hand Rule is applicable in the case of _____.

- A. electric motors
- B. electric generators ✓
- C. fuse wires
- D. electric kettles

Q88 General Science **ENGLISH**

Which of the following will cause the greatest increase in power dissipation for a given resistor?

- A. Halving the resistance
- B. Doubling the resistance
- C. Halving the current through the resistor
- D. Doubling the voltage across the resistor ✓

Q89 General Science **ENGLISH**

If a substance has a pH of 11, which of the following statements is true?

- A. It is acidic and does not change the colour of the litmus paper.
- B. It is acidic and can turn blue litmus paper red.
- C. It is basic and can turn red litmus paper blue. ✓
- D. It is neutral and does not change the litmus colour.

Q90 General Science **ENGLISH**

The potential difference versus current plot for a conducting wire is a straight line. The slope of this line gives us the:

- A. number of electrons in the wire
- B. resistance of the wire ✓
- C. voltage across the wire
- D. current flowing through the wire

Q91 General Science **ENGLISH**

Why do iron filings arrange themselves in a pattern around a bar magnet?

- A. Because of the magnetic field ✓
- B. Due to electric charge
- C. Due to gravitational force
- D. Because they are heavy

Q92 General Science **ENGLISH**

What happens to the resistance of most conductors as their temperature increases?

- A. It remains the same.
- B. It increases. ✓
- C. It becomes zero.
- D. It decreases.

Q93 General Science **ENGLISH**

Which of the following combinations would produce a precipitate?

- A. $\text{NaOH} + \text{FeCl}_3$ ✓
- B. $\text{NaOH} + \text{NaCl}$
- C. $\text{NaCl} + \text{KNO}_3$
- D. $\text{NaOH} + \text{Na}_2\text{SO}_4$

Q94 General Science **ENGLISH**

If the length of a wire-shaped resistor is doubled, the resistivity:

- A. remains the same ✓
- B. is doubled
- C. is quadrupled
- D. is halved



Q95 General Science **ENGLISH**

A solution has a pH of 12. Which ion concentration is higher in this solution?

- A. Only H^+
- B. Both H^+ and OH^- are equal
- C. Only OH^- ✓
- D. More number S^{2-} ions and more Cl^{-1}

Q96 General Science **ENGLISH**

Which ion is responsible for the acidic properties of acids?

- A. H^+ ✓
- B. Cl^-
- C. OH^-
- D. Na^+

Q97 General Science **ENGLISH**

A copper wire has a resistance of $10\ \Omega$. If it is replaced with a wire of the same material and length but twice the cross-sectional area, its resistance will be _____.

- A. $20\ \Omega$
- B. $2.5\ \Omega$
- C. $5\ \Omega$ ✓
- D. $10\ \Omega$

Q98 General Science **ENGLISH**

Which of the following represents a combination reaction?

- A. $2KClO_3 \rightarrow 2KCl + 3O_2$
- B. $CaCO_3 \rightarrow CaO + CO_2$
- C. $CaO + H_2O \rightarrow Ca(OH)_2$ ✓
- D. $NaCl + AgNO_3 \rightarrow AgCl + NaNO_3$

Q99 General Science **ENGLISH**

When lead nitrate is heated, it decomposes to form lead monoxide (PbO), nitrogen dioxide (NO_2), and oxygen (O_2). The brown gas seen during the reaction is:

- A. nitric oxide (NO)
- B. nitrogen dioxide (NO_2) ✓
- C. lead monoxide (PbO)
- D. oxygen (O_2)

Q100 General Science **ENGLISH**

When two elements react to form a compound, it can be classified as:

- A. double displacement
- B. combination ✓
- C. displacement
- D. decomposition



Mathematics

30 Questions • Answer Key

Q1 Mathematics ENGLISH

The average price of three items of furniture is Rs 16830. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 10098



B. 3366

C. 7854

D. 5610

Q2 Mathematics ENGLISH

The current ages of A and B add up to 36 years. Four years ago, the age of A was three times than that of B. What is the current age of A?

A. 30 years

B. 35 years

C. 20 years

D. 25 years



Q3 Mathematics ENGLISH

A man sold an article for ₹360 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 ₹2250, then what is the value of d ?

A. 38

B. 42



C. 41

D. 45

Q4 Mathematics ENGLISH

The sirens of three companies sound together initially and then continue to sound at intervals of 12 minutes, 16 minutes, and 20 minutes, respectively. Over a period of 16 hours and 12 minutes from the time they first sound together, how many times will they sound simultaneously?

A. 3 times

B. 4 times

C. 6 times

D. 5 times



Q5 Mathematics ENGLISH

If a 3210 m long train crosses a pole in 107 seconds, then find the time (in seconds) taken by the train to cross a 150 m long platform.

A. 110

B. 106

C. 114

D. 112



Q6 Mathematics ENGLISH

The greatest common divisor (GCD) and least common multiple (LCM) of two numbers are 12 and 480, respectively, and the numbers are in the ratio of 5 : 8. Find the difference between the two numbers.

A. 36



B. 12

C. 42

D. 24

Q7 Mathematics ENGLISH

Twelve years ago, the age of Reena's mother was three times the age of Reena. Two years hence, the mother's age will be 2 times the age of Reena. Find the ratio of the present ages of Reena and her mother.

A. 5 : 9

B. 27 : 13

C. 13 : 27



D. 9 : 11

Q8 Mathematics ENGLISH

The average price of three items of furniture is Rs 16890. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 5630

B. 3378

C. 7882

D. 10134



Q9 Mathematics ENGLISH

If the average of 9 numbers is 17 and one number is removed, the average of the remaining 8 numbers becomes 15. What is the value of the removed number?

A. 33



B. 37

C. 35

D. 39

Q10 Mathematics ENGLISH

If the distance between A and B is 530 Km. From A, Namit goes to B with speed 37 km/h and return to A with the speed 77 km/h. Find the average speed of Namit.(rounded off to two decimal place)

A. 44.54 km/h

B. 46.51 km/h

C. 44.47 km/h

D. 49.98 km/h

**Q11 Mathematics** ENGLISH

A and B can do a piece of work in 2 days and 42 days, respectively. The number of days [Correct to one decimal place] required to complete the work if both A and B work together is:

A. 3.3

B. 1.3

C. 5.1

D. 1.9

**Q12 Mathematics** ENGLISH

If the mean proportional of P and 125 is 100, then find the value of P.

A. 82

B. 80



C. 77

D. 79

Q13 Mathematics ENGLISH

Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 4 February 2024 to 5 April 2024

A. 35



B. 34

C. 33

D. 36

Q14 Mathematics ENGLISH

If at same rate of interest, in 2 years, the simple interest is ₹56 and compound interest is ₹58, then what is the principal (in ₹)?

A. 396

B. 392



C. 385

D. 387

Q15 Mathematics ENGLISH

A number when increased by 50 %, gives 2880. The number is:

A. 5760

B. 960

C. 1920



D. 3840

Q16 Mathematics ENGLISH

If A's salary is 72 % more than that of B, then how much percent is B's salary less than that of A (correct to 2 decimal places)?

A. 45.3%

B. 41.86%



C. 44.19%

D. 44.24%



Q17 Mathematics ENGLISH

The age of some students is given in years as 22, 23, 26, 28, 24, 29, 23, 27, 25 and 21. The median age (in years) of the students is:

A. 23.5

B. 24

C. 24.5



D. 25

Q18 Mathematics ENGLISH

The marks scored by 10 students are given below.

18, 13, 14, 18, 14, 17, 15, 11, 13, 18

The mode of the data is:

A. 14

B. 11

C. 18



D. 13

Q19 Mathematics ENGLISH

Two taps can fill a cistern in 2 hours and 51 hours respectively. A third tap can empty it in 51 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

A. 5

B. 2



C. 3

D. 4

Q20 Mathematics ENGLISH

The larger of two supplementary angles is 22° more than the smaller. The smaller angle (in degree) is:

A. 86

B. 88

C. 79



D. 84

Q21 Mathematics ENGLISH

Find the value of $\sin^2 63^\circ + \sin^2 27^\circ + \cos^2 17^\circ + \cos^2 73^\circ + \cos^2 90^\circ$.

A. 0

B. 2



C. -1

D. 1

Q22 Mathematics ENGLISH

A, B and C invest sum in the ratio 76 : 37 : 52 respectively. If they earned total profit of ₹3850 at the end of year, then what is the difference between share of B and C?

A. ₹360

B. ₹305

C. ₹350



D. ₹203

Q23 Mathematics ENGLISH

A shopkeeper bought an article for ₹740. At what price (in ₹) should he sell the article to make 30% profit?

A. 518

B. 950

C. 962



D. 974



Q24 Mathematics **ENGLISH**

The total surface area of a solid hemisphere is 191 cm^2 . Its radius (in cm) is: $\text{Take } \pi = \frac{22}{7}$

A. $\sqrt{\frac{1347}{66}}$

B. $\sqrt{\frac{1347}{132}}$

C. $\sqrt{\frac{1337}{66}}$ ✓

D. $\sqrt{\frac{1345}{66}}$

Q25 Mathematics **ENGLISH**

$\frac{(a^4 \times b^3 \times c^4)}{(a^9 \times b^4 \times c^8)}$ in simplified form is:

A. $(a^7) \times (b^8) \times (c^{-9})$

B. $(a^{-9}) \times (b^{-2}) \times (c^{-2})$

C. $(a^7) \times (b^9) \times (c^8)$

D. $(a^{-5}) \times (b^{-1}) \times (c^{-4})$ ✓

Q26 Mathematics **ENGLISH**

If 546 apples were distributed among Neeraj, Vidya, and Mohan in the ratio $\frac{1}{6} : \frac{1}{2} : \frac{1}{3}$, how many apples did the Mohan get?

A. 182 ✓

B. 202

C. 172

D. 192



Q27 Mathematics **ENGLISH**

Solve the following linear equation.

$$2x - y + z = 8, x + y - z = 10, x + y + 2z = 12$$

A. $x = 6, y = \frac{14}{3}, z = \frac{2}{3}$



B. $x = \frac{-1}{3}, y = 6, z = \frac{14}{3}$

C. $x = -6, y = \frac{-14}{3}, z = \frac{1}{3}$

D. $x = \frac{2}{3}, y = -6, z = \frac{14}{3}$

Q28 Mathematics **ENGLISH**

In $\triangle ABC$, $DE \parallel AC$, where D and E are the points on sides AB and BC, respectively.

If $BD = 8$ cm and $AD = 7$ cm, then what is the ratio of the area of $\triangle BDE$ to the trapezium ADEC?

A. 65:162

B. 64:161



C. 162:65

D. 161:64

Q29 Mathematics **ENGLISH**

Find the value of $2.\overline{38} \div 0.\overline{54}$.

A. $5\frac{26}{51}$

B. $6\frac{29}{57}$

C. $4\frac{19}{49}$



D. $3\frac{17}{21}$

Q30 Mathematics **ENGLISH**

A trader claims to sell flour at a profit of 35%, but also dishonestly uses a weight which is 16% 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. 63%

B. 60%

C. 56%

D. 61%



Q31 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: UOK :: HBX : %

A. # = TJF, % = MGC

B. # = PJF, % = NGC

C. # = PJF, % = MGO

D. # = PJF, % = MGC

**Q32** General Intelligence and Reasoning **ENGLISH**

119 is related to 205 following a certain logic. Following the same logic, 145 is related to 231. To which of the given options is 132 related, following the same logic?

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

A. 228

B. 215

C. 221

D. 218

**Q33** General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. GM – DJ

B. EK – BH

C. QW – NT

D. TY – PU

**Q34** General Intelligence and Reasoning **ENGLISH**

Seven people, B, D, E, F, P, Q and R, are sitting in a row, facing north. Only three people sit between R and E. F sits to the immediate left of E. No one sits to the right of B. Only two people sit between B and F. P sits to the immediate right of Q.

How many people sit between D and P?

A. Two



B. Four

C. Three

D. One

Q35 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

4 24 120 480 ? 2880

A. 1440



B. 1080

C. 1220

D. 1360

Q36 General Intelligence and Reasoning **ENGLISH**

Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 5 # * 7 9 % 2 & 1 > 6 @ 3 ^ 4 \$ > 8 (Right)

How many such number are there which are immediately preceded by a number and also immediately followed by another number?

A. 0



B. 1

C. 2

D. 3



Q37 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

29 38 51 68 89 ?

A. 115

B. 114



C. 113

D. 116

Q38 General Intelligence and Reasoning **ENGLISH**

Seven boxes, A, B, C, D, X, Y and Z, are kept one over the other but not necessarily in the same order. Only three boxes are kept above B. Only one box is kept between C and B. Only three boxes are kept between C and Y. Y is kept at some place above B. Z is kept immediately below Y. A is kept at one of the places above X. D is not kept immediately above or below C. Which box is kept at the lowermost position?

A. B

B. C

C. X



D. Z

Q39 General Intelligence and Reasoning **ENGLISH**

B, C, E, F and H have different heights. Only C is taller than B. E is taller than H. Only two people have heights between F and C. How many people have heights between H and B?

A. Two



B. Three

C. Four

D. One

Q40 General Intelligence and Reasoning **ENGLISH**

Pankaj starts from Point A and drives 12 km towards east. He then takes a left turn, drives 18 km, turns left and drives 19 km. He then takes a left turn and drives 21 km. He takes a final left turn, drives 7 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)

A. 4 km to the north

B. 1 km to the north

C. 5 km to the north

D. 3 km to the north

**Q41** General Intelligence and Reasoning **ENGLISH**

A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

A, B, C, D and E are sitting in a straight line facing north. Who sits on the extreme left end?

(I) D sits second to the right of C.

(II) Exactly two people sit between B and D.

A. Both Statements I and II put together are not sufficient to answer the question.



B. Both Statements I and II put together (and not independently) are sufficient to answer the question.

C. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.

D. Data in Statement I alone is sufficient to answer the question, while data in Statement II is not.

Q42 General Intelligence and Reasoning **ENGLISH**

Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) \$ 7 & 4 2 & % 4 6 @ 8 Ω 9 # 6 * £ 5 = 2 (Right)

How many such symbols are there each of which is immediately preceded by an odd number and immediately followed by an even number?

A. One

B. Four

C. Two

D. Three



Q43 General Intelligence and Reasoning ENGLISH

G, H, I, J, K, L and M live 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. H lives on an even numbered floor but not on the second floor. Only three people live between H and M. J lives on one of the floors below H but immediately above M. G lives on one of floors below J. Only three people live between G and K. L lives on one of the floors above J but below I. Who lives on the fifth floor?

A. L

B. H

C. K

D. M

Q44 General Intelligence and Reasoning ENGLISH

In a certain code language,
'pillow blanket bed' is coded as 'ma ph st',
'bed window door' is coded as 'cd le ma' and
'door pillow wall' is coded as 'st bq cd'.
(All the codes are two-letter codes only.)
What is the code for 'wall' in that language?

A. st

B. cd

C. bq

D. le

Q45 General Intelligence and Reasoning ENGLISH

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

GUY ZNR SGK LZD ?

A. EWS

B. ESW

C. SWE

D. SEW

Q46 General Intelligence and Reasoning ENGLISH

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

$$58 + (36 \times 4) \div 3 + 6 \times 8 - 12 = 86$$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)

A. 12 and 8

B. 36 and 12

C. 3 and 6

D. 4 and 3

Q47 General Intelligence and Reasoning ENGLISH

In a certain code language,
'mountains hills rocks' is coded as 'dy ph mt',
'rocks valleys rivers' is coded as 'lp ph st' and
'rivers mountains forests' is coded as 'st bq dy'.
(All the codes are two-letter codes only.)
What is the code for 'valleys' in that language?

A. lp

B. st

C. ph

D. dy

Q48 General Intelligence and Reasoning ENGLISH

In a certain code language,
'A + B means 'A is the son of B',
'A - B means 'A is the brother of B',
'A × B means 'A is the wife of B' and
'A ÷ B means 'A is the father of B'.

How is S related to H if 'S + D × F ÷ G - H'?

A. Brother

B. Husband

C. Son

D. Father



Q49 General Intelligence and Reasoning **ENGLISH**

Select the pair which follows the same pattern as that followed by the two set of pairs given below. Both pairs follow the same pattern.

PMN : RPI

VHS : XKN

A. TIH : VMC

B. NFF : PIA

C. PTV : RWR

D. JPQ : LSM

Q50 General Intelligence and Reasoning **ENGLISH**

Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

GEC BZX WUS RPN ?

A. MKJ

B. MJK

C. MIK

D. MKI

Q51 General Intelligence and Reasoning **ENGLISH**

5 is related to 26 following a certain logic. Following the same logic, 12 is related to 145. To which of the following is 13 related, following the same logic?

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

A. 172

B. 170

C. 162

D. 168

Q52 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. HF-AU

B. VS-OI

C. FC-YS

D. SP-LF

Q53 General Intelligence and Reasoning **ENGLISH**

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 7381564, how many digits will appear more than once in the new number thus formed?

A. One

B. Two

C. None

D. Three

Q54 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of :: ?

: NJR :: OKS : %

A. # = LHO, % = QMU

B. # = LHP, % = QNU

C. # = LHP, % = QMU

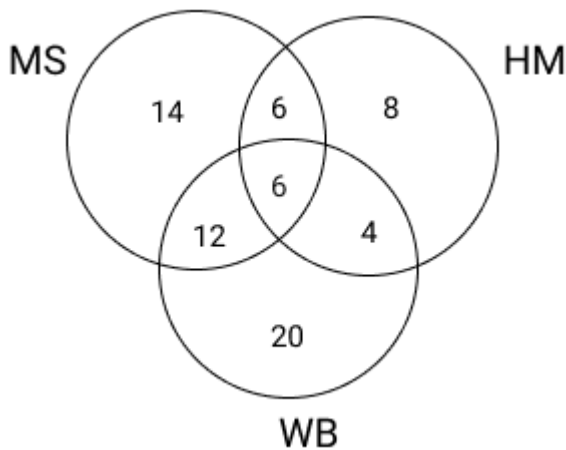
D. # = LHP, % = QMV



Q55 General Intelligence and Reasoning **ENGLISH**

Study the given diagram carefully and answer the question that follows. The numbers in different sections indicate the number of persons who own the given brands of car. How many person own both MS and WB but not HM?

(NOTE: You have to take the given data to be true even if they seem to be at variance from commonly known facts.)



A. 18

B. 12



C. 8

D. 34

General Awareness

15 Questions • Answer Key

Q56 General Awareness **ENGLISH**

In the month of July in India, at what latitude is the Inter-Tropical Convergence Zone typically situated?

A. Near the equator

B. Between 5°N and 10°N

C. Around 20°N-25°N



D. South of the equator

Q57 General Awareness **ENGLISH**

Which state hosted the 61st edition of the Indian National Chess Championship in 2024?

A. Tamil Nadu

B. Karnataka

C. Haryana



D. Himachal Pradesh

Q58 General Awareness **ENGLISH**

Which of the following Constitutional amendments inserts the Special officer for linguistic minorities, who is known as the Commissioner for Linguistic Minorities in India (CLM), to investigate all the matters relating to the safeguards provided for the linguistic minorities in India under the Constitution and report to the President?

A. 10th Constitutional Amendment Act, 1960

B. 7th Constitutional Amendment Act, 1956



C. 2nd Constitutional Amendment Act, 1952

D. 11th Constitutional Amendment Act, 1965

Q59 General Awareness **ENGLISH**

Which major Indian port has become the first to operate under a Public-Private Partnership (PPP) model?

A. Mundra Port

B. Paradip Port

C. New Mangaluru Port

D. Jawaharlal Nehru Port



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Q60 General Awareness **ENGLISH**

Where did Dr. Jitendra Singh, Union Minister of State for Science and Technology, inaugurate India's first Demonstration Facility for Biopolymers in October 2024?

- A. Hyderabad
- B. Pune
- C. Chennai
- D. Bhopal

Q61 General Awareness **ENGLISH**

Which of the following statements is correct about equilibrium?

- A. Equilibrium is the situation where there is less tendency for change.
- B. Equilibrium is the situation where there is a tendency for change.
- C. Equilibrium is the situation where there is no tendency for any change.
- D. Equilibrium is the situation where there is more tendency for change.

Q62 General Awareness **ENGLISH**

Which of the following articles deals with elections to the House of the People and to the legislative assemblies of state to be on the basis of adult suffrage?

- A. 352
- B. 326
- C. 318
- D. 340

Q63 General Awareness **ENGLISH**

Mahatma Gandhi started his famous 'Salt march' accompanied by _____ of his trusted volunteers.

- A. 78
- B. 94
- C. 51
- D. 39

Q64 General Awareness **ENGLISH**

Who launched 'Create in India Challenge-Season One' in New Delhi on 22 August 2024, the run-up to the World Audio Visual and Entertainment Summit?

- A. Ashwini Vaishnaw
- B. Narendra Modi
- C. Nitin Gadkari
- D. Amit Shah

Q65 General Awareness **ENGLISH**

Which of the following dynasties did NOT participate in tripartite struggle over Kannauj?

- A. The Rashtrakutas
- B. The Gurjara-Pratiharas
- C. The Cholas
- D. The Palas

Q66 General Awareness **ENGLISH**

The Citizenship Amendment Act was enacted in 2019 and was operationalised after the rules for it were notified by the Ministry of Home Affairs on _____.

- A. 11 March 2020
- B. 11 March 2022
- C. 11 March 2024
- D. 11 March 2023

Q67 General Awareness **ENGLISH**

Which city of India organised the World Sustainable Development Summit 2024?

- A. Jaipur
- B. New Delhi
- C. Mumbai
- D. Hyderabad



Q68 General Awareness **ENGLISH**

What was the venue of G20 Agriculture Ministerial Meeting in 2024?

- A. Paris, France
- B. Ottawa, Canada
- C. Cuiaba, Brazil
- D. Brussels, Belgium



Q69 General Awareness **ENGLISH**

In the context of Buddhist architecture, what is a 'chaitya'?

- A. A type of stupa
- B. A residential space for monks
- C. A decorative column
- D. A hall for prayer and assembly



Q70 General Awareness **ENGLISH**

In which year was 'Indian Culture: A Compendium of Indian History, Culture and Heritage' published?

- A. 2023
- B. 2020
- C. 2021
- D. 2022



General Science

30 Questions • Answer Key

Q71 General Science **ENGLISH**

Washing soda is represented by $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$. The value of 'x' is equal to:

- A. 6
- B. 8
- C. 10
- D. 2



Q72 General Science **ENGLISH**

What does the thumb represent in Fleming's Right-Hand Rule?

- A. Direction of motion
- B. Direction of induced current
- C. Direction of voltage
- D. Direction of magnetic field



Q73 General Science **ENGLISH**

Which of the following modes of asexual reproduction is used by unicellular organisms exclusively?

- A. Fragmentation
- B. Regeneration
- C. Sporulation
- D. Binary fission



Q74 General Science **ENGLISH**

People having acidity problems are treated with antacids that contain which of the following?

- A. Milk of magnesia
- B. Quick lime
- C. Hydrochloric acid
- D. Lime water



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Q75 General Science **ENGLISH**

Baking soda, commonly used in households, is also known by its chemical name:

- A. sodium carbonate
- B. magnesium hydroxide
- C. sodium bicarbonate ✓
- D. calcium carbonate

Q76 General Science **ENGLISH**

When a solution contains an equal number of H^+ and OH^- ions, then the pH of the solution is:

- A. $pH > 12$
- B. $pH < 3$
- C. $pH > 3$ but < 5
- D. $pH = 7$ ✓

Q77 General Science **ENGLISH**

Which of the following devices operates based on the heating effect of electric current?

- A. Electric motor
- B. Electric iron ✓
- C. Generator
- D. Transformer

Q78 General Science **ENGLISH**

A concave mirror can form a real, inverted and magnified image when the object is placed _____.

- A. between the focus and the centre of curvature ✓
- B. at the pole
- C. between the pole and the focus
- D. beyond the centre of curvature

Q79 General Science **ENGLISH**

The magnetic field inside a solenoid:

- A. varies with distance from the edge
- B. is the same at all points ✓
- C. is zero at the centre
- D. is maximum at the centre and minimum at the edge

Q80 General Science **ENGLISH**

Consider a pencil dipped in water in a glass beaker. If the water is replaced by kerosene or turpentine, will the pencil appear displaced to the same extent?

- A. No, the displacement will vary.
- B. No, the pencil will appear straight. ✓
- C. Yes, the displacement will be the same.
- D. Yes, it will be more displaced than in water.

Q81 General Science **ENGLISH**

What is the shape of the magnetic field lines inside a solenoid?

- A. Straight and parallel ✓
- B. Randomly oriented
- C. Circular
- D. Elliptical

Q82 General Science **ENGLISH**

In Amoeba, the splitting during fission can occur _____.

- A. only along a fixed plane
- B. in a definite orientation related to a structure
- C. only in one specific plane
- D. in any plane ✓

Q83 General Science **ENGLISH**

Which process ensures half the amount of DNA in reproductive cells as compared to non-reproductive cells?

- A. Meiosis ✓
- B. Cytokinesis
- C. Amitosis
- D. Mitosis



Q84 General Science **ENGLISH**

Which of the following metals will displace copper from copper sulfate solution?

- A. Platinum
- B. Silver
- C. Iron ✓
- D. Gold

Q85 General Science **ENGLISH**

Why do stars appear to twinkle when viewed from the Earth?

- A. Diffraction by clouds
- B. Scattering by particles
- C. Reflection in the atmosphere
- D. Refraction in the Earth's atmosphere ✓

Q86 General Science **ENGLISH**

Which law of refraction states that light bends due to a change in speed when passing from one medium to another?

- A. Huygens' principle
- B. Law of reflection
- C. Fermat's principle
- D. Snell's law ✓

Q87 General Science **ENGLISH**

What is the process of fusion of the male and female gametes called in plants?

- A. Fertilisation ✓
- B. Propagation
- C. Germination
- D. Pollination

Q88 General Science **ENGLISH**

Why is asexual reproduction advantageous for single-celled organisms?

- A. It allows rapid reproduction in favourable conditions. ✓
- B. It prevents overcrowding.
- C. It requires a mate.
- D. It increases genetic variability.

Q89 General Science **ENGLISH**

Which of the following is an example of regeneration in plants?

- A. Binary fission in bacteria
- B. Reproduction in humans
- C. Growth of a new plant from a cutting ✓
- D. Budding in hydra

Q90 General Science **ENGLISH**

Which among the following organisms reproduce by regeneration method?

- A. Bryophyllum
- B. Rhizopus
- C. Yeast
- D. Planaria ✓

Q91 General Science **ENGLISH**

Why is variation in plants important for their survival and evolution?

- A. It ensures that all plants produce identical offspring.
- B. It allows plants to adapt to changing environmental conditions. ✓
- C. It reduces competition among plants.
- D. It helps plants to grow taller and stronger.



Q92 General Science **ENGLISH**

When sodium carbonate (Na_2CO_3) is dissolved in water, the resulting solution becomes:

- A. neutral
- B. highly reactive with sodium chloride
- C. acidic
- D. basic** ✓

Q93 General Science **ENGLISH**

In a series circuit, if one of the resistors is removed or broken, the current in the circuit will _____.

- A. stay the same
- B. become zero** ✓
- C. decrease
- D. increase

Q94 General Science **ENGLISH**

Which reactants are used to prepare bleaching powder?

- A. Calcium hydroxide and hydrochloric acid
- B. Chlorine and water
- C. Chlorine gas and dry calcium hydroxide** ✓
- D. Lime and sulphuric acid

Q95 General Science **ENGLISH**

What is the general form of a combination reaction?

- A. $A \rightarrow B + C$
- B. $AB \rightarrow A + B$
- C. $A + B \rightarrow AB$** ✓
- D. $AB + CD \rightarrow AC + BD$

Q100 General Science **ENGLISH**

What is the resistivity (ρ) of a material?

- A. A measure of how strongly a material opposes the flow of electric current** ✓
- B. The same as its resistance
- C. The amount of current a material can carry
- D. The product of voltage and current

Q96 General Science **ENGLISH**

The product of the reaction between ethanol and acetic acid is:

- A. acetate
- B. ester** ✓
- C. ethanal
- D. methanol

Q97 General Science **ENGLISH**

A solution has a pH of 8. If it is diluted with an equal volume of water, what will happen to its pH?

- A. The pH will remain the same.
- B. The pH will increase.
- C. It will become neutral.** ✓
- D. The pH will decrease.

Q98 General Science **ENGLISH**

What are the units of inheritance, which Mendel referred to as 'factors,' now called?

- A. Genes** ✓
- B. Traits
- C. Chromosomes
- D. DNA

Q99 General Science **ENGLISH**

According to Mendel, which trait appeared in F1 progeny on crossing tall pea plants with short pea plants?

- A. Medium
- B. Tall** ✓
- C. Short
- D. Dwarf



Mathematics

30 Questions • Answer Key

Q1 Mathematics ENGLISH

Find the total time taken by boat to travel upstream and downstream, if the distance travel in each direction (upstream and downstream) is 495km. If speed of boat is 32 km/h and speed of current is 23 km/h.

A. 56 hours

B. 64 hours ✓

C. 72 hours

D. 62 hours

Q2 Mathematics ENGLISH

Simplify the given expression.

 $(1 + \cos A)(\operatorname{cosec} A - \cot A)$ A. $\tan A$ B. $\operatorname{cosec} A$ C. $\sec A$ D. $\sin A$ ✓

Q3 Mathematics ENGLISH

9 men can do a piece of work in 21 days. The number of men required to complete the same work in 3 days is:

A. 62

B. 64

C. 63 ✓

D. 67

Q4 Mathematics ENGLISH

A man sold an article for ₹481 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 ₹1924, then what is the value of d ?

A. 42.5

B. 32

C. 37.5 ✓

D. 33

Q5 Mathematics ENGLISH

What is the average of all the natural numbers from 1 to 94?

A. 48

B. 47.5 ✓

C. 47

D. 48.5

Q6 Mathematics ENGLISH

The average price of three items of furniture is Rs 16860. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

A. 10116 ✓

B. 3372

C. 7868

D. 5620

Q7 Mathematics ENGLISH

Which of the following is NOT a property of a regular polygon?

A. All sides are of equal length.

B. Angles at the centre by all sides are equal.

C. The angle made by each side at the centre is 90° , if it is a regular polygon with four sides.D. The angle made by each side at the centre is 60° , if it is a regular polygon with eight sides. ✓

Q8 Mathematics ENGLISH

The average of seven consecutive odd numbers is 41. What is the smallest of these numbers?

A. 37

B. 33

C. 35 ✓

D. 39



Q9 Mathematics ENGLISH

A theater sold 500 tickets to a concert. The tickets for adults cost \$20 each, and the tickets for children cost \$12 each. If the total revenue was \$8,000, how many adult tickets were sold?

A. 300

B. 350

C. 250



D. 200

Q10 Mathematics ENGLISH

A trader lost 10% by selling a shirt for ₹850. He will gain x% by selling it for ₹1530, the value of x is:

A. 72

B. 62



C. 52

D. 77

Q11 Mathematics ENGLISH

Find the simple interest (in closest integral ₹) on ₹3000 at 8% per annum rate of interest for the period from 23 February 2024 to 24 April 2024

A. 39

B. 38

C. 40



D. 41

Q12 Mathematics ENGLISH

A company earns a profit (in ₹) that is distributed among the company's three partners in the ratio of 4 : 12 : 5. If the difference between the smallest and the largest shares is ₹20208, the total profit (in ₹) of the company is:

A. 53097

B. 53096

C. 53060

D. 53046

**Q13 Mathematics** ENGLISH

When 268 is added to 6K8, the result is 9P6. What is the least possible value of K and P for which 9P6 is divisible by 3?

A. K=4; P=6

B. K=6; P=9

C. K=0; P=3

D. K=3; P=0

**Q14 Mathematics** ENGLISH

A cube of side 5 cm is cut into smaller cubes of side 1 cm. What is the ratio of the total surface area of the larger cube and the sum of the total surfaces of all the smaller cubes?

A. 1 : 5



B. 2 : 3

C. 1 : 3

D. 2 : 5

Q15 Mathematics ENGLISH

If A's salary is 31 % more than that of B, then how much percent is B's salary less than that of A (correct to 2 decimal places)?

A. 21.53%

B. 23.66%



C. 27.46%

D. 21.74%

Q16 Mathematics ENGLISH

A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 9 hours 15 minutes. He would have gained 2 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

A. 11 hours 15 minutes



B. 10 hours 15 minutes

C. 11 hours 45 minutes

D. 12 hours 30 minutes



Q17 Mathematics ENGLISH

Evaluate: $33 \div 9 \times 3 - 2 \times 3$

A. 4

B. 7

C. 8

D. 5

**Q18 Mathematics** ENGLISH

A number when increased by 50 %, gives 2970. The number is:

A. 3960

B. 990

C. 5940

D. 1980

**Q19 Mathematics** ENGLISH

The ratio of numbers of girls and boys participating in sports of a school is 1 : 5. If the number of girls is 239, determine the number of boys participating in the sports.

A. 1225

B. 1215

C. 1195



D. 1170

Q20 Mathematics ENGLISH

A milk man has 80 litres milk in one container and 68 litres milk in another container. Find the maximum capacity of a container, which can measure milk of either container exact number of times.

A. 2 litres

B. 4 litres



C. 6 litres

D. 5 litres

Q21 Mathematics ENGLISH

A pipe can fill a tank in 18 hours. Another pipe can empty the filled tank in 21 hours. If both the pipes are opened simultaneously, then the time (in hours) in which the tank will be filled is:

A. 127

B. 128

C. 126



D. 129

Q22 Mathematics ENGLISH

If the interest earned during the 2nd year on a certain sum is ₹4719, and the rate of interest is 10% per annum compounded annually, then the sum is:

A. ₹42045

B. ₹42445

C. ₹42900



D. ₹41905

Q23 Mathematics ENGLISH

If 330 persons can complete the construction of a shopping complex in 50 days, how many persons are required to complete the same work in 30 days?

A. 198

B. 450

C. 550



D. 505



Q24 Mathematics **ENGLISH**

AC is a chord of a circle. If X and Y are the two points, on the circumference of the circle, lying on the same side of the chord AC such that $\angle AXC = 58^\circ$, then what is the measure of $2\angle AYC$?

A. 116°



B. 120°

C. 58°

D. 60°

Q25 Mathematics **ENGLISH**

By selling an article at $\frac{2}{5}$ of its actual selling price, Ramesh incurs a loss of 16%. If he sells it at 86% of its actual selling price, then the profit percentage is:

A. 83.4%

B. 80.6%



C. 82.6%

D. 81.8%

Q26 Mathematics **ENGLISH**

The mean marks of the following distribution is:

Marks Obtained	No. of Students
28	8
12	12
57	18
85	13

A. 43

B. 53

C. 39

D. 49

**Q27 Mathematics** **ENGLISH**

Radha thinks of a number and subtracts $6\frac{3}{5}$ from it. She multiplies the result by 10. Now the result obtained is four times the same number she thought. Find the number.

A. 14

B. 11



C. 13

D. 12



Q28 Mathematics ENGLISH

Find the mean of the following frequency distribution.

x	5	6	15	9	8
f	10	5	8	10	9

A. $9\frac{13}{21}$

B. $8\frac{13}{21}$ ✓

C. $7\frac{13}{21}$

D. $6\frac{13}{21}$

Q29 Mathematics ENGLISH

Ram takes 2 hours more than Ravi to walk 20 km. If Ram doubles his speed, then he is ahead of Ravi by one hour 20 minutes. Find the speed of Ravi (in km/hr).

A. $3\frac{2}{7}$

B. $4\frac{2}{7}$ ✓

C. 4

D. 3

Q30 Mathematics ENGLISH

Find the value of $0.\overline{36} + 0.\overline{723}$.

A. $1\frac{41}{495}$

B. $1\frac{31}{330}$

C. $1\frac{89}{990}$ ✓

D. $1\frac{26}{33}$



Q31 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

HKN 7, CFI 13, XAD 19, SVY 25, NQT 31, ?

A. ILO 37



B. ILO 36

C. JLO 37

D. ILP 37

Q32 General Intelligence and Reasoning **ENGLISH**

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. IEB

B. UQN

C. NJG

D. ZWU

**Q33** General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series?

34 34 46 46 58 58 70 70 ?

A. 84

B. 88

C. 90

D. 82

**Q34** General Intelligence and Reasoning **ENGLISH**

Tarun ranked 21st from the top and 12th from the bottom in his class. How many students are there in his class?

A. 31

B. 32



C. 33

D. 34

Q35 General Intelligence and Reasoning **ENGLISH**

What should come in place of the question mark (?) in the given series based on the English alphabetical order?

HFC JHE LJG NLI ?

A. PNK



B. PML

C. PMK

D. PNL

Q36 General Intelligence and Reasoning **ENGLISH**

If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 1534876, what will be the sum of the digits which are third from the left and third from the right?

A. 8

B. 6

C. 14

D. 10

**Q37** General Intelligence and Reasoning **ENGLISH**

Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number results in the second number. Similarly, certain mathematical operation(s) on the second number results in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying 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 - 8 - 16 - 32; 1 - 2 - 4 - 8

A. 12 - 24 - 28 - 56

B. 6 - 12 - 24 - 28

C. 3 - 6 - 12 - 20

D. 5 - 10 - 20 - 40



Q38 General Intelligence and Reasoning **ENGLISH**

Below are given two sets of numbers. In each set of numbers, a certain mathematical operation on first number results in the second number. Similarly, certain mathematical operation on second number results in the third number and so on. Which of the given options follows the same set of operations as in question?

(NOTE – A two/three digit number cannot be broken into individual digits for operations e.g. if 37 is followed by 10, the operation cannot be 3+7 as a two digit number cannot be broken into individual digits)

2 – 14 – 44 – 88 ; 5 – 35 – 65 – 130

A. 7 – 49 – 79 – 158



B. 11 – 121 – 152 – 162

C. 13 – 39 – 122 – 142

D. 14 – 64 – 94 – 144

Q39 General Intelligence and Reasoning **ENGLISH**

Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?

: WZB :: BEG : %

A. # = EHJ, % = TWY



B. # = FHJ, % = TWY

C. # = EMJ, % = TWY

D. # = EHJ, % = TWI

Q40 General Intelligence and Reasoning

HINDI - no English version saved

निम्नलिखित संख्या एवं प्रतीक श्रृंखला का संदर्भ लें और उसके बाद आने वाले प्रश्न का उत्तर दें। गिनती केवल बाएं से दाएं की जानी चाहिए।

(बाएं) * 5 2 # # 2 2 7 & % 2 \$ & 1 3 \$ % \$ 5 4 \$ \$ (दाएं)

ऐसी कितनी संख्याएँ हैं जिनमें से प्रत्येक के ठीक पहले एक संख्या है और ठीक बाद में भी एक संख्या है?

A. 2

B. 3

C. 0

D. 1

**Q41** General Intelligence and Reasoning **ENGLISH**

Rakesh starts from Point A and drives 21 km towards the west. He then takes a left turn, drives 23 km, turns left and drives 27 km. He then takes a left turn and drives 28 km. He takes a final left turn, drives 6 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)

A. 5 km to the south



B. 4 km to the south

C. 2 km to the south

D. 3 km to the south

Q42 General Intelligence and Reasoning **ENGLISH**

In a certain code,

'butter milk ghee' is coded as 'dy la mt',

'biscuit ghee salad' is coded as 'bz qp la' and

'salad butter egg' is coded as 'st bz dy'.

All the codes are two-letter codes only.

What is ghee coded as?

A. qp

B. bz

C. la



D. mt

Q43 General Intelligence and Reasoning **ENGLISH**

A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

A, B, C, D and E are sitting in a straight line facing North. Who sits on the extreme right end?

(I) Exactly three people sit between B and C.

(II) A sits immediately to the left of B.

A. Data in Statement I alone is sufficient to answer the question, while data in Statement II is not.

B. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.

C. Both Statements I and II put together are not sufficient to answer the question.

D. Both Statements I and II put together (and not independently) are sufficient to answer the question.



Q44 General Intelligence and Reasoning ENGLISH

B, C, E, F and H have different heights. F is taller than E but shorter than B. E is taller than H. C is taller than H. More than two people are taller than C. How many people are taller than H?

A. One

B. Four



C. Three

D. Two

Q45 General Intelligence and Reasoning ENGLISH

Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

A. RXAE



B. NTWB

C. AGJO

D. SYBG

Q46 General Intelligence and Reasoning ENGLISH

Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

UQY : WUV

MDW : OHT

A. NUM : PYK

B. LHR : NKO

C. SOU : USR



D. WTQ : YXO

Q47 General Intelligence and Reasoning ENGLISH

What should come in place of the question mark (?) in the given series?

85 94 108 127 151 ?

A. 170

B. 175

C. 180



D. 185

Q48 General Intelligence and Reasoning ENGLISH

In a certain code language,

'A + B' means 'A is the son of B',

'A - B' means 'A is the brother of B',

'A × B' means 'A is the wife of B' and

'A ÷ B' means 'A is the father of B'.

How is S related to H if 'S - D × F + G ÷ H'?

A. Wife's father

B. Brother's wife's father

C. Brother's wife's brother



D. Wife's brother

Q49 General Intelligence and Reasoning ENGLISH

Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

GHO : LGM

HIN : MHL

A. NCL : SBJ



B. ORK : OQM

C. MIH : MHE

D. JJS : JIR

Q50 General Intelligence and Reasoning ENGLISH

In a certain code language,

'pen pencil eraser' is coded as 'qp fq pw',

'pencil crayon box' is coded as 'bz er qp' and

'box pen board' is coded as 'er bq fg'.

(All the codes are two-letter coded only.)

What is the code for 'pencil' in that language?

A. bz

B. er

C. qp



D. fq



Q51 General Intelligence and Reasoning **ENGLISH**

If 'P' stands for '×', 'Q' stands for '÷', 'R' stands for '−' and 'S' stands for '+', what will come in place of the question mark (?) in the following equation?

$$35\ S\ 49\ R\ 6\ P\ 3\ P\ 2\ S\ (72\ Q\ 4) = ?$$

A. 50

B. 66



C. 84

D. 98

Q52 General Intelligence and Reasoning **ENGLISH**

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 five people have exams after P. Only three people have exams before T. Q has the exam immediately after V but before U. S does not have the exam on Monday. How many people have exams between Q and R?

A. One

B. Three

C. Four



D. Two

Q53 General Intelligence and Reasoning **ENGLISH**

Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) $3 \ \& \ ^5 \ 7 \ \# \ 9 \ \% \ 8 \ * \ 4 \ < \ 1 \ \$ \ 2 \ @ \ * \ 6$ (Right)

How many such symbols are there which are immediately preceded by a number and also immediately followed by another number?

A. 5



B. 4

C. 3

D. 2

Q54 General Intelligence and Reasoning **ENGLISH**

Seven people, W, X, Y, Z, E, F and G, are sitting in a row, facing north. Only two people sit to the right of Y. Only two people sit between Y and F. Only two people sit between E and W. W sits to the immediate left of Y. Z sits to the immediate right of X.

Who sits at the third position from the left end of the row?

A. Y

B. G



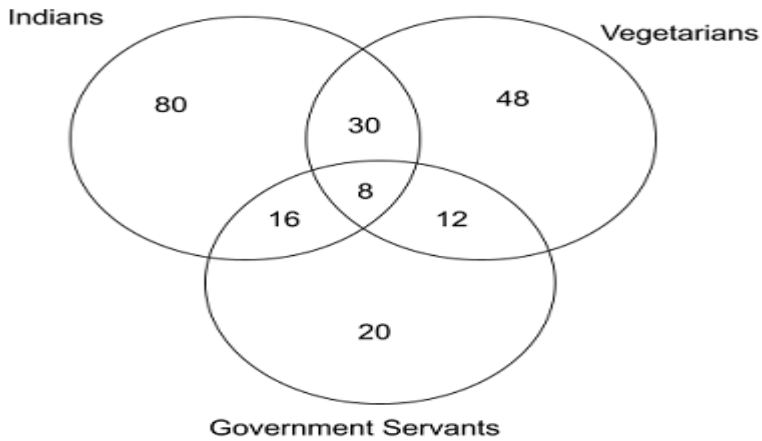
C. Z

D. W



Q55 General Intelligence and Reasoning **ENGLISH**

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



How many such government servants are there who are Indians but not vegetarians?

A. 12

B. 16



C. 30

D. 8

General Awareness

15 Questions • Answer Key

Q56 General Awareness **ENGLISH**

Hangul, also known as Kashmir Stag, can be found in _____.

A. Chandoli

B. Campbell Bay

C. Dudhwa

D. Dachigam



Q57 General Awareness **ENGLISH**

The Indigo Rebellion took place in _____ during 1859-1860.

A. Bengal



B. Bombay

C. Punjab

D. Madras

Q58 General Awareness **ENGLISH**

The Indian Space Research Organisation (ISRO) celebrated its 55th foundation day on 15 August 2024 by launching which of the following satellites?

A. EOS-04

B. EOS-06

C. EOS-08



D. EOS-07

Q59 General Awareness **ENGLISH**

Which of the following states has the highest density of railway network as of 2019-20?

A. West Bengal

B. Punjab

C. Odisha

D. Uttar Pradesh



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Q60 General Awareness **ENGLISH**

The Pala King of Bengal, Dharamapala was defeated by which of the following Rashtrakuta kings?

- A. Govinda III
- B. Krishna I
- C. Dhruva Dharavarsha ✓
- D. Indra III

Q61 General Awareness **ENGLISH**

Which of the following is NOT a function of the Prime Minister in India?

- A. Power to recommend for dissolution of the Parliament
- B. Formation of the Council of Ministers
- C. Appointment of Supreme Court judges ✓
- D. Removal of Ministers

Q62 General Awareness **ENGLISH**

Article 24 of the Indian Constitution prohibits the employment of children below the age of ____ years in any factory, mine or other hazardous activities.

- A. 18
- B. 14 ✓
- C. 16
- D. 12

Q63 General Awareness **ENGLISH**

Which UNESCO World Heritage Site is a cave complex with stunning paintings and sculptures, located in Maharashtra?

- A. Elephanta Caves
- B. Bhimbetka Caves
- C. Badami Caves
- D. Ajanta Caves ✓

Q64 General Awareness **ENGLISH**

Which of the following kinds of demand exists in the monopolistic competition for the product of an individual firm?

- A. Perfectly inelastic
- B. Relatively inelastic
- C. Relatively elastic ✓
- D. Perfectly elastic

Q65 General Awareness **ENGLISH**

What was the venue of the 19th annual meeting of the Secretaries of the Security Councils of the Shanghai Cooperation Organization (SCO)?

- A. Kathmandu, Nepal
- B. Astana, Kazakhstan ✓
- C. New Delhi, India
- D. Dhaka, Bangladesh

Q66 General Awareness **ENGLISH**

Chiang Mai city, the most polluted city in the world as of March 2024, is located in which country?

- A. China
- B. Vietnam
- C. Thailand ✓
- D. Japan

Q67 General Awareness **ENGLISH**

Who made history by becoming the oldest Indian to swim across the English Channel in August 2024?

- A. Suyash Jadhav
- B. Srihari Nataraj
- C. Virdhawal Khade
- D. Siddhartha Agarwal ✓



Q68 General Awareness **ENGLISH**

According to clause (2) of Article 239A, any law created by the Parliament for Puducherry shall NOT be considered an amendment to the Constitution for the purposes of which Article?

A. Article 370

B. Article 368



C. Article 371

D. Article 356

Q69 General Awareness **ENGLISH**

In which year was 'Reflections on Mughal Art & Culture' published?

A. 2019

B. 2022

C. 2020

D. 2021

**Q70** General Awareness **ENGLISH**

Who among the following was appointed as the Union Minister of Panchayati Raj in June 2024?

A. Shivraj Singh Chouhan

B. Piyush Goyal

C. Rajiv Ranjan Singh



D. Jagat Prakash Nadda

General Science

30 Questions • Answer Key

Q71 General Science **ENGLISH**

A gardener wants to grow potato plants. He had put a potato with buds (eyes) in the soil. He succeeded to get a new potato plant because:

A. there was no animal to eat the potato buds

B. vegetative propagation is by buds (eyes)



C. potatoes can be grown by root cuttings

D. there are no other plant species in that area

Q72 General Science **ENGLISH**

An object is placed at 30 cm from a convex mirror with a focal length of 15 cm. Calculate the image distance (v) using the mirror formula.

A. -10 cm

B. 10 cm



C. -15 cm

D. 15 cm

Q73 General Science **ENGLISH**

Nita is pregnant, but loves to eat junk food. Her doctor advised her to eat salads and fruits. The reason for this advice is:

A. junk food is tasty, but leads to obesity

B. the mother's blood has no role in the growth of a baby

C. junk food is costly in comparison to salad and fruits

D. the nutrients in the mother's blood nourishes the growing baby

**Q74** General Science **ENGLISH**

An electric fan becomes warm if used continuously for longer time. This happens due to:

A. the high temperature during the summer

B. the slow rotation of the fan

C. the fast rotation of the fan

D. heating effect of the current flowing through the fan



Q75 General Science **ENGLISH**

An electric refrigerator rated 400 W operates 8 hours/day. What is the cost of the energy to operate it for 30 days at ₹3.00 per kW h?

- A. ₹36
- B. ₹400
- C. ₹288
- D. ₹9.6

Q76 General Science **ENGLISH**

What happens when sodium hydroxide reacts with copper (II) sulfate solution?

- A. Sodium sulfate is formed.
- B. Copper(II) hydroxide precipitates.
- C. Copper metal is deposited.
- D. No reaction occurs.

Q77 General Science **ENGLISH**

When washing soda is exposed to hot atmosphere for a long time, it:

- A. gains heat from the Sun and becomes dry
- B. loses water molecules but remains in crystal form
- C. loses water molecules and becomes powdery
- D. gains water molecules and dissolves in them

Q78 General Science **ENGLISH**

What unique feature do the sex chromosomes in humans have compared to other chromosomes?

- A. They are not always a perfect pair in males.
- B. They are always perfectly paired.
- C. They are the largest chromosomes in the body.
- D. They are identical in males and females.

Q79 General Science **ENGLISH**

The genetic constitution of a child getting an X bearing sperm from the father will be:

- A. 44+XY
- B. 46+XY
- C. 44+XX
- D. 46+XX

Q80 General Science **ENGLISH**

What is the term for the band of colours produced when light is dispersed?

- A. Spectrum
- B. Refraction
- C. Reflection
- D. Absorption

Q81 General Science **ENGLISH**

Who was the scientist credited with the discovery of electromagnetic induction?

- A. Nikola Tesla
- B. Michael Faraday
- C. Thomas Edison
- D. Isaac Newton

Q82 General Science **ENGLISH**

Which of the following is a safety device used to prevent excessive current from flowing in electrical circuits?

- A. Capacitor
- B. Resistor
- C. Transformer
- D. Fuse

Q83 General Science **ENGLISH**

Which of the following bacterial infections is considered a sexually transmitted disease (STD)?

- A. Typhoid
- B. Tuberculosis
- C. Pneumonia
- D. Gonorrhoea

Q84 General Science **ENGLISH**

Which of the following plants propagates through runners?

- A. Jasmine
- B. Strawberry
- C. Rose
- D. Potato



Q85 General Science **ENGLISH**

Which of the following is the female germ cell in plants?

- A. Cells outside the ovule
- B. Cell opposite to egg cell in an ovule
- C. Cells in the centre of ovule
- D. Egg cell**

Q86 General Science **ENGLISH**

What type of image does a concave lens form when an object is placed at infinity?

- A. Virtual, erect and point sized**
- B. Virtual, erect and larger
- C. Real, inverted and same size
- D. Real, erect and point sized

Q87 General Science **ENGLISH**

The reactants that are used for the production of bleaching powder are:

- A. $\text{CaOH} + \text{Cl}_2$
- B. $\text{CaO} + \text{Cl}$
- C. $\text{Ca(OH)}_2 + \text{Cl}_2$**
- D. $\text{CaO} + \text{Cl}_2$

Q88 General Science **ENGLISH**

An unsaturated carbohydrate that has a double bond is:

- A. C_3H_4
- B. C_3H_6**
- C. C_3H_8
- D. C_2H_2

Q89 General Science **ENGLISH**

In a displacement reaction, if a more reactive metal displaces a less reactive metal from its salt solution, what is the result?

- A. The less reactive metal is displaced and solidifies
- B. Formation of an insoluble salt**
- C. The less reactive metal is displaced and the more reactive metal becomes a part of the compound
- D. The more reactive metal remains unchanged

Q90 General Science **ENGLISH**

When sodium sulphate solution is added to barium chloride solution, precipitate of _____ is formed.

- A. barium hydrogen sulphate
- B. barium sulphate**
- C. sodium hydrogen sulphate
- D. sodium chloride

Q91 General Science **ENGLISH**

Neutralisation reaction is a type of:

- A. combination reaction
- B. displacement reaction
- C. decomposition reaction
- D. double displacement reaction**

Q92 General Science **ENGLISH**

What does Family Planning aim at?

- A. Population growth
- B. Preventing all pregnancies by recommending abortion
- C. Population control**
- D. Increasing pollution

Q93 General Science **ENGLISH**

The chemical name for 'Plaster of Paris' is:

- A. calcium chloride hexahydrate
- B. calcium sulphate dihydrate
- C. calcium chloride semihydrate
- D. calcium sulphate hemihydrate**

Q94 General Science **ENGLISH**

The front face of a circular loop of a wire is the North Pole; the direction of current in this face of the loop will be:

- A. towards north
- B. clockwise
- C. anti-clockwise**
- D. towards south



Q95 General Science **ENGLISH**

Which of the following is an example of exothermic combination reaction?

- A. Quick lime dissolved in water** ✓
- B. Photosynthesis
- C. Ammonium chloride dissolved in water
- D. Respiration

Q96 General Science **ENGLISH**

A rose plant with white flowers was planted in soil by stem cutting without any grafting. The new plant produced similar white flowers. What does it indicate?

- A. White flowers look good so gardeners plant such roses.
- B. Stem cutting is a type of asexual reproduction, so there was no variation.** ✓
- C. White flowers are the only type of variety available in rose.
- D. Stem cutting is a type of sexual reproduction, so there was no variation.

Q97 General Science **ENGLISH**

When hydrogen gas is passed through heated black copper (II) oxide, it:

- A. oxidises to form bluish copper solution
- B. oxidises to form brownish copper metal
- C. reduces to form bluish copper solution
- D. reduces to form brownish copper metal** ✓

Q98 General Science **ENGLISH**

Which of the following is NOT true about fragmentation?

- A. It involves breaking of the organism into parts.
- B. It is a form of sexual reproduction.** ✓
- C. Each fragment can grow into a complete individual.
- D. It requires the organism to be multicellular.

Q99 General Science **ENGLISH**

A lens has _____ principal foci.

- A. 3
- B. 1
- C. 2** ✓
- D. 4

Q100 General Science **ENGLISH**

Fleming's Left-Hand Rule is used to determine _____.

- A. the magnitude of the force on a current-carrying conductor
- B. the strength of the magnetic field
- C. the direction of force on a current-carrying conductor** ✓
- D. the amount of current flowing through the conductor

