

RRB ALP 2024 CBT 1

Assistant Loco Pilot | CEN 01/2024

ENGLISH ANSWER KEY

Official Answer Key with Solutions

All 15 Shifts · 25-11-2024 to 29-11-2024

Questions	75
Marking	+1 correct / -1/3 wrong
Duration	60 minutes
Sections	Maths 20 · Reasoning 25 · General Science 20 · GA 10

Every paper here is the official RRB response sheet with the correct answer marked.

HOW TO USE THIS BOOK

- 1 Open the INDEX on the next page.
- 2 Click any row to jump straight to that date and shift.
- 3 Correct options are ticked in green, wrong ones crossed in red.
- 4 Use the bookmarks panel of your PDF reader to move between shifts.

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Compiled 12 September 2026

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RRB ALP 2024 CBT 1 (English) · 15 shifts

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Test Center Name	iON Digital Zone iDZ Zoo Park Tirupathi
Test Date	25/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Cranial nerves arising from the brain and spinal nerves arising from the spinal cord together constitute the:

- Ans**
- ☒ 1. central nervous system
 - ☒ 2. autonomic nervous system
 - ☒ 3. peripheral nervous system
 - ☒ 4. endocrine system

Q.2 ZX is related to AC in a certain way. In the same way, US is related to FH. To which of the following options is PN related, following the same logic?

- Ans**
- ☒ 1. KM
 - ☒ 2. LM
 - ☒ 3. ML
 - ☒ 4. KO

Q.3 In the case of reflection of the light from a convex mirror, when a parallel beam of light is incident on the reflecting surface, reflected light _____.

- Ans**
- ☒ 1. appears to diverge from the centre of curvature
 - ☒ 2. appears to converge at the principal focuss
 - ☒ 3. appears to diverge from the principal focus
 - ☒ 4. appears to converge at the centre of curvature

Q.4 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.)

- Ans**
- ☒ 1. SVP
 - ☒ 2. OSL
 - ☒ 3. HLE
 - ☒ 4. FJC

Q.5 Who among the following created the record in the boys' 1500m by completing the race in 3:51.12 mins at the 6th Khelo India Youth Games?

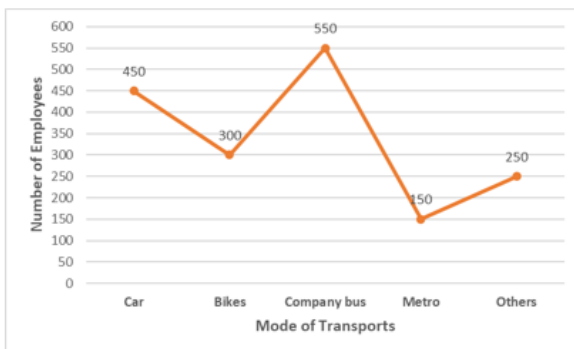
- Ans**
- ☐ 1. Rahul Iyer
 - ☐ 2. Jay Kumar Verma
 - ☒ 3. Rahul Sarnaliya
 - ☐ 4. Adi Sharma

Q.6 Which cell organelle is associated with generation of ATP?

- Ans**
- ☐ 1. Endoplasmic reticulum
 - ☐ 2. Lysosomes
 - ☐ 3. Chloroplast
 - ☒ 4. Mitochondria

Q.7 Study the given graph and answer the question that follows.

The graph shows the number of employees who used different modes of transport in the year 2010.



What is the respective ratio between the number of employees who used Bike to the number of employees who used Metro?

- Ans**
- ☐ 1. 5 : 2
 - ☐ 2. 4 : 5
 - ☐ 3. 3 : 2
 - ☒ 4. 2 : 1

Q.8 A man loses 20% of his money. After spending 25% of the remaining amount, he has ₹480 left. What is the amount of money he originally had?

- Ans**
- ☐ 1. ₹840
 - ☐ 2. ₹720
 - ☐ 3. ₹600
 - ☒ 4. ₹800

Q.9 In a certain code language, 'NUMB' is coded as '4618' and 'BUNT' is coded as '6438'. What is the code for 'T' in the given code language?

- Ans**
- ☐ 1. 6
 - ☐ 2. 4
 - ☒ 3. 3
 - ☐ 4. 8

Q.10 At a particular time during the day, owing to the position of the sun, a 6 feet tall man casts a shadow of 4 feet, whereas a pole next to the man casts a shadow of 36 feet. What is the height of the pole?

- Ans**
- ☐ 1. 60 feet
 - ☒ 2. 54 feet
 - ☐ 3. 56 feet
 - ☐ 4. 63 feet

Q.11 In a certain code language,

$A + B$ means 'A is the brother of B',

$A - B$ means 'A is the son of B',

$A \times B$ means 'A is the wife of B' and

$A \div B$ means 'A is the father of B'.

Based on the above, how is Q related to S if ' $P - Q \div R \times S + T$ '?

- Ans**
- ☐ 1. Father
 - ☐ 2. Husband's brother
 - ☒ 3. Wife's father
 - ☐ 4. Wife's brother

Q.12 Energy possessed by a body by virtue of its position or configuration is _____.

- Ans**
- ☒ 1. potential energy
 - ☐ 2. nuclear energy
 - ☐ 3. electromagnetic energy
 - ☐ 4. kinetic energy

Q.13 The sum of two numbers is 36. Five times one number is equal to 4 times the other. The greater of the two numbers is:

- Ans**
- ☐ 1. 12
 - ☒ 2. 20
 - ☐ 3. 16
 - ☐ 4. 15

Q.14 A 3-digit number is such that its units' digit, tens' digit and hundreds' digit are in the ratio 2 : 3 : 4. The sum of this number and the number obtained by reversing its digits is 1332. Find the positive difference between the 3-digit number and the number formed by reversing its digit.

- Ans**
- ☐ 1. 594
 - ☐ 2. 323
 - ☒ 3. 396
 - ☐ 4. 414

- Q.15** 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.)

- Ans**
- ☒ 1. EHM
 - ☒ 2. KNS
 - ☒ 3. RUY
 - ☒ 4. JMR

- Q.16** A, B, C, D, E and F are sitting around a circular table facing the centre. B sits second to the right of D. A is an immediate neighbour of E and C. E sits second to the left of F. What is the position of F with respect to B?

- Ans**
- ☒ 1. Second to the left
 - ☒ 2. Immediate right
 - ☒ 3. Immediate left
 - ☒ 4. Third to the right

- Q.17** Seven people, B, C, D, E, F, G, and K, are sitting in a straight line, facing north. Only three people sit to the left of B. Only K sits to the right of G. Only three people sit between G and D. C sits at some place to the left of F but at some place to the right of E.

How many people sit between E and F?

- Ans**
- ☒ 1. Three
 - ☒ 2. Four
 - ☒ 3. Two
 - ☒ 4. One

- Q.18** A shopkeeper provides successive discounts of 5% and 4%, which are equivalent to a single discount of ____.

- Ans**
- ☒ 1. 9.2%
 - ☒ 2. 9%
 - ☒ 3. 8%
 - ☒ 4. 8.8%

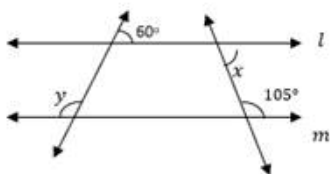
- Q.19** Which two numbers should be interchanged to make the given equation correct?

$$21 \times 4 + (84 \div 7) \times 2 - 15 \times 5 + 42 = 105$$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

- Ans**
- ☒ 1. 4 and 2
 - ☒ 2. 4 and 5
 - ☒ 3. 84 and 42
 - ☒ 4. 7 and 21

Q.20 In the adjoining figure line l is parallel to line m . What is the value of $x + 2y$?



- Ans
- ☐ 1. 340°
 - ☒ 2. 315°
 - ☐ 3. 270°
 - ☐ 4. 225°

Q.21 Select the correct balanced reaction for $\text{CuO} + \text{NH}_3 \rightarrow \text{Cu} + \text{N}_2 + \text{H}_2\text{O}$.

- Ans
- ☐ 1. $2\text{CuO} + 3\text{NH}_3 \rightarrow 3\text{Cu} + \text{N}_2 + 3\text{H}_2\text{O}$
 - ☐ 2. $3\text{CuO} + 2\text{NH}_3 \rightarrow 3\text{Cu} + 2\text{N}_2 + 3\text{H}_2\text{O}$
 - ☒ 3. $3\text{CuO} + 2\text{NH}_3 \rightarrow 3\text{Cu} + \text{N}_2 + 3\text{H}_2\text{O}$
 - ☐ 4. $3\text{CuO} + 2\text{NH}_3 \rightarrow 3\text{Cu} + \text{N}_2 + 4\text{H}_2\text{O}$

Q.22 Traits can be influenced by:

- Ans
- ☒ 1. by both paternal DNA and maternal DNA
 - ☐ 2. only paternal DNA
 - ☐ 3. only maternal DNA
 - ☐ 4. only maternal grandparent DNA

Q.23 Which of the following devices does NOT utilise the magnetic effects of electric current?

- Ans
- ☐ 1. Electric motor
 - ☐ 2. Microphone
 - ☒ 3. Magnetic compass
 - ☐ 4. Electric generator

Q.24 In which year did the Delhi High Court issue a notice regarding a plea for 33% reservation for women lawyers in Bar Council elections?

- Ans
- ☐ 1. 2023
 - ☐ 2. 2022
 - ☒ 3. 2024
 - ☐ 4. 2021

Q.25 If 'I' stands for '+', 'J' stands for '×', 'K' stands for '+', and 'L' stands for '-', what will come in place of the question mark '?' in the following equation?

$$38\text{ I } (3\text{ J } 4)\text{ L } (16\text{ K } 2)\text{ I } 11 = ?$$

- Ans**
- ☒ 1. 34
 - ☒ 2. 47
 - ☒ 3. 61
 - ☒ 4. 53

Q.26 The average of the first 25 multiples of 3 is:

- Ans**
- ☒ 1. 36
 - ☒ 2. 39
 - ☒ 3. 25
 - ☒ 4. 30

Q.27 Find the compound interest on ₹11,000 in 2 years at 4% p.a., interest compounded yearly.

- Ans**
- ☒ 1. ₹897.60
 - ☒ 2. ₹906.50
 - ☒ 3. ₹875.80
 - ☒ 4. ₹786.60

Q.28 If each vowel in the word CONSTRUCTION is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which of the following letters will be sixth from the right in the group of letter thus formed?

- Ans**
- ☒ 1. V
 - ☒ 2. S
 - ☒ 3. Q
 - ☒ 4. B

Q.29 Which of the following is the characteristics of striated muscles?

- Ans**
- ☒ 1. cylindrical, unbranched and multinucleate
 - ☒ 2. spindle-shaped, unbranched and multinucleate
 - ☒ 3. spindle-shaped, unbranched and uninucleate
 - ☒ 4. cylindrical, branched and multinucleate

Q.30 The Government of India has come out with a new set of National Awards in the field of Science, Technology and Innovation known as 'Rashtriya Vigyan Puraskar' in ____ categories.

- Ans**
- ☒ 1. three
 - ☒ 2. four
 - ☒ 3. two
 - ☒ 4. five

Q.31 Which Indian personality played the female protagonist in the movie *Sister Midnight*, showcased at the Cannes Film Festival in 2024?

- Ans**
- ☒ 1. Kriti Sanon
 - ☒ 2. Aditi Rao Hydari
 - ☒ 3. Taapsee Pannu
 - ☒ 4. Radhika Apte

Q.32 Evaluate the given expression.

$$2^3 \times (-9)^0 \times 3^3$$

- Ans
- ☐ 1. 36
 - ☒ 2. 216
 - ☐ 3. 9
 - ☐ 4. 81

Q.33 Who was appointed as the Director General of Sashastra Seema Bal (SSB) in September 2024?

- Ans
- ☐ 1. Subodh Kumar Jaiswal
 - ☐ 2. Rakesh Asthana
 - ☒ 3. Amrit Mohan Prasad
 - ☐ 4. Kuldeep Singh

Q.34 A series of compounds in which the same functional group substitutes for hydrogen in a carbon chain is called _____.

- Ans
- ☒ 1. homologous series
 - ☐ 2. catenation
 - ☐ 3. heterologous series
 - ☐ 4. isomers

Q.35 A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for ₹3,200. With the help of C, they completed the work in 3 days. How much is to be paid to C?

- Ans
- ☐ 1. ₹375
 - ☐ 2. ₹800
 - ☒ 3. ₹400
 - ☐ 4. ₹600

Q.36 If the force of attraction between the earth and an apple separated by distance 'x' is 'F', then the force acting on the same apple kept at a distance '2x' will be _____.

- Ans
- ☒ 1. $F/4$
 - ☐ 2. $2F$
 - ☐ 3. $4F$
 - ☐ 4. $F/2$

Q.37 The atomic number of an atom is equal to the:

- Ans
- ☐ 1. sum of the number of electrons and that of neutrons
 - ☒ 2. total number of protons present in the nucleus of an atom
 - ☐ 3. sum of the number of protons and that of neutrons
 - ☐ 4. half of the number of electrons present in the nucleus of an atom

Q.38 Which of the following statements is/are related to ecosystem?

- (i) It consists of biotic components comprising living organisms.
- (ii) All green plants and certain bacteria are producers.
- (iii) Decomposers break-down complex organic into simple organic substance.

- Ans
- ✓ 1. (i),(ii) and (iii)
 - ✗ 2. Only (i) and (ii)
 - ✗ 3. Only (i) and (iii)
 - ✗ 4. Only (i)

Q.39 If $9.6 : 16.8 :: 18 : x$, what is the value of x?

- Ans
- ✗ 1. 20.4
 - ✓ 2. 31.5
 - ✗ 3. 24.8
 - ✗ 4. 25.5

Q.40 Match the following.

(i) The swollen bottom part of the pistil is	(a) stigma
(ii) The middle elongated part of the pistil is	(b) ovule
(iii) The terminal part of the pistil is	(c) ovary
(iv) The ovary contains	(d) style

- Ans
- ✗ 1. (i) - (c), (ii)- (b), (iii) - (a), (iv)- (d)
 - ✓ 2. (i) - (c), (ii)- (d), (iii) - (a), (iv)- (b)
 - ✗ 3. (i) - (b), (ii)- (c), (iii) - (a), (iv)- (d)
 - ✗ 4. (i) - (a), (ii)- (d), (iii) - (c), (iv)- (b)

Q.41 Particles of matter are continuously moving due to their:

- Ans
- ✗ 1. chemical energy
 - ✓ 2. kinetic energy
 - ✗ 3. mechanical energy
 - ✗ 4. nuclear energy

Q.42 Refer to the given number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 2 & % 4 6 @ & 3 Ω 9 # 1 * 8 £ 6 1 7 # (Right)

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

- Ans
- ✓ 1. One
 - ✗ 2. More than two
 - ✗ 3. None
 - ✗ 4. Two

Q.43 If the HCF and the LCM of two numbers are 7 and 245, respectively, then their product is:

- Ans**
- ☐ 1. 1175
 - ☐ 2. 1751
 - ☐ 3. 1517
 - ☒ 4. 1715

Q.44 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All plants are rhinos.

All plants are animals.

Conclusion:

(I) All rhinos are plants.

(II) Some animals are rhinos.

- Ans**
- ☐ 1. Both conclusions (I) and (II) follow.
 - ☒ 2. Only conclusion (II) follows.
 - ☐ 3. Only conclusion (I) follows.
 - ☐ 4. Neither conclusion (I) nor (II) follows.

Q.45 Which of the following is produced when hydrochloric acid reacts with water?

- Ans**
- ☒ 1. Both H_3O^+ and Cl^-
 - ☐ 2. Only Cl^-
 - ☐ 3. Only H_3O^+
 - ☐ 4. Both HO^- and Cl^-

Q.46 Electric devices like laundry iron, electric toaster, electric oven, electric kettle and electric heater are based on which effect of electric current?

- Ans**
- ☐ 1. Physiological effect
 - ☐ 2. Magnetic effect
 - ☒ 3. Heating effect
 - ☐ 4. Chemical effect

Q.47 The average height of 50 pupils in a class is 150 cm. Five of them whose average height is 146 cm, leave the class, and five others whose average height is 156 cm, join. The new average height of the pupils of the class (in cm) is

_____.

- Ans**
- ☒ 1. 151
 - ☐ 2. 153
 - ☐ 3. 149
 - ☐ 4. 152

Q.48 A man bought a number of oranges at 3 for a rupee and an equal number at 2 for a rupee. At what price per dozen should he sell them to make a profit of 20%?

- Ans**
- ☐ 1. ₹7
 - ☒ 2. ₹6
 - ☐ 3. ₹4
 - ☐ 4. ₹5

Q.49 Anil spends 40% of his income on rent and 40% of the remaining income on medicines. If he saves ₹7,200 every month, then his monthly income is:

- Ans**
- ☐ 1. ₹25,000
 - ☒ 2. ₹20,000
 - ☐ 3. ₹36,000
 - ☐ 4. ₹22,000

Q.50 Select the pair which follows the same pattern as that followed by the two pair given below. Both pairs follow the same pattern.

FIND : URMW

BENT : YVMG

- Ans**
- ☐ 1. FILE : VROV
 - ☐ 2. SAID : HZRV
 - ☐ 3. BEAD : YVYW
 - ☒ 4. HERO : SVIL

Q.51 Given below is a statement followed by two possible reasons numbered I and II. Read the statement carefully and decide which of the two explain(s) the event/observation/information given in the statement.

Statement - Long queues were seen outside the electricity bill payment counters in city X on 14th June 2023.

Reasons:

(I) The last date for payment of electricity bills in City X is 15th of every month.

(II) Many people were unable to pay the electricity bill online in June 2023 due to a server failure.

- Ans**
- ☒ 1. Both I and II are possible reasons.
 - ☐ 2. Only I is a possible reason.
 - ☐ 3. Only II is a possible reason.
 - ☐ 4. Neither I nor II is a possible reason.

Q.52 A car covers four successive 3 km stretches at speeds of 10 km/h, 20 km/h, 30 km/h and 60 km/h, respectively. Its average speed over this distance is:

- Ans**
- ☐ 1. 15 km/h
 - ☐ 2. 25 km/h
 - ☐ 3. 30 km/h
 - ☒ 4. 20 km/h

Q.53 Who among the following is the author of the book 'The Miracle Makers: Indian Cricket's Greatest Epic'?

- Ans**
- ☐ 1. Sunil Joshi
 - ☐ 2. Hrushikesh Kanitkar
 - ☐ 3. Shiv Sundar Das
 - ☒ 4. Bharat Sundareshan

Q.54 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(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.)

X : 679 :: 864 : Y

- Ans**
- ☐ 1. X = 898, Y = 649
 - ☐ 2. X = 834, Y = 704
 - ☐ 3. X = 812, Y = 756
 - ☒ 4. X = 825, Y = 718

Q.55 In case of jelly, which of the following is the dispersed phase?

- Ans**
- ☐ 1. Solid phase
 - ☐ 2. Gas phase
 - ☐ 3. Both solid and liquid phases
 - ☒ 4. Liquid phase

Q.56 In a certain code language, 'FROM' is coded as '4935' and 'MORE' is coded as '3154'. What is the code for 'E' in the given code language?

- Ans**
- ☐ 1. 5
 - ☐ 2. 9
 - ☒ 3. 1
 - ☐ 4. 3

Q.57 The amount of force needed to accelerate a 10 kg mass at 2.5m/s^2 is _____.

- Ans**
- ☐ 1. 7.5 N
 - ☒ 2. 25 N
 - ☐ 3. 12.5 N
 - ☐ 4. 4 N

Q.58 In the Union Budget 2024, which initiative did the Finance Minister announce to enhance productivity in agriculture?

- Ans**
- ☐ 1. Introduction of genetically modified crops
 - ☒ 2. A comprehensive review of the agriculture research setup
 - ☐ 3. Expansion of irrigation facilities nationwide
 - ☐ 4. A new subsidy program for farmers

Q.59 Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. D is kept third from the bottom. Only one box is kept between F and A. Only three boxes are kept between G and E. B is kept immediately above F. E is kept on one of the positions above D.

How many boxes are kept between E and C?

- Ans** ☒ 1. Two
☐ 2. Three
☐ 3. One
☐ 4. None

Q.60 Which natural disaster triggered storms, flash floods, and landslips in the northeastern states of India in 2024?

- Ans** ☐ 1. Cyclone Amphan
☐ 2. Cyclone Fani
☐ 3. Cyclone Yaas
☒ 4. Cyclone Remal

Q.61 Which of the following numbers is divisible by 11?

- Ans** ☒ 1. 9246864
☐ 2. 8245964
☐ 3. 9248164
☐ 4. 7247564

Q.62 Brinda starts from Point A and drives 19 km towards West. She then takes a left turn, drives 22 km, turns left and drives 25 km. She takes a final left turn, drives 22 km and stops at Point P. How far (shortest distance) and towards which direction should she drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)

- Ans** ☐ 1. 7 km towards the West
☐ 2. 7 km towards the South
☒ 3. 6 km towards the West
☐ 4. 6 km towards the East

Q.63 Select the number from among the given options that can replace the question mark (?) in the following series.

26 78 36 108 66 198 ?

- Ans** ☐ 1. 142
☒ 2. 156
☐ 3. 128
☐ 4. 164

Q.64 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 346 :: 9 : Y

- Ans** ☒ 1. X = 7, Y = 732
☐ 2. X = 5, Y = 612
☐ 3. X = 6, Y = 729
☐ 4. X = 8, Y = 756

Q.65 Water flows into a tank having the dimensions of its base given as $200 \text{ m} \times 150 \text{ m}$ through a rectangular pipe having dimensions given as $1.5 \text{ m} \times 1.25 \text{ m}$ @ 20 kmph. In what time (in minutes) will the water rise by 2 meters?

- Ans
- ☐ 1. 72
 - ☐ 2. 234
 - ☐ 3. 540
 - ☒ 4. 96

Q.66 Dr. Shankarbaba Pundlikrao Papalkar is known for his dedication to improving the lives of:

- Ans
- ☐ 1. senior citizens
 - ☐ 2. farmers
 - ☐ 3. those receiving education
 - ☒ 4. disabled and destitute children

Q.67 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

DFH, KMO, RTV, YAC, ?

- Ans
- ☐ 1. EGI
 - ☐ 2. EGK
 - ☐ 3. FIL
 - ☒ 4. FHJ

Q.68 If each vowel in the word REALISM is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order and then arrange in reverse order of English alphabetical order, then which of the following letters will be fourth from the left in the group of letter thus formed?

- Ans
- ☐ 1. N
 - ☐ 2. F
 - ☒ 3. M
 - ☐ 4. J

Q.69 A triangle has sides of length 5 cm, 7 cm and 10 cm. Find the area of the triangle (in cm^2).

- Ans
- ☐ 1. $7\sqrt{10}$
 - ☐ 2. 350
 - ☐ 3. 25
 - ☒ 4. $2\sqrt{66}$

Q.70 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BEV, FIR, JMN, NQJ, RUF, ?

- Ans
- ☐ 1. TUS
 - ☒ 2. VYB
 - ☐ 3. STU
 - ☐ 4. YVB

Q.71 If $x + \frac{1}{x} = 5$, then $x^2 + \frac{1}{x^2} = ?$

- Ans
- ✓ 1. 23
 - ✗ 2. 26
 - ✗ 3. 25
 - ✗ 4. 24

Q.72 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All fishes are birds.

All birds are animals.

Conclusions:

(I) All animals are fishes.

(II) Some birds are fishes.

- Ans
- ✗ 1. Neither conclusion (I) nor (II) follows.
 - ✗ 2. Both conclusions (I) and (II) follow.
 - ✓ 3. Only conclusion (II) follows.
 - ✗ 4. Only conclusion (I) follows.

Q.73 Which of the following options represents metals that do NOT react with cold water?

- Ans
- ✓ 1. Aluminium, iron and zinc
 - ✗ 2. Sodium, iron and potassium
 - ✗ 3. Sodium, calcium and zinc
 - ✗ 4. Sodium, calcium and potassium

Q.74 Twinkling of stars is related to the phenomenon of _____.

- Ans
- ✗ 1. dispersion of light
 - ✗ 2. interference of light
 - ✓ 3. refraction of light
 - ✗ 4. reflection of light

Q.75 In which state is the Gingee Fort, which was recently nominated for the UNESCO World Heritage status, located?

- Ans
- ✓ 1. Tamil Nadu
 - ✗ 2. Karnataka
 - ✗ 3. Gujarat
 - ✗ 4. Rajasthan



Test Center Name	iON Digital Zone iDZ Austinpatti
Test Date	25/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

- Options shown in green color with a tick icon are correct.
- Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 பின்வரும் விருப்பத்தேர்வுகளில் எது, தாம்சனின் அணு மாதிரியில் காணப்படும் துணை அணுத்துகள்களைக் குறிக்கிறது?

- Ans
- ✗ 1. புரோட்டான்கள் மட்டுமே
 - ✗ 2. எலக்ட்ரான்கள் மற்றும் புரோட்டான்கள் ஆகிய இரண்டும்
 - ✓ 3. எலக்ட்ரான்கள் மட்டுமே
 - ✗ 4. புரோட்டான்கள் மற்றும் நியூட்ரான்கள் ஆகிய இரண்டும்

Q.2 ஒரு பொருளை 20 cm தூரத்தில் ஒரு குழியாடிக்கு முன்னால் வைத்தால், அந்த ஆடியின் வளைவு மையத்தில் ஒரு மெய் பிம்பம் உருவாகிறது. எனில், அந்த ஆடியினால் ஏற்படும் உருப்பெருக்கம் _____ ஆகும்.

- Ans
- ✗ 1. -10
 - ✗ 2. -20
 - ✓ 3. -1
 - ✗ 4. -0.5

Q.3 ஆங்கில அகரவரிசையின் அடிப்படையில், ஒரு குறிப்பிட்ட வழி முறையில் UPTQ என்பது OJNK உடன் தொடர்புடையது. அதே வழி முறையில் RMQN என்பது LGKH உடன் தொடர்புடையது. எனில் அதே தர்க்கத்தைப் பின்பற்றி, பின்வரும் விருப்பத்தேர்வுகளில் NIMJ என்பது எதனுடன் தொடர்புடையது?

- Ans
- ✗ 1. CHDG
 - ✓ 2. HCGD
 - ✗ 3. CHGD
 - ✗ 4. HCDG

Q.4 ஒரு குறிப்பிட்ட தேர்வில் ஒரு வகுப்பின் மாணவர்களின் சராசரி மதிப்பெண்கள் 80 ஆகும். அந்தத் தேர்வில் சராசரி மதிப்பெண்கள் 40ஆக இருக்கும் 5 மாணவர்களைத் தவிர்த்துவிட்டால், மீதமுள்ளவர்களின் சராசரி மதிப்பெண்கள் 90 ஆகும். எனில் தேர்வு எழுதிய மாணவர்களின் எண்ணிக்கையைக் கண்டறியவும்.

Ans ✓ 1. 25

✗ 2. 20

✗ 3. 35

✗ 4. 15

Q.5 வயிற்றின் சுவரில் இருக்கும் இரைப்பை சுரப்பிகள் _____ ஐ வெளியிடுவதில்லை.

Ans ✓ 1. உமிழ்நீர்

✗ 2. சளி

✗ 3. ஹைட்ரோகுளோரிக் அமிலம்

✗ 4. பெப்சின் (pepsin)

Q.6 கொடுக்கப்பட்ட அறிக்கைகள் மற்றும் முடிவுகளை கவனமாக படிக்கவும். பொதுவாக அறியப்பட்ட உண்மைகளிலிருந்து மாறுபட்டதாகத் தோன்றினாலும் கொடுக்கப்பட்ட அறிக்கைகள் உண்மையாக இருப்பதாக கருத வேண்டும். கொடுக்கப்பட்ட அறிக்கைகளிலிருந்து எந்த முடிவு(கள்) தர்க்கரீதியாக பின்பற்றுகிறது என்பதை நீங்கள் தீர்மானிக்க வேண்டும்.

அறிக்கை:

சில ஒட்டகச்சிவிங்கிகள், காண்டாமிருகங்கள் ஆகும்.

அனைத்து காண்டாமிருகங்களும் புலிகள் ஆகும்.

முடிவுகள்:

(I) சில புலிகள், ஒட்டகச்சிவிங்கிகள் ஆகும்

(II) அனைத்து புலிகளும் காண்டாமிருகங்கள் ஆகும்.

Ans ✗ 1. முடிவு (I) அல்லது (II) ஆகிய இரண்டுமே பின்பற்றப்படவில்லை

✓ 2. முடிவு (I) மட்டுமே பின்பற்றப்படுகின்றது

✗ 3. முடிவு (II) மட்டுமே பின்பற்றப்படுகின்றது

✗ 4. முடிவு (I) மற்றும் (II) ஆகிய இரண்டுமே பின்பற்றுகின்றன

Q.7 8 இன் மூன்று தொடர்ச்சியான மடங்குகளின் கூட்டுத்தொகை 2424 ஆகும். எனில் அவற்றில் மிகப்பெரிய எண்ணைக் கண்டறியவும்.

Ans ✗ 1. 810

✗ 2. 824

✗ 3. 848

✓ 4. 816

Q.8 30 மற்றும் 50 க்கும் இடைப்பட்ட அனைத்து பகா எண்களின் சராசரியைக் கண்டறியவும்.

- Ans
- ☒ 1. 40.2
 - ☒ 2. 40.4
 - ☒ 3. 38.9
 - ☒ 4. 39.8

Q.9 நளின் Y என்ற புள்ளியில் இருந்து தொடங்கி வடக்கு நோக்கி 8 km ஓட்டுகிறார். பின்னர் வலதுபுறம் திரும்பி 23 km ஓட்டி, வலதுபுறம் திரும்பி 29 km ஓட்டுகிறார். பின்னர் இடதுபுறம் திரும்பி 14 km ஓட்டுகிறார். அவர் இடதுபுறம் திரும்பி, 21 km ஓட்டி, Z என்ற புள்ளியில் நிறுத்துகிறார். மீண்டும் Y புள்ளியை அடைய, அவர் எவ்வளவு தூரம் (குறுகிய தூரம்) மற்றும் எந்த திசையை நோக்கி ஓட்ட வேண்டும்? (குறிப்பிடப்படாத வரை அனைத்து திருப்பங்களும் 90 டிகிரி திருப்பங்கள் மட்டுமே)

- Ans
- ☒ 1. 26 km வடக்கு நோக்கி
 - ☒ 2. 29 km தெற்கு நோக்கி
 - ☒ 3. 37 km மேற்கு நோக்கி
 - ☒ 4. 21 km கிழக்கு நோக்கி

Q.10 ஒரு நபர் ஒரு பொருளை, ₹247.50 ரூபாய்க்கு விற்பதன் மூலம் 12.5% லாபம் ஈட்டுகிறார். எனில் அந்தப் பொருளின் அடக்க விலை என்ன?

- Ans
- ☒ 1. ₹224
 - ☒ 2. ₹220
 - ☒ 3. ₹225
 - ☒ 4. ₹210

Q.11 ஆங்கில அகரவரிசையின் அடிப்படையில் KBWJ என்பது ஒரு குறிப்பிட்ட வழிமுறையில் MZZG உடன் தொடர்புடையது. அதே வழிமுறையில், OXCD என்பது QVFA உடன் தொடர்புடையது. அதே தர்க்கத்தைப் பின்பற்றி STIX என்பது பின்வரும் விருப்பங்களில் எதுவுடன் தொடர்புடையது?

- Ans
- ☒ 1. TSLV
 - ☒ 2. VSLT
 - ☒ 3. VRKU
 - ☒ 4. URLU

Q.12 ஒரு குறிப்பிட்ட குறியீட்டு மொழியில் 'FEND' என்பது '9735' என்றும் மற்றும் 'FEUD' என்பது '3769' என்றும் குறியிடப்பட்டுள்ளது. எனில் கொடுக்கப்பட்டுள்ள குறியீட்டு மொழியின்படி 'U' என்பது எப்படி குறியிடப்படுகிறது?

- Ans
- ☒ 1. 6
 - ☒ 2. 9
 - ☒ 3. 3
 - ☒ 4. 7

Q.13 A, B, C, D, E, F மற்றும் G என ஏழு நபர்கள் கிடைவரிசையில் வடக்கு திசை நோக்கி அமர்ந்துள்ளனர். C மற்றும் D ஆகியோருக்கு இடையில் ஐந்து நபர்கள் மட்டுமே அமர்ந்துள்ளனர். B என்பவர், வலது முனையிலிருந்து மூன்றாவது இடத்தில் அமர்ந்துள்ளார். G என்பவர், C என்பவரின் உடனடி வலப்புறத்தில் அமர்ந்துள்ளார். E என்பவர் A என்பவரின் வலதுபுறத்தில் மூன்றாவதாக அமர்ந்துள்ளார். எனில் G மற்றும் F ஆகியோருக்கு இடையில் எத்தனை பேர் அமர்ந்துள்ளனர்?

- Ans
- ☒ 1. இரண்டு
 - ☒ 2. மூன்று
 - ☒ 3. நான்கு
 - ☒ 4. ஒன்று

Q.14 $(p/q)^{2M+2} = (q/p)^{9-M}$ என்ற சமன்பாட்டில் M இன் மதிப்பு என்ன?

- Ans
- ☒ 1. 6
 - ☒ 2. 5
 - ☒ 3. $-\frac{7}{2}$
 - ☒ 4. -11

Q.15 கொடுக்கப்பட்ட சமன்பாட்டைச் சமன் செய்ய எந்த இரண்டு எண்களை ஒன்றுக்கொன்று இடம் மாற்ற வேண்டும்?

?

$$72 - 56 + (13 + 19) \times 2 - 95 \div 5 + 17 = 76$$

(குறிப்பு: கொடுக்கப்பட்ட எண்ணின் தனித்தனி இலக்கங்கள் அல்லாமல், முழு எண்ணானது இட மாற்றம் செய்யப்பட வேண்டும்.)

- Ans
- ☒ 1. 17 மற்றும் 56
 - ☒ 2. 19 மற்றும் 17
 - ☒ 3. 19 மற்றும் 5
 - ☒ 4. 13 மற்றும் 17

Q.16 தேசிய விளையாட்டு விருதுகள் 2023 இன் போது மொத்தம் _____ அர்ஜுனா விருதுகள் வழங்கப்பட்டன.

- Ans
- ☒ 1. 31
 - ☒ 2. 18
 - ☒ 3. 26
 - ☒ 4. 21

Q.17 பின்வரும் கோவையைச் சுருக்குக:

$$(2z - 5y)^2 + (5z + 2y)^2 - 25z^2$$

Ans

✓ 1. $29y^2 + 4z^2$

✗ 2. $29y^2 - 4z^2$

✗ 3. $19y^2 + 4z^2$

✗ 4. $19y^2 - 4z^2$

Q.18 A, B, C, D, E, F மற்றும் G ஆகிய ஏழு பெட்டிகள் ஒன்றன் மேல் ஒன்றாக வைக்கப்பட்டுள்ளன, ஆனால் ஒரே வரிசையில் இருக்க வேண்டிய அவசியமில்லை. F பெட்டி மேலிருந்து மூன்றாவதாக வைக்கப்பட்டுள்ளது. B மற்றும் G க்கு இடையில் இரண்டு பெட்டிகள் மட்டுமே வைக்கப்பட்டுள்ளன. D பெட்டி G க்கு உடனடி மேலே வைக்கப்பட்டுள்ளது. E மற்றும் A க்கு இடையில் மூன்று பெட்டிகள் மட்டுமே வைக்கப்பட்டுள்ளன. F க்கு கீழே உள்ள நிலைகளில் ஒன்றில் D பெட்டி வைக்கப்பட்டுள்ளது. E பெட்டியானது மேல்-உச்ச நிலையில் வைக்கப்படவில்லை.

எனில், மேலிருந்து நான்காவதாக எந்த பெட்டி வைக்கப்பட்டுள்ளது?

Ans

✗ 1. A

✗ 2. E

✓ 3. B

✗ 4. C

Q.19 + என்றால் -, - என்றால் ×, × என்றால் ÷, ÷ என்றால் +, எனில், பின்வரும் சமன்பாட்டில் கேள்விக்குறியின் '?' இடத்தில் என்ன வரும்?

$$62 - 2 \div 7 + 14 \times 7 = ?$$

Ans

✗ 1. 133

✓ 2. 129

✗ 3. 131

✗ 4. 143

Q.20 பின்வரும் மின்பகுபொருள்களில், தாமிரத்தின் மின்னாற்பகுப்பு சுத்திகரிப்புக்கு எது பயன்படுத்தப்படுகிறது?

Ans

✗ 1. சோடியம் சல்ஃபேட்

✓ 2. தாமிர சல்பேட் (Copper sulphate)

✗ 3. தாமிர ஆக்சைடு (Copper oxide)

✗ 4. கியுப்ரஸ் குளோரைடு

Q.21 $18 : 24 :: 24 : y$, எனில் y இன் மதிப்பைக் கண்டறியவும்?

Ans ✓ 1. 32

✗ 2. 18

✗ 3. 36

✗ 4. 24

Q.22 $Al_2(SO_4)_3 + BaCl_2 \rightarrow AlCl_3 + BaSO_4$ வினைக்கான சரியான சமநிலை சமன்பாட்டைத் தேர்ந்தெடுக்கவும்.

Ans ✗ 1. $Al_2(SO_4)_3 + 2BaCl_2 \rightarrow 2AlCl_3 + 3 BaSO_4$

✗ 2. $Al_2(SO_4)_3 + 3BaCl_2 \rightarrow 3AlCl_3 + 2 BaSO_4$

✗ 3. $2Al_2(SO_4)_3 + 3BaCl_2 \rightarrow 2AlCl_3 + 3BaSO_4$

✓ 4. $Al_2(SO_4)_3 + 3BaCl_2 \rightarrow 2AlCl_3 + 3 BaSO_4$

Q.23 24 m நீளமும், 8 m உயரமும், 60 cm தடிமனும் கொண்ட ஒரு சுவரைக் கட்டுவதற்குத் தேவையான $24\text{ cm} \times 12\text{ cm} \times 8\text{ cm}$ அளவுள்ள செங்கற்களின் எண்ணிக்கையைக் கண்டறியவும்.

Ans ✗ 1. 4500

✗ 2. 450000

✗ 3. 450

✓ 4. 45000

Q.24 ஒரு அறிக்கையைத் தொடர்ந்து, I மற்றும் II என எண்ணிடப்பட்ட இரண்டு சாத்தியமான காரணங்கள் கீழே கொடுக்கப்பட்டுள்ளன. அறிக்கையை கவனமாகப் படித்து, இரண்டில் எது/எவை அறிக்கையில் கொடுக்கப்பட்டுள்ள நிகழ்வு/அவதானிப்பு/தகவலை விளக்குகிறது என்பதைத் தீர்மானிக்கவும்.

அறிக்கை - 2023 அக்டோபர் 19 முதல் 2024 ஜனவரி 5 வரை, A நகரம் முதல் B நகரம் வரை செவ்வாய் மற்றும் வெள்ளிக்கிழமைகளில் இரண்டு விடுமுறை சிறப்பு ரயில்களை இயக்க ரயில்வே அதிகாரிகள் முடிவு செய்துள்ளனர்.

காரணங்கள்:

(I) A நகரத்திலிருந்து C நகரத்திற்கு செல்லும் விமானங்கள் முழுவதுமாக முன்பதிவு செய்யப்பட்டுள்ளன. மேலும் ஆகஸ்ட் 2023 முதல், A நகரம் மற்றும் C நகரம் இடையே இயக்கப்படும் விமானங்களின் எண்ணிக்கையை அதிகரிக்க விமான நிறுவனங்கள் திட்டமிட்டுள்ளன.

(II) நகரம் B யிலிருந்து புலம்பெயர்ந்து நகரம் A இல் பணிபுரியும் பலர், திருவிழாக்களுக்காக அக்டோபர் முதல் ஜனவரி வரையில் ரயில்களில் நகரம் B க்கு திரும்பிச் செல்கிறார்கள். தற்போதுள்ள ரயில்களால் பயணிகளின் அதிகரிப்பை சமாளிக்க முடியாது.

Ans ✗ 1. I மட்டுமே ஒரு சாத்தியமான காரணம்.

✗ 2. I அல்லது II ஆகிய எதுவும் ஒரு சாத்தியமான காரணம் அல்ல.

✗ 3. I மற்றும் II ஆகிய இரண்டும் சாத்தியமான காரணங்கள்.

✓ 4. II மட்டுமே ஒரு சாத்தியமான காரணம்.

Q.25 ஒவ்வொன்றும் 250 m நீளம் கொண்ட இரண்டு ரயில்கள், முறையே 90 km/h மற்றும் 60 km/h வேகத்தில், இணையான தண்டவாளங்களில் எதிரெதிர் திசைகளில் பயணிக்கின்றன. எத்தனை வினாடிகளில் அவை ஒன்றையொன்று முழுமையாகக் கடக்கும்?

- Ans
- ✓ 1. 12 நொடிகள்
 - ✗ 2. 10 நொடிகள்
 - ✗ 3. 18 நொடிகள்
 - ✗ 4. 15 நொடிகள்

Q.26 பின்வரும் எண்-ஜோடிகளில், முதல் எண்ணின் மீது சில கணித செயல்பாடுகளைப் செயல்படுத்துவதன் மூலம் இரண்டாவது எண்ணானது பெறப்படுகிறது.

பின்வருவனவற்றில் X மற்றும் Y க்கு பதிலாக எந்த எண்களை மாற்றினால், :: இன் இடது பக்கத்தில் உள்ள இரண்டு எண்கள் பின்பற்றும் அமைப்பும், :: இன் வலது பக்கத்தில் உள்ள எண்கள் பின்பற்றும் அமைப்பும் ஒரே மாதிரியாக இருக்கும்?

$$X : 125 :: 13 : Y$$

- Ans
- ✗ 1. $X = 12, Y = 173$
 - ✗ 2. $X = 12, Y = 169$
 - ✗ 3. $X = 11, Y = 169$
 - ✓ 4. $X = 11, Y = 173$

Q.27 பின்வருவனவற்றில் எது ஒரு படித்தான கலவையின் உதாரணம் அல்ல?

- Ans
- ✓ 1. தண்ணீரில் எண்ணெய்
 - ✗ 2. தண்ணீரில் கரைந்த சர்க்கரை
 - ✗ 3. தண்ணீரில் காப்பர் சல்பேட் தூள்
 - ✗ 4. தண்ணீரில் கரைந்த உப்பு

Q.28 15 ஜனவரி 2024 அன்று NITI ஆயோக்கால் (NITI Aayog) '____' என்ற தலைப்பில் விவாதக் கட்டுரை வெளியிடப்பட்டது.

- Ans
- ✓ 1. 2005-06 முதல் இந்தியாவில் பல பரிமாண வறுமைக் குறியீடு
 - ✗ 2. இந்தியாவில் வறுமை குறைப்பு
 - ✗ 3. பொருளாதார வளர்ச்சி மற்றும் வறுமைக் குறைப்பு
 - ✗ 4. வறுமை ஒழிப்புக்கான அரசாங்க முயற்சிகள்

Q.29 ஒரு அலகு நேரத்தில் மோட்டார் செய்யும் வேலை _____ எனப்படும்.

- Ans
- ✗ 1. உந்தம்
 - ✗ 2. ஆற்றல்
 - ✓ 3. திறன்
 - ✗ 4. முடுக்கம்

Q.30 இரண்டு இணைகோடுகளை வெட்டும் ஒரு குறுக்குவெட்டின் அதே பக்கத்தில் உள்ள இரண்டு உட்கோணங்கள் 2 : 3 என்ற விகிதத்தில் இருந்தால், அந்த இரண்டு கோணங்களில் எது பெரியது?

- Ans
- ☒ 1. 136°
 - ☒ 2. 120°
 - ☒ 3. 54°
 - ☒ 4. 108°

Q.31 பின்வரும் அறிக்கைகளில் எது தவறானது ஆகும்?

- Ans
- ☒ 1. பொருளின் துகள்களுக்கு இடையே உள்ள ஈர்ப்பு விசையின் வலிமையானது, எந்த வகையான பொருளாக இருந்தாலும், நிலையானதாகும்.
 - ☒ 2. பொருளின் துகள்களுக்கு இடையே செயல்படும் விசையானது, அவற்றை ஒன்றிணைத்து வைத்திருக்கிறது.
 - ☒ 3. பொருளின் துகள்கள் அவற்றிற்கிடையே செயல்படும் விசையைப் பெற்றுள்ளன.
 - ☒ 4. பொருளின் துகள்களுக்கு இடையே உள்ள ஈர்ப்பு விசையின் வலிமையானது, ஒவ்வொருவகைப் பொருளும் மற்றொன்றிலிருந்து மாறுபடுகிறது.

Q.32 ஆங்கில அகரவரிசையின் அடிப்படையில், பின்வரும் நான்கு எழுத்து-தொகுப்பு ஜோடிகளில் மூன்று, ஒரு குறிப்பிட்ட வழிமுறையில் ஒரே மாதிரியாக உள்ளன, இதனால் அவை ஒரு குழுவை உருவாக்குகிறது. எனில் அந்தக் குழுவில் சேராத ஜோடி எது?

(குறிப்பு: வித்தியாசமான ஒன்றானது, மெய்யெழுத்துக்கள்/உயிரெழுத்துகளின் எண்ணிக்கை அல்லது எழுத்துத் தொகுப்பில் அவற்றின் நிலை ஆகியவற்றின் அடிப்படையில் இல்லை)

- Ans
- ☒ 1. QL – OJ
 - ☒ 2. WR – UP
 - ☒ 3. ID – GB
 - ☒ 4. MS – LH

Q.33 ஏற்கனவே 1968 இல் பத்மஸ்ரீ விருது பெற்ற எந்த இந்திய பரதநாட்டிய நடனக் கலைஞர் மற்றும் திரைப்பட நட்சத்திரம், சிவில் பதவிபட்டமளிப்பு விழாவின் போது 2024 இல் பத்ம பூஷன் விருது பெற்றார்?

- Ans
- ☒ 1. ஹேமா மாலினி
 - ☒ 2. வைஜெயந்திமாலா
 - ☒ 3. ருக்மிணி தேவி அருண்டேல்
 - ☒ 4. ஷோபனா

Q.34 நாம் பேருந்தில் பயணிக்கும் போது, திடீரென பேருந்து நிறுத்தப்படும்போது நாம் முன்னோக்கிச் செல்கிறோம். இதற்கு காரணம் _____ ஆகும்.

Ans ☒ 1. புவியீர்ப்பு விசையினால் ஏற்படும் முடுக்கம்

☒ 2. நம் உடலின் நிலைமம்

☒ 3. நியூட்டனின் இரண்டாவது இயக்க விதி

☒ 4. நியூட்டனின் மூன்றாவது இயக்க விதி

Q.35 TYPING என்ற வார்த்தையின் ஒவ்வொரு எழுத்தும், ஆங்கில அகரவரிசையில் அதற்கு முன்பு உடனடியாக வரும் எழுத்தாக மாற்றப்பட்டு மற்றும் இவ்வாறு உருவாக்கப்பட்ட புதிய எழுத்துக்களின் குழுவானது, ஆங்கில அகரவரிசையில் மறுசீரமைக்கப்பட்டால், புதிய மறுசீரமைக்கப்பட்ட எழுத்துக்களின் குழுவில், வலதுபுறத்தில் முதலாவதாக எந்த எழுத்து உள்ளது?

Ans ☒ 1. M

☒ 2. S

☒ 3. O

☒ 4. X

Q.36 ஒளி ஊடுருவாத ஒரு பொருளின் மீது ஒளி படும் போது, அதன் வடிவியல் நிழலை நாம் காண்கிறோம். இது _____ இன் காரணமாகும்.

Ans ☒ 1. ஒரு நேர் கோட்டில் பயணிக்கும் ஒளி

☒ 2. ஒளியின் பிரதிபலிப்பு

☒ 3. ஒளியின் விளிம்புவளைவு

☒ 4. ஒரு பொருளின் ஒளிப்பிரிகை

Q.37 கொடுக்கப்பட்ட எண் மற்றும் குறியீடுகளின் தொடரைப் பார்த்து, பின்வரும் கேள்விக்கு பதிலளிக்கவும். இடமிருந்து வலமாக மட்டுமே எண்ண வேண்டும்.

(இடது) 7 3 @ 1 7 3 ^ 4 & 3 Ω 9 # * £ 5 (வலது)

இதுபோன்ற எத்தனை குறியீடுகள் உள்ளன, அவை ஒவ்வொன்றிற்கும் உடனடி முன்பாக ஒரு எண் உள்ளது மற்றும் உடனடி பின்பாகவும் ஒரு எண் உள்ளது?

Ans ☒ 1. ஐந்துக்கும் மேலான

☒ 2. நான்கு

☒ 3. ஐந்து

☒ 4. மூன்று

Q.38 தவறான அறிக்கையைத் தேர்ந்தெடுக்கவும்.

Ans ✓ 1. பெண் கேமீட் (gamete) சூலகமடியில் உள்ளது.

✗ 2. கருத்தரித்தல் நமக்கு சைகோட்டை அளிக்கிறது.

✗ 3.

ஆண் விந்து உயிரணுக்கள் மகரந்தத் தூளிலிருந்து உற்பத்தி செய்யப்படுகின்றன.

✗ 4.

ஆண் கேமீட் (gamete) மற்றும் பெண் கேமீட் இணைவது கருத்தரித்தல் என்று அழைக்கப்படுகிறது.

Q.39 மே 2024 இல், DRDO ஆனது _____ பாதுகாப்பு தொழில்நுட்ப திட்டங்களை IIT புவனேஸ்வரிடம் ஒப்படைத்தது.

Ans ✓ 1. ஒன்பது

✗ 2. பதினொன்று

✗ 3. ஏழு

✗ 4. ஐந்து

Q.40 'சுமக் தயக்டக்' (லெப்சா பாரம்பரிய தொப்பி) உருவாக்குவதில் தனது திறமைக்காகப் புகழ்பெற்ற எந்த சிக்கிம் கைவினைஞர் ஆனவர் கலை மற்றும் கலாச்சார பாரம்பரியத்திற்கான பங்களிப்புகளுக்காக 2024 இல் பத்மஸ்ரீ விருது பெற்றார்?

Ans ✗ 1. தாஷி நம்கியால்

✗ 2. சோனம் ஷெரிங்

✗ 3. கர்மா வாங்சுக்

✓ 4. ஜோர்டான் லெப்சா

Q.41 ஆங்கில அகரவரிசையின் அடிப்படையில் கொடுக்கப்பட்ட தொடரில் உள்ள கேள்விக்குறியின் (?) இடத்தில் பின்வரும் விருப்பத்தேர்வுகளில் எது வரும்?

YUS, WSQ, UQO, SOM, ?

Ans ✗ 1. QKL

✗ 2. RML

✓ 3. QMK

✗ 4. QOL

Q.42 10 m நீளமுள்ள ஒரு செப்புக்கம்பியின் மின்தடை R ohm ஆகும். எனில், 5 மீட்டர் நீளமுள்ள செப்புக்கம்பியின் மின்தடை என்ன?

Ans ✗ 1. 5R ohm

✗ 2. R ohm

✓ 3. 0.5R ohm

✗ 4. 2R ohm

Q.43 2023 ஆம் ஆண்டில், அனைத்து இ-வே பில் மற்றும் இ-இன்வாய்ஸ் அமைப்புகளிலும் இரு விதமான சான்று உறுதியை (two-factor authentication) செயல்படுத்திய நிறுவனம் எது?

- Ans
- ✗ 1. CBBT
 - ✗ 2. SEBI
 - ✓ 3. CBIC
 - ✗ 4. RBI

Q.44 கொடுக்கப்பட்ட தொடரை, தர்க்கரீதியாக முழுமையாக்குவதற்கு கேள்விக்குறிக்கு (?)பதிலாக பின்வரும் விருப்பத்தேர்வுகளில் எது வர வேண்டும்?

361, 348, 335, 322, 309,?

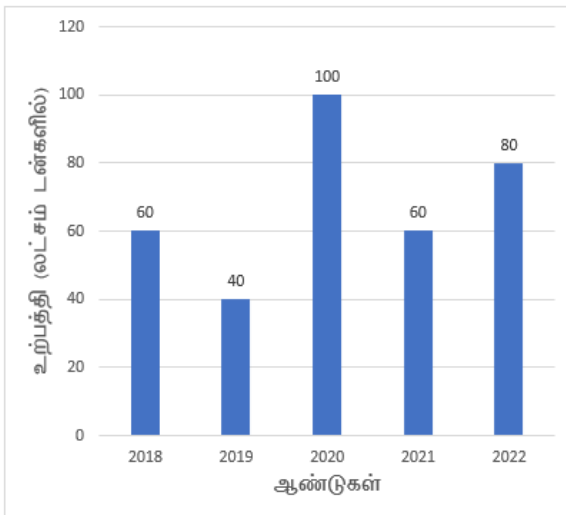
- Ans
- ✓ 1. 296
 - ✗ 2. 300
 - ✗ 3. 290
 - ✗ 4. 294

Q.45 தவறான ஜோடியைத் தேர்ந்தெடுக்கவும்.

- Ans
- ✗ 1. முதன்மை நுகர்வோர் - இரண்டாவது உணவூட்ட நிலை
 - ✗ 2. தன்னூட்ட உயிரிகள் - முதல் உணவூட்ட நிலை
 - ✗ 3. சிறிய மாமிச உண்ணிகள் - மூன்றாவது உணவூட்ட நிலை
 - ✓ 4. பாக்டீரியா - நான்காவது உணவூட்ட நிலை

Q.46 பின்வரும் வரைபடத்தைப் படித்து, கொடுக்கப்பட்ட கேள்விக்கு பதிலளிக்கவும்.

கொடுக்கப்பட்ட பார் வரைபடமானது 2018 முதல் 2022 வரையிலான காலகட்டத்தில் ஒரு மாநிலத்தில் அரிசியின் வருடாந்திர உற்பத்தியைக் காட்டுகிறது.



ஒட்டுமொத்தமாக 2020, 2021 மற்றும் 2022 ஆகிய ஆண்டுகளில் அரிசியின் மொத்த உற்பத்தி (லட்சம் டன்களில்) எவ்வளவு?

- Ans
- ✗ 1. 270
 - ✓ 2. 240
 - ✗ 3. 260
 - ✗ 4. 250

Q.47 2024 ஆம் ஆண்டில் அறிவியல் மற்றும் பொறியியல் துறையில் ராம் சேத் சவுத்ரிக்கு எந்த விருது வழங்கப்பட்டுள்ளது?

- Ans
- ☒ 1. பத்ம பூஷன்
 - ☒ 2. பாரத ரத்னா
 - ☒ 3. பத்ம ஸ்ரீ
 - ☒ 4. பத்ம விபூஷன்

Q.48 ஒரு குறிப்பிட்ட குறியீட்டு மொழியில்,
A + B என்றால் 'A என்பது B இன் தாய்',
A - B என்றால் 'A என்பது B இன் சகோதரர்',
A × B என்றால் 'A என்பது B இன் மனைவி',
A ÷ B என்றால் 'A என்பது B இன் தந்தை',
மற்றும் A # B என்றால் 'A என்பது B இன் மகள்'.
'Q # R × P ÷ K × T' எனில் T என்பவர் R என்பவருக்கு என்ன உறவு முறையாவார்?

- Ans
- ☒ 1. மகனின் மகள்
 - ☒ 2. மகனின் மனைவி
 - ☒ 3. மனைவியின் தாய்
 - ☒ 4. மகளின் மகள்

Q.49 ஆங்கில அகரவரிசையின் அடிப்படையில் கொடுக்கப்பட்ட தொடரில் உள்ள கேள்விக்குறியின் (?) இடத்தில் பின்வரும் விருப்பத்தேர்வுகளில் எது வரும்?

BEG, CFH, DGI, EHJ, ?

- Ans
- ☒ 1. FIK
 - ☒ 2. FGL
 - ☒ 3. FKL
 - ☒ 4. FGK

Q.50 3 km/h வேகத்தில் நிலையான நீரில் படகை ஓட்டிச் செல்லும் ஒரு படகோட்டி, 50 km தூரம் நீரோட்டத்தின் திசையில் ஓட்டிச் செல்லும் போது எடுக்கும் தூரத்தின் இரட்டிப்பு நேரம் 50 km நீரோட்டத்தின் எதிர் திசையில் செல்வதற்கு எடுக்கிறார். எனில் நீரோட்டத்தின் திசையில் படகோட்டியின் வேகம் என்ன?

- Ans
- ☒ 1. $\frac{7}{2}$ km/h
 - ☒ 2. 4 km/h
 - ☒ 3. $\frac{10}{3}$ km/h
 - ☒ 4. $\frac{9}{2}$ km/h

Q.51 பின்வருபவர்களில் 2024 செஸ் ஒலிம்பியாட்டில் இந்திய செஸ் அணியின் விளையாடாத கேப்டன் மற்றும் பயிற்சியாளர் யார்?

- Ans
- ✓ 1. ஸ்ரீநாத் நாராயணன்
 - ✗ 2. பெண்ட்யாலா ஹரிகிருஷ்ணா
 - ✗ 3. அபிஜித் கங்குலி
 - ✗ 4. விக்ரம் சிங்

Q.52 ஒரு செவ்வகத்தின் பக்கங்கள் 8 : 10 என்ற விகிதத்தில் உள்ளன மற்றும் அதன் சுற்றளவு 90 cm ஆகும். இந்த செவ்வகத்தின் பரப்பளவு என்ன?

- Ans
- ✗ 1. 550 cm^2
 - ✓ 2. 500 cm^2
 - ✗ 3. 520 cm^2
 - ✗ 4. 450 cm^2

Q.53 ஒரு பொருளின் மீதான வரி 20% குறைக்கப்படுகிறது மற்றும் அதன் நுகர்வானது 15% அதிகரிக்கின்றது. எனில் வரி வருவாயில் அதன் மீதான விளைவு என்ன?

- Ans
- ✗ 1. எந்த மாற்றமும் இல்லை
 - ✗ 2. இது 8% அதிகரிக்கிறது
 - ✗ 3. இது 10% அதிகரிக்கிறது
 - ✓ 4. இது 8% குறைகிறது

Q.54 பின்வரும் எண்களில் எது 4 ஆல் வகுபடும்?

- Ans
- ✗ 1. 7864534
 - ✗ 2. 9876342
 - ✗ 3. 9876754
 - ✓ 4. 8978624

Q.55 84, 105 மற்றும் 140 இன் மீ.பொ.ம. (LCM) என்ன?

- Ans
- ✗ 1. 240
 - ✗ 2. 360
 - ✓ 3. 420
 - ✗ 4. 120

Q.56 கீழ்க்கண்ட சாதனங்களில் எது காந்தபுலத்தில் மின்னோட்டம் பாயும் கடத்தியைப் பயன்படுத்தாது?

- Ans
- ✗ 1. மின்சார மோட்டார்
 - ✓ 2. மின்சார ஹீட்டர்
 - ✗ 3. மின்சார விசிறி
 - ✗ 4. மின்சார ஜெனரேட்டர்

Q.57 ஒரு நாளைக்கு 15 மணி நேரம் வேலை செய்யும் 25 பேர் 5 யூனிட் வேலைகளை 8 நாட்களில் முடிக்க முடியும். எனில், 12 பேர் ஒரு நாளைக்கு 20 மணி நேரம் வேலை செய்து, 10 யூனிட் வேலைகளை முடிக்க எத்தனை நாட்கள் தேவைப்படும்?

- Ans
- ☒ 1. 22 நாட்கள்
 - ☒ 2. 24 நாட்கள்
 - ☒ 3. 20 நாட்கள்
 - ☒ 4. 25 நாட்கள்

Q.58 பின் வரும் எந்த சுற்று சூழல் காரணிகள் சில ஊர்வனவற்றின் பாலினத்தை தீர்மானிக்கிறது?

- Ans
- ☒ 1. அழுத்தம்
 - ☒ 2. வெப்ப நிலை
 - ☒ 3. தண்ணீர்
 - ☒ 4. மண்

Q.59 17 செப்டம்பர் 2024 அன்று போதைப்பொருள் கட்டுப்பாட்டுப் பணியகத்தின்(Narcotics Control Bureau) தலைமை இயக்குநராக நியமிக்கப்பட்டவர் யார்?

- Ans
- ☒ 1. அனுராக் கர்க்
 - ☒ 2. ராகேஷ் அஸ்தானா
 - ☒ 3. சஞ்சய் அரோரா
 - ☒ 4. சாமந்த் கோயல்

Q.60 கடந்த ஆண்டு, ஒரு பள்ளியில் 610 சிறுவர்கள் இருந்தனர். இந்த ஆண்டு அந்த எண்ணிக்கை 20% குறைந்துள்ளது. இந்த ஆண்டு பள்ளியில் உள்ள மொத்த சிறுவர்களின் எண்ணிக்கையின் 175% சிறுமிகள் என்றால் பள்ளியில் எத்தனை சிறுமிகள் இருக்கிறார்கள்?

- Ans
- ☒ 1. 854
 - ☒ 2. 848
 - ☒ 3. 798
 - ☒ 4. 782

Q.61 பணிப்பங்கீடு (செல் செய்யும் செயல்பாடுகள் - டிவிஷன் ஆஃப் லேபர்)_____ நிகழ்கிறது.

- Ans
- ☒ 1. ஒரு செல் உயிரி அல்லது பலசெல் உயிரினங்கள் ஆகிய எதிலும் இல்லை
 - ☒ 2. பலசெல் உயிரினங்களில் மட்டும்
 - ☒ 3. ஒரு செல் உயிரினங்களில் மட்டும்
 - ☒ 4. ஒரு செல் உயிரி மற்றும் பலசெல் உயிரினங்கள் ஆகிய இரண்டிலும்

Q.62 ஒரு குறிப்பிட்ட குறியீட்டு மொழியில், 'ARGOT' என்பது '12497' எனவும், 'GRAFT' என்பது '29743' எனவும் குறியிடப்பட்டுள்ளது. எனில் கொடுக்கப்பட்ட அந்தக் குறியீட்டு மொழியில் 'F' க்கான குறியீடு என்ன?

- Ans ☒ 1. 7
☒ 2. 4
☒ 3. 3
☒ 4. 2

Q.63 உலர்ந்த நீர்த்த சுண்ணாம்பின் மீது குளோரின் வினைபுரிவதால் பின்வருவனவற்றில் எது உருவாகிறது?

- Ans ☒ 1. ஹைட்ரோகுளோரிக் அமிலம்
☒ 2. கால்சியம் குளோரைட்
☒ 3. கால்சியம் ஆக்சைடு
☒ 4. பிளீச்சிங் பவுடர்

Q.64 MASTER என்ற வார்த்தையில் உள்ள ஒவ்வொரு மெய்யெழுத்தும் ஆங்கில அகர வரிசைப்படி அதற்கு முன்பு உடனடியாக வரும் எழுத்தாக மாற்றப்பட்டு, மற்றும் ஒவ்வொரு உயிரெழுத்தும் ஆங்கில அகர வரிசைப்படி அதற்கு பின்பு உடனடியாக வரும் எழுத்தாக மாற்றப்பட்டுள்ளது. இவ்வாறு உருவாக்கப்பட்ட புதிய எழுத்துக்களின் குழுவில் எத்தனை மெய் எழுத்துக்கள் உள்ளன?

- Ans ☒ 1. ஆறு
☒ 2. ஐந்து
☒ 3. மூன்று
☒ 4. நான்கு

Q.65 பின்வரும் எண்-ஜோடிகளில், முதல் எண்ணில் சில கணித செயல்பாடுகளைச் செயல்படுத்துவதன் மூலம் இரண்டாவது எண் பெறப்படுகிறது. இதில், :: இன் இடது பக்கத்தில் உள்ள இரண்டு எண்கள் பின்பற்றும் அதே அமைப்பை :: இன் வலது பக்கத்தில் உள்ள இரண்டு எண்கள் பின்பற்றும் வகையில், பின்வருவனவற்றுள், எந்த எண்கள் X மற்றும் Y க்குப் பதிலாக வர வேண்டும்?

(குறிப்பு: எண்களை அதன் கூறு (constituent) இலக்கங்களாகப் பிரிக்காமல், முழு எண்களில் செயல்பாடுகள் செய்யப்பட வேண்டும். எ.கா. 13. 13 -இல் கூட்டுதல் / கழித்தல் / பெருக்குதல் போன்ற செயல்பாடுகளைச் செய்யலாம். 13 ஐ 1 மற்றும் 3 ஆக பிரித்த பின்னர் 1 மற்றும் 3 இல் கணித செயல்பாடுகளைச் செய்வது அனுமதிக்கப்படாது)

$$X : 128 :: 146 : Y$$

- Ans ☒ 1. $X = 156, Y = 86$
☒ 2. $X = 174, Y = 84$
☒ 3. $X = 164, Y = 92$
☒ 4. $X = 168, Y = 98$

Q.66 பூமியின் புவியீர்ப்பு விசையினால் ஒரு பாரிய (massive) பொருளின் தடையற்ற வீழ்ச்சியின் போது என்ன நடக்கும்?

- Ans
- ✗ 1. பாரிய அப்பொருளின் திசைவேகம் குறைகிறது.
 - ✗ 2. அப்பொருளின் நிறை அதிகரிக்கிறது.
 - ✗ 3. அப்பொருளின் நிறை குறைகிறது.
 - ✓ 4. பாரிய அப்பொருளின் திசைவேகம் அதிகரிக்கிறது.

Q.67 பின்வருவனவற்றுள் எது ஆல்கீன்களின் பொதுவான வாய்ப்பாடு ஆகும்?

- Ans
- ✗ 1. $C_{2n}H_{2n}$
 - ✗ 2. $C_nH_{2n} + 1$
 - ✗ 3. C_nH_n
 - ✓ 4. C_nH_{2n}

Q.68 ஒரு விற்பனையின் மீதான 40% மற்றும் 60% என்ற இரண்டு தொடர்ச்சியான தள்ளுபடிகள் என்பது _____ என்ற ஒரு ஒற்றை தள்ளுபடிக்கு சமமாகும்.

- Ans
- ✗ 1. 66%
 - ✗ 2. 70%
 - ✓ 3. 76%
 - ✗ 4. 80%

Q.69 பின்வரும் நிலையான வளர்ச்சி இலக்குகளில் எது, அதன் மதிப்பெண் 50க்குக் குறைவாக இருப்பதால், இலக்கு நிர்ணயிக்கப்பட்ட முயற்சிகள் இன்னும் தேவை என முன்னிலைப்படுத்தப்படுகிறது?

- Ans
- ✓ 1. இலக்கு 5 (பாலின சமத்துவம்)
 - ✗ 2. இலக்கு 8 (கண்ணியமான வேலை மற்றும் பொருளாதார வளர்ச்சி)
 - ✗ 3. இலக்கு 15 (சுற்றுச்சூழல் பாதுகாப்பு)
 - ✗ 4. இலக்கு 13 (பருவநிலை நடவடிக்கை)

Q.70 கொடுக்கப்பட்ட அறிக்கைகள் மற்றும் முடிவுகளை கவனமாக படிக்கவும். பொதுவாக அறியப்பட்ட உண்மைகளிலிருந்து மாறுபட்டதாகத் தோன்றினாலும் கொடுக்கப்பட்ட அறிக்கைகள் உண்மையாக இருப்பதாக கருத வேண்டும். கொடுக்கப்பட்ட அறிக்கைகளிலிருந்து எந்த முடிவு/கள் தர்க்கரீதியாக பின்பற்ற வேண்டும் என்பதை நீங்கள் தீர்மானிக்க வேண்டும்.

அறிக்கை:

அனைத்து எலுமிச்சைகளும் உருளைக்கிழங்குகள் ஆகும்.

சில எலுமிச்சைகள், பப்பாளிகள் ஆகும்.

முடிவுகள்:

(I) சில உருளைக்கிழங்குகள், பப்பாளிகள் ஆகும்.

(II) அனைத்து பப்பாளிகளும் உருளைக்கிழங்குகள் ஆகும்.

Ans ☒ 1. முடிவு I அல்லது II ஆகிய இரண்டுமே பின்பற்றப்படவில்லை

☒ 2. முடிவு II மட்டுமே பின்பற்றப்படுகின்றது

☒ 3. முடிவு I மட்டுமே பின்பற்றப்படுகின்றது

☒ 4. முடிவு I மற்றும் II ஆகிய இரண்டுமே பின்பற்றுகின்றன

Q.71 $4 \sin^2 \theta = 1$ மற்றும் θ என்பது ஒரு குறுங்கோணம் எனில், $\cos^2 \theta + \tan^2 \theta$ இன் மதிப்பு _____ ஆகும்.

Ans ☒ 1. 1

☒ 2. $\frac{1}{4}$

☒ 3. $\frac{5}{13}$

☒ 4. $\frac{13}{12}$

Q.72 L, P, R, V, X, Y, மற்றும் Z ஆகியவர்கள் ஒரு வட்ட மேசையைச் சுற்றி அதன் மையத்தை நோக்கி அமர்ந்துள்ளனர். V இன் வலதுபுறத்தில் இருந்து எண்ணும் போது, V மற்றும் L க்கு இடையில் ஒரு நபர் மட்டுமே அமர்ந்துள்ளார். L மற்றும் X க்கு இடையே ஒருவர் மட்டுமே அமர்ந்துள்ளார். V மற்றும் Z க்கு இடையில் ஒருவர் மட்டுமே அமர்ந்துள்ளார். R மற்றும் X க்கு இடையே இரண்டு நபர்கள் மட்டுமே அமர்ந்துள்ளனர். P மற்றும் Z க்கு இடையில் ஒருவர் மட்டுமே அமர்ந்துள்ளார். எனில், Y இன் உடனடி வலது மற்றும் இடப்புறத்தில் முறையே அமர்ந்திருப்பவர் யார்?

Ans ☒ 1. V மற்றும் X

☒ 2. Z மற்றும் V

☒ 3. X மற்றும் Z

☒ 4. V மற்றும் Z

Q.73 ஆங்கில அகரவரிசையின் அடிப்படையில், பின்வரும் நான்கு எழுத்து-தொகுப்பு ஜோடிகளில் மூன்று, ஒரு குறிப்பிட்ட வழிமுறையில் ஒரே மாதிரியாக உள்ளன, இதனால் அவை ஒரு குழுவை உருவாக்குகிறது. எனில் அந்தக் குழுவில் சேராத ஜோடி எது?

(குறிப்பு: வித்தியாசமான ஒன்றானது, மெய்யெழுத்துக்கள்/உயிரெழுத்துகளின் எண்ணிக்கை அல்லது எழுத்துத் தொகுப்பில் அவற்றின் நிலை ஆகியவற்றின் அடிப்படையில் இல்லை)

- Ans
- ✓ 1. AD - CG
 - ✗ 2. KP - MR
 - ✗ 3. QV - SX
 - ✗ 4. BG - DI

Q.74 ஒரு தொகையானது கூட்டு வட்டியில், வருடாந்திர கூட்டுவட்டி முறையில், 12 ஆண்டுகளில் அதன் இரட்டிப்பாகிறது என்றால், எத்தனை ஆண்டுகளில் அத்தொகை அதன் எட்டு மடங்காக அதிகரிக்கும்?

- Ans
- ✗ 1. 48
 - ✗ 2. 12
 - ✗ 3. 24
 - ✓ 4. 36

Q.75 பின்வரும் எந்த தாவர ஹார்மோன்களானது அதிக செறிவில் பழங்கள் மற்றும் விதைகளில் உள்ளது?

- Ans
- ✗ 1. ஆக்சின்கள்(Auxin)
 - ✓ 2. சைட்டோகைனின்(Cytokinin)
 - ✗ 3. அப்சிசிக் அமிலம்(Absciscic acid)
 - ✗ 4. கிபெரெலின்ஸ்(Gibberellin)

2024/12/02-17:32:41



Test Center Name	iON Digital Zone iDZ Kannur
Test Date	25/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 ദ്രവ്യത്തിന്റെ കണികകൾക്കിടയിൽ മതിയായ വിടവുണ്ടെന്ന് കാണിക്കുന്ന ഉദാഹരണം ഏത്?

Ans ☒ 1. ഇരുമ്പ് ആണി മുറിക്കുന്നത്

☒ 2. ചന്ദനത്തിരി കത്തിക്കുന്നത്

☒ 3. വെള്ളം തിളക്കുന്നത്

☒ 4. പൊട്ടാസ്യം പെർമാംഗനേറ്റ് വെള്ളത്തിൽ തുല്യമായി വ്യാപിക്കുന്നത്

Q.2 2024-ലെ കേന്ദ്ര ബജറ്റിനെക്കുറിച്ചുള്ള പ്രസംഗത്തിൽ, ധനമന്ത്രി വരാനിരിക്കുന്ന വർഷത്തേക്കുള്ള ശ്രദ്ധിക്കുന്ന മേഖലകൾ എടുത്തുകാണിച്ചു. ഊന്നൽ നൽകിയ മേഖലകൾ തന്നിരിക്കുന്നവയിൽ ഏത്?

Ans ☒ 1. കൃഷി, പ്രതിരോധം, ബഹിരാകാശം, ആരോഗ്യ സംരക്ഷണം

☒ 2. തൊഴിൽ, നൈപുണ്യം, MSME-കൾ, മധ്യവർഗം

☒ 3. അടിസ്ഥാന സൗകര്യങ്ങൾ, സാങ്കേതികവിദ്യ, വിനോദസഞ്ചാരം, പരിസ്ഥിതി

☒ 4. വിദ്യാഭ്യാസം, കായികം, സാംസ്കാരികം, വിനോദം

Q.3 6cm വ്യാസമുള്ള ഒരു ഘന ലോഹ ബോൾ സമീരിന്റെ പക്കൽ ഉണ്ട്. അവൻ അത് ഉരുക്കുകയും ആ പദാർഥം ഉപയോഗിച്ച് ഒരു ഘന സിലിണ്ടർ നിർമ്മിക്കുകയും ചെയ്യുന്നു. സിലിണ്ടറിന്റെ പാദവ്യാസം പന്തിന്റെ വ്യാസത്തിന് തുല്യമാണെങ്കിൽ, സിലിണ്ടറിന്റെ ഉയരം എത്രയായിരിക്കും?

Ans ☒ 1. 6 cm

☒ 2. 4 cm

☒ 3. 4.5 cm

☒ 4. 8 cm

Q.4 തന്നിട്ടുള്ള പ്രസ്താവനകളും നിഗമനങ്ങളും ശ്രദ്ധയോടെ വായിക്കുക. തന്നിട്ടുള്ള പ്രസ്താവനകൾ പൊതുവെ അറിയപ്പെടുന്ന വസ്തുതകളിൽ നിന്ന് വ്യത്യസ്തമാണെന്ന് തോന്നിയാലും അവ ശരിയാണെന്ന് പരിഗണിച്ച്, പ്രസ്താവനകളെ യുക്തിപരമായി പിന്തുടരുന്ന നിഗമനം(ങ്ങൾ) ഏതാണെന്ന് തീരുമാനിക്കുക.

പ്രസ്താവനകൾ:

ചില മൈക്കുകൾ സ്പീക്കറുകളാണ്.

ഒരു സ്പീക്കറും പിയാനോ അല്ല.

നിഗമനങ്ങൾ:

- (I) ഒരു മൈക്കും പിയാനോ അല്ല.
- (II) ചില സ്പീക്കറുകൾ മൈക്കുകളാണ്.

- Ans
- ✗ 1. നിഗമനം I മാത്രം പിന്തുടരുന്നു.
 - ✓ 2. നിഗമനം II മാത്രം പിന്തുടരുന്നു.
 - ✗ 3. I, II എന്നീ രണ്ടു നിഗമനങ്ങളും പിന്തുടരുന്നു.
 - ✗ 4. I, II എന്നിവയിൽ ഒരു നിഗമനവും പിന്തുടരുന്നില്ല.

Q.5 'അമർ അക്ബർ അന്തോണി', 'ബോബി' തുടങ്ങിയ ചിത്രങ്ങളിലെ മികവിന് പേരുകേട്ട, 2024 റിപ്പബ്ലിക് ദിനത്തിൽ പത്മഭൂഷൺ നൽകി ആദരിച്ച ഇതിഹാസ സംഗീതജ്ഞൻ ആര്?

- Ans
- ✓ 1. പുാരേലാൽ ശർമ്മ
 - ✗ 2. ലക്ഷ്മികാന്ത് ശാന്താനാഥ് കുടൽക്കർ
 - ✗ 3. RD ബർമൻ
 - ✗ 4. ഇളയരാജ

Q.6 തന്നിരിക്കുന്ന പട്ടിക മനസ്സിലാക്കി തുടർന്നുള്ള ചോദ്യങ്ങൾക്ക് ഉത്തരം നൽകുക.

ഒരു ക്രിക്കറ്റ് മത്സരത്തിന് വെള്ളി, ശനി ദിവസങ്ങളിൽ റൊക്കം പണത്തിനും ഓൺലൈൻ മോഡിലും വിറ്റ ടിക്കറ്റുകളുടെ എണ്ണമാണ് പട്ടിക കാണിക്കുന്നത്.

ദിവസങ്ങൾ	വീറ്റ ടിക്കറ്റുകളുടെ എണ്ണം (പണം)	വീറ്റ ടിക്കറ്റുകളുടെ എണ്ണം (ഓൺലൈൻ)
വെള്ളി	725	525
ശനി	1000	3000

റൊക്കം പണത്തിനും ഓൺലൈനായും വെള്ളിയാഴ്ച ആകെ എത്ര ടിക്കറ്റുകൾ വിറ്റു?

- Ans
- ✗ 1. 1050
 - ✓ 2. 1250
 - ✗ 3. 1350
 - ✗ 4. 1150

Q.7 2023-ൽ, ഏറ്റവും ഉയർന്ന PM2.5 ലെവൽ രേഖപ്പെടുത്തിയതിലൂടെ ആഗോളതലത്തിൽ ഏറ്റവും മലിനമായ മഹാനഗരപ്രദേശമായ ഇന്ത്യൻ നഗരം ഏത്?

- Ans
- ☐ 1. ഗുവാഹത്തി
 - ☒ 2. ബെഗുസാരായി
 - ☐ 3. ന്യൂ ഡെൽഹി
 - ☐ 4. ഗ്രേറ്റർ നോയിഡ

Q.8 ഒരു ജീവിയുടെ എല്ലാ സ്വഭാവസവിശേഷതയെയും സ്വാധീനിക്കുന്നത് തന്നിരിക്കുന്നവയിൽ ഏത്?

- Ans
- ☐ 1. മാതൃ DNA മാത്രം
 - ☐ 2. പിതൃ DNA, മാതൃ DNA എന്നിവ രണ്ടും തുല്യമായി
 - ☒ 3. മാതൃ DNA-യേക്കാൾ കൂടുതൽ പിതൃ DNA സ്വാധീനിക്കുന്നു
 - ☐ 4. പിതൃ DNA മാത്രം

Q.9 B, C, D, E, F, G, K എന്നീ ഏഴ് പേർ ഒരു നേർവരിയിൽ വടക്കുദിശയ്ക്ക് അഭിമുഖമായി ഇരിക്കുന്നു. G-യുടെ വലത് വശത്ത് ആരും ഇരിക്കുന്നില്ല. G, E എന്നിവർക്കിടയിൽ മൂന്നു പേർ മാത്രമാണ് ഇരിക്കുന്നത്. E, F എന്നിവർക്കിടയിൽ രണ്ടു പേർ മാത്രമാണ് ഇരിക്കുന്നത്. D-യുടെ ഇടത് വശത്ത് മൂന്നാമത് C ഇരിക്കുന്നു. D-യുടെ തൊട്ട് ഇടത് വശത്ത് K ഇരിക്കുന്നു.

B, F എന്നിവർക്കിടയിൽ എത്ര പേർ ഇരിക്കുന്നു?

- Ans
- ☐ 1. ഒന്ന്
 - ☐ 2. രണ്ട്
 - ☒ 3. മൂന്ന്
 - ☐ 4. നാല്

Q.10 കണ്ണാടികളിലെ പ്രതിബിംബമുണ്ടാകുന്ന പ്രതിഭാസം _____ ആണ്.

- Ans
- ☐ 1. ഡിഫ്രാക്ഷൻ
 - ☐ 2. ഇൻറർഫറൻസ്
 - ☐ 3. അപവർത്തനം
 - ☒ 4. പ്രതിപതനം

Q.11 ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തെ അടിസ്ഥാനമാക്കി, നൽകിയിരിക്കുന്ന ശ്രേണിയിലെ ചോദ്യചിഹ്നത്തിന് (?) പകരം വരേണ്ട ഓപ്ഷൻ തന്നിരിക്കുന്നവയിൽ ഏത്?

CGM, EIO, GKQ, IMS, ?

- Ans
- ☐ 1. KNY
 - ☐ 2. KOV
 - ☒ 3. KOU
 - ☐ 4. KOX

Q.12 ഒരാൾ തന്റെ വരുമാനത്തിന്റെ $\frac{1}{3}$ ഭാഗം 7% സാധാരണ പലിശയിലും $\frac{1}{4}$ ഭാഗം 8% സാധാരണ പലിശയിലും വരുമാനത്തിന്റെ ബാക്കി 10% സാധാരണ പലിശയിലും നിക്ഷേപിക്കുന്നു. ഒരു വർഷത്തിന്റെ അവസാനം ആകെ പലിശ ₹561 ആണെങ്കിൽ, അയാളുടെ തുടക്കത്തിലെ വരുമാനം എത്രയായിരുന്നു?

- Ans
- ☒ 1. ₹7,500
 - ☒ 2. ₹6,600
 - ☒ 3. ₹3,000
 - ☒ 4. ₹4,500

Q.13 72 km/h വേഗത്തിൽ സഞ്ചരിക്കുന്ന ഒരു തീവണ്ടി, 24 sec കൊണ്ട് ഒരു തൂൺ കടന്നു പോവുന്നു. തീവണ്ടിയുടെ നീളം എത്രയാണ്?

- Ans
- ☒ 1. 300 m
 - ☒ 2. 150 m
 - ☒ 3. 125 m
 - ☒ 4. 480 m

Q.14 നമ്മുടെ ശരീരത്തിൽ നിന്ന് ഹാനികരമായ ഉപാപചയ മാലിന്യങ്ങൾ നീക്കം ചെയ്യപ്പെടുന്ന ജൈവപ്രക്രിയ _____ എന്നറിയപ്പെടുന്നു.

- Ans
- ☒ 1. വിസർജനം
 - ☒ 2. സ്രവണം
 - ☒ 3. സംവഹനം
 - ☒ 4. മലവിസർജനം

Q.15 താഴെ നൽകിയിരിക്കുന്നത് ഒരു കാരണവും തുടർന്ന് I, II, III എന്നീ നമ്പരുകളിൽ ഉള്ള സാധ്യമായ ഫലങ്ങളുമാണ്. കാരണം ശ്രദ്ധാപൂർവ്വം വായിച്ച് മുന്നിൽ ഏതാണ് സാധ്യമായ ഫലം(ങ്ങൾ) ആകാവുന്നതെന്ന് തീരുമാനിക്കുക.

കാരണം - കഴിഞ്ഞ രണ്ട് ദിവസമായി X എന്ന സിറ്റിയിൽ ഇടിമിന്നലും കനത്ത മഴയും നാശം വിതച്ചിരുന്നു. അടുത്ത 48 മണിക്കൂറിൽ കൂടുതൽ മഴ പെയ്യുമെന്ന് കാലാവസ്ഥാ നിരീക്ഷണ കേന്ദ്രം മുന്നറിയിപ്പ് നൽകിയിരിക്കുന്നു.

ഫലം I - X എന്ന സിറ്റിയിൽ യൂണിറ്റിന് 50 പൈസ നിരക്ക് വർദ്ധിപ്പിക്കാൻ വൈദ്യുതി ബോർഡ് തീരുമാനിച്ചു.

ഫലം II - X എന്ന സിറ്റിയുടെ പല പ്രദേശങ്ങളിലും വെള്ളം കെട്ടിക്കിടക്കുന്നതായി റിപ്പോർട്ട് ചെയ്യുന്നുണ്ട്.

ഫലം III - എംജി റോഡിൽ ഇന്നലെ രാത്രി നിരവധി മരങ്ങൾ വീണതായും 12 പേർക്ക് പരിക്കേറ്റതായും പറയപ്പെടുന്നുണ്ട്.

- Ans
- ☒ 1. I, II എന്നിവ രണ്ടും സാധ്യമായ ഫലങ്ങളാണ്.
 - ☒ 2. II മാത്രമാണ് സാധ്യമായ ഫലം.
 - ☒ 3. II, III എന്നിവ രണ്ടും സാധ്യമായ ഫലങ്ങളാണ്.
 - ☒ 4. I മാത്രമാണ് സാധ്യമായ ഫലം.

Q.16 ജസ്റ്റിസ് എം ഫാത്തിമ ബീവി എന്നവർ, 1989-ൽ സുപ്രീം കോടതിയിൽ നിയമിതയായ, പ്രഥമ വനിതാ ജഡ്ജിയാണ്. അവർ 96-ാം വയസ്സിൽ _____-ന് അന്തരിച്ചു.

- Ans ☒ 1. 2023 നവംബർ 23
☐ 2. 2023 നവംബർ 25
☐ 3. 2023 നവംബർ 22
☐ 4. 2023 നവംബർ 26

Q.17 2 kg പിണ്ഡമുള്ള വസ്തു, 5 m/sec എന്ന സ്ഥിര പ്രവേഗത്തിൽ ചലിക്കുന്നു, അതിന്റെ ഗതികോർജ്ജം _____ ആണ്.

- Ans ☐ 1. 50 ജൂൾ
☐ 2. 10 ജൂൾ
☒ 3. 25 ജൂൾ
☐ 4. 

Q.18 ഒരു ആവാസവ്യവസ്ഥയിൽ ഏറ്റവും കൂടുതൽ ഉള്ള ജീവീയഘടകമേത്?

- Ans ☒ 1. തൃതീയ ഉപഭോക്താക്കൾ
☐ 2. പ്രാഥമിക ഉപഭോക്താക്കൾ
☐ 3. ഉൽപ്പാദകർ
☐ 4. ദ്വിതീയ ഉപഭോക്താക്കൾ

Q.19 TEACHING എന്ന വാക്കിലെ ഓരോ സ്വരാക്ഷരവും ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തിൽ അതിനെ തുടർന്ന് വരുന്ന അക്ഷരത്തിലേക്കും, ഓരോ വ്യഞ്ജനാക്ഷരവും ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തിൽ അതിനെ തുടർന്ന് വരുന്ന അക്ഷരത്തിലേക്കും മാറ്റുകയും, തുടർന്ന് അക്ഷരങ്ങൾ ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തിൽ ക്രമീകരിക്കുകയും ചെയ്താൽ, അങ്ങനെ രൂപംകൊണ്ട അക്ഷരങ്ങളുടെ കൂട്ടത്തിൽ, വലതുവശത്ത് നിന്ന് നാലാമത്തെ അക്ഷരം ഏതായിരിക്കും?

- Ans ☐ 1. J
☐ 2. F
☐ 3. H
☒ 4. I

Q.20 അർപ്പിത 9 ഓറഞ്ചുകളും 8 വാഴപ്പഴങ്ങളും ₹276-ന് വാങ്ങുന്നു. ഓറഞ്ചിന്റെ വില 10% കുറയുകയും വാഴപ്പഴത്തിന്റേത് അതേപടി നിലനിൽക്കുകയും ചെയ്താൽ, 5 ഓറഞ്ചുകളുടെയും 10 വാഴപ്പഴങ്ങളുടെയും വില ₹210 ആണ്. 3 ഓറഞ്ചുകളുടെയും 4 വാഴപ്പഴങ്ങളുടെയും യഥാർത്ഥ വില എത്രയാണ്?

- Ans ☐ 1. ₹123
☐ 2. ₹120
☐ 3. ₹116
☒ 4. ₹108

Q.21 ഏത് കോശത്തിനാണ് ആകൃതി മാറുന്നത്?

- Ans
- ☐ 1. അണ്ഡം
 - ☒ 2. അമീബ
 - ☐ 3. മൃദുപേശി
 - ☐ 4. നാഡീകോശം

Q.22 ഒരു വ്യാപാരി, ഒരു പാൻ ₹10-ന് വിൽക്കുമ്പോൾ, അതിന്റെ വാങ്ങിയ വിലയുടെ $\frac{1}{11}$ അയാൾക്ക് നഷ്ടമുണ്ടാകുന്നു. പാനിന്റെ വാങ്ങിയ വിലയെത്ര?

- Ans
- ☐ 1. ₹10
 - ☒ 2. ₹11
 - ☐ 3. ₹9
 - ☐ 4. ₹12

Q.23 തന്നിരിക്കുന്നവയിൽ ഏതാണ് അറ്റോമിക മാസിന്റെ യൂണിറ്റിന്റെ പ്രതീകം?

- Ans
- ☐ 1. ml
 - ☐ 2. mg
 - ☒ 3. u
 - ☐ 4. g

Q.24 തന്നിരിക്കുന്ന സംഖ്യാ ജോഡികളിൽ, ആദ്യ സംഖ്യയിൽ ചില ഗണിത ക്രിയകൾ നടത്തിയാണ് രണ്ടാമത്തെ സംഖ്യ നേടിയിരിക്കുന്നത്. :: എന്നതിന്റെ ഇടതുവശത്തുള്ള രണ്ട് സംഖ്യകൾ പിന്തുടരുന്ന പാറ്റേൺ :: എന്നതിന്റെ വലതുവശത്തുള്ളതിന് സമമാകുന്നതിന് ഏത് സംഖ്യകളാണ് X, Y എന്നിവയ്ക്ക് പകരം വരേണ്ടത്?

(ശ്രദ്ധിക്കുക: സംഖ്യകളെ അതിന്റെ ഘടക അക്കങ്ങളായി വിഭജിക്കാതെ, മുഴുവൻ സംഖ്യകളിലും ക്രിയകൾ നടത്തണം. ഉദാ. 13-13 -ൽ/13ലേക്ക് കൂട്ടൽ/കുറയ്ക്കൽ/ഗുണിക്കൽ മുതലായ ക്രിയകൾ നടത്താം. 13-നെ 1, 3 എന്നിങ്ങനെ വിഭജിച്ച് 1, 3 എന്നിവയിൽ ഗണിതക്രിയകൾ നടത്തുന്നത് അനുവദനീയമല്ല.)

$$X : 529 :: 21 : Y$$

- Ans
- ☐ 1. $X = 12, Y = 729$
 - ☐ 2. $X = 11, Y = 625$
 - ☐ 3. $X = 14, Y = 529$
 - ☒ 4. $X = 18, Y = 676$

Q.25 ഒരു ആസിഡും ഒരു ബേസും തമ്മിലുള്ള രാസപ്രവർത്തനത്തിന്റെ ഉൽപ്പന്നം(ങ്ങൾ) എന്താണ്?

- Ans
- ☐ 1. ലവണം മാത്രം
 - ☐ 2. ജലം മാത്രം
 - ☐ 3. ലവണം, ഹൈഡ്രജൻ വാതകം
 - ☒ 4. ലവണവും ജലവും

Q.26 2024 സെപ്റ്റംബറിലെ ഒരു സംഭവത്തിന്റെ പേരിൽ വാർത്തകളിൽ ഇടം നേടിയ ജീവിതപുത്രിക ഉത്സവം പ്രധാനമായും ആഘോഷിക്കുന്ന സംസ്ഥാനം ഏത്?

- Ans
- ✓ 1. ബിഹാർ
 - ✗ 2. ഒഡീഷ
 - ✗ 3. പശ്ചിമ ബംഗാൾ
 - ✗ 4. ഗുജറാത്ത്

Q.27 ഒരു പ്രത്യേക കോഡ് ഭാഷയിൽ, 'towards the end' എന്നത് 'mb rh gp' എന്നും, 'end it here' എന്നത് 'hk mb bl' എന്നും കോഡ് ചെയ്തിരിക്കുന്നു. ഈ കോഡ് ഭാഷയിൽ 'end' എന്നതിന്റെ കോഡ് എന്താണ്?

- Ans
- ✓ 1. mb
 - ✗ 2. bl
 - ✗ 3. gp
 - ✗ 4. hk

Q.28 സൈലത്തിന്റെ (Xylem) ധർമ്മം എന്താണ്?

- Ans
- ✗ 1. കൊഴുപ്പുകളുടെ സംവഹനം
 - ✓ 2. ജലത്തിന്റെയും ധാതുക്കളുടെയും സംവഹനം
 - ✗ 3. ഭക്ഷണത്തിന്റെ സംവഹനം
 - ✗ 4. മാംസ്യത്തിന്റെ സംവഹനം

Q.29 ശരിയായ പ്രസ്താവന തിരഞ്ഞെടുക്കുക

- Ans
- ✗ 1. പൂമ്പൊടിയുടെ മുളയ്ക്കലാണ് പരാഗണം.
 - ✗ 2. പൂവിലെ പ്രാണികളുടെ സന്ദർശനമാണ് പരാഗണം.
 - ✓ 3. കേസരത്തിൽ നിന്ന് പരാഗണസ്ഥലത്തേക്ക് പൂമ്പൊടിയുടെ കൈമാറ്റമാണ് പരാഗണം.
 - ✗ 4. അണ്ഡാശയത്തിലെ പരാഗനാളിയുടെ വളർച്ചയാണ് പരാഗണം.

Q.30 രണ്ടാം ചലനനിയമമനുസരിച്ച്, ആക്ക മാറ്റത്തിന്റെ നിരക്ക് _____ ന് ആനുപാതികമാണ്.

- Ans
- ✗ 1. സ്ഥാനാന്തരം
 - ✗ 2. ജഡത്വം
 - ✗ 3. ഊർജം
 - ✓ 4. ബലം

Q.31 തന്നിരിക്കുന്ന ഗണിതവാക്യം ഒരു പൂർണ്ണ വർഗമാക്കി കാണിക്കുക:

$$a^2+9b^2+c^2-6ab+6bc-2ac$$

Ans

✗ 1. $(a-3b-2c)^2$

✗ 2. $(a-3b+c)^2$

✗ 3. $(a+3b+c)^2$

✓ 4. $(a-3b-c)^2$

Q.32 നൽകിയിരിക്കുന്ന പ്രസ്താവനകളും നിഗമനങ്ങളും ശ്രദ്ധാപൂർവ്വം വായിക്കുക. നൽകിയിരിക്കുന്ന പ്രസ്താവനകൾ പൊതുവെ അറിയപ്പെടുന്ന വസ്തുതകളിൽനിന്ന് വ്യത്യസ്തമാണെന്ന് തോന്നിയാലും അവ ശരിയാണെന്ന് പരിഗണിച്ച്, നൽകിയിരിക്കുന്ന പ്രസ്താവനകളെ യുക്തിപരമായി പിന്തുടരുന്ന നിഗമനം/നിഗമനങ്ങൾ ഏതെന്ന് തീരുമാനിക്കുക.

പ്രസ്താവനകൾ:

എല്ലാ വാതിലുകളും കവാടങ്ങളാണ്.

ഒരു വാതിലും ഒരു പൂട്ടല്ല.

നിഗമനം:

(I) ചില പൂട്ടുകൾ കവാടങ്ങളാണ്.

(II) ഒരു പൂട്ടും ഒരു വാതിലല്ല.

Ans

✓ 1. നിഗമനം (II) മാത്രം പിന്തുടരുന്നു.

✗ 2. നിഗമനം (I), (II) ഇവയിലൊന്നും പിന്തുടരുന്നില്ല

✗ 3. നിഗമനം (I) മാത്രം പിന്തുടരുന്നു

✗ 4. നിഗമനം (I), (II) ഇവ രണ്ടും പിന്തുടരുന്നു

Q.33 ഭൂമിയുടെ ഗുരുത്വാകർഷണ ത്വരണം എന്നത് ചന്ദ്രനിലെ ഗുരുത്വാകർഷണ ത്വരണത്തിന്റെ 6 മടങ്ങ് ആണെങ്കിൽ, തന്നിരിക്കുന്ന പ്രസ്താവനകളിൽ ശരി ഏത്?

Ans

✗ 1.

ഒരു വസ്തുവിന്റെ ഭാരം ചന്ദ്രനിലെ ഭാരവുമായി താരതമ്യപ്പെടുത്തുമ്പോൾ, ഭൂമിയിൽ 2 മടങ്ങ് ആണ്.

✓ 2.

ഒരു വസ്തുവിന്റെ ഭാരം ചന്ദ്രനിലെ ഭാരവുമായി താരതമ്യപ്പെടുത്തുമ്പോൾ, ഭൂമിയിൽ 6 മടങ്ങ് ആണ്.

✗ 3. ഭൂമിയിലോ ചന്ദ്രനിലോ അളക്കുമ്പോൾ ഒരു വസ്തുവിന്റെ ഭാരം തുല്യമാണ്.

✗ 4.

ഒരു വസ്തുവിന്റെ ഭാരം ഭൂമിയിലെ ഭാരവുമായി താരതമ്യപ്പെടുത്തുമ്പോൾ, ചന്ദ്രനിൽ 6 മടങ്ങ് ആണ്.

Q.34 തന്നിരിക്കുന്ന സംഖ്യാജോഡികളിൽ, ആദ്യ സംഖ്യയിൽ ചില ഗണിത ക്രിയകൾ നടത്തുകവഴിയാണ് രണ്ടാമത്തെ സംഖ്യ ലഭിച്ചിരിക്കുന്നത്. :: എന്നതിന്റെ ഇടതുവശത്തുള്ള രണ്ട് സംഖ്യകൾ പിന്തുടരുന്ന പാറ്റേൺ :: എന്നതിന്റെ വലതുവശത്തുള്ളതിന് സമമാകുന്നതിന് X, Y എന്നിവയ്ക്ക് പകരം വേരേണ്ട സംഖ്യകൾ ഏതെല്ലാം?

(ശ്രദ്ധിക്കുക: സംഖ്യകളെ അവയുടെ ഘടക അക്കങ്ങളായി വിഭജിക്കാതെ, സംഖ്യകളിൽ മുഴുവനായും ക്രിയകൾ നടത്തണം. ഉദാ. 13 - 13-ൽ നടത്തുന്ന കൂട്ടൽ/കുറയ്ക്കൽ/ഗുണിക്കൽ മുതലായ ക്രിയകൾ 13-ൽ നടത്താം, 13-നെ 1, 3 എന്നിങ്ങനെ വിഭജിച്ച് 1, 3 എന്നിവയിൽ ഗണിതക്രിയകൾ നടത്തുന്നത് അനുവദനീയമല്ല.)

X : 243 :: 17 : Y

- Ans**
- ☐ 1. X = 34, Y = 148
 - ☐ 2. X = 31, Y = 169
 - ☐ 3. X = 27, Y = 156
 - ☒ 4. X = 25, Y = 171

Q.35 ഫോക്കസ് ദൂരം 10 cm ഉള്ള കോൺകേവ് ദർപ്പണത്തിന് മുന്നിൽ ഒരു വസ്തു വെക്കുമ്പോൾ, ദർപ്പണത്തിന് മുന്നിൽ 20 cm അകലത്തിൽ ഒരു യഥാർത്ഥ പ്രതിബിംബം ഉണ്ടാകുന്നു. ഇവിടെ, വസ്തുവിലേക്കുള്ള ദൂരം _____ ആണ്.

- Ans**
- ☐ 1. -5 cm
 - ☐ 2. -10 cm
 - ☒ 3. -20 cm
 - ☐ 4. -30 cm

Q.36 JGLI എന്നത് ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തെ അടിസ്ഥാനമാക്കി ഒരു പ്രത്യേക രീതിയിൽ NKPM എന്നതുമായി ബന്ധപ്പെട്ടിരിക്കുന്നു. അതേരീതിയിൽ, OLQN എന്നത് SPUR എന്നതുമായി ബന്ധപ്പെട്ടിരിക്കുന്നു. അതേ യുക്തിയനുസരിച്ച്, തന്നിരിക്കുന്നവയിൽ ഏത് ഓപ്ഷനുമായാണ് LINK ബന്ധപ്പെട്ടിരിക്കുന്നത്?

- Ans**
- ☐ 1. PMOR
 - ☐ 2. MPOR
 - ☒ 3. PMRO
 - ☐ 4. MPRO

Q.37 DYNAMIC എന്ന വാക്കിലെ ഓരോ അക്ഷരവും ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തിൽ അതിനു തൊട്ട് ശേഷമുള്ള അക്ഷരമാക്കി മാറ്റുന്നു. ഇങ്ങനെ രൂപപ്പെട്ട പുതിയ അക്ഷരക്കൂട്ടം ഇംഗ്ലീഷ് അക്ഷരമാലാ ക്രമത്തിൽ പുനക്രമീകരിക്കുന്നു. പുനക്രമീകരിച്ച അക്ഷരക്കൂട്ടത്തിൽ, വലതു വശത്ത് ഒന്നാമതായി വരുന്ന അക്ഷരം ഏത്?

- Ans**
- ☒ 1. Z
 - ☐ 2. E
 - ☐ 3. B
 - ☐ 4. D

Q.38 തന്നിരിക്കുന്ന നാല് അക്ഷരക്കൂട്ടങ്ങളിൽ മൂന്നെണ്ണം, ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമമനുസരിച്ച്, ഒരു പ്രത്യേക രീതിയിൽ ഒരുപോലെയും, അങ്ങനെ ഒരു ഗ്രൂപ്പ് രൂപപ്പെടുത്തുന്നവയുമാണ്. ആ ഗ്രൂപ്പിൽ ഉൾപ്പെടാത്ത അക്ഷരക്കൂട്ടം ഏത്?

(ശ്രദ്ധിക്കുക: ഗ്രൂപ്പിൽ പെടാത്തത് വ്യഞ്ജനാക്ഷരങ്ങളുടെ/സ്വരാക്ഷരങ്ങളുടെ എണ്ണത്തെയോ അക്ഷരക്കൂട്ടത്തിലെ അവയുടെ സ്ഥാനത്തെയോ അടിസ്ഥാനമാക്കിയല്ല.)

- Ans
- ☐ 1. MHL
 - ☐ 2. FAE
 - ☒ 3. VRU
 - ☐ 4. PKO

Q.39 2024-ൽ നടത്തിയ ഏറ്റവും പുതിയ NSSO ഉപഭോക്തൃ ചെലവ് സർവ്വേ (consumer expenditure survey) പ്രകാരം, ഇന്ത്യയിൽ റിപ്പോർട്ട് ചെയ്യപ്പെട്ട ദാരിദ്ര്യ നിരക്ക് എത്ര?

- Ans
- ☒ 1. 5% എന്നതിന് താഴെ
 - ☐ 2. 10% എന്നതിന് താഴെ
 - ☐ 3. 15% എന്നതിന് മുകളിൽ
 - ☐ 4. 10%-15%

Q.40 ജനുവരി, ഫെബ്രുവരി, മാർച്ച്, ഏപ്രിൽ എന്നീ മാസങ്ങളിൽ ഒരാളുടെ ശരാശരി മാസ ശമ്പളം ₹8,000 ആണ്. ഫെബ്രുവരി, മാർച്ച്, ഏപ്രിൽ, മെയ് മാസങ്ങളിൽ അത് ₹8,500- ഉം ആണ് .മെയ് മാസത്തെ അയാളുടെ ശമ്പളം ₹6,500 ആണെങ്കിൽ, ജനുവരി മാസത്തെ അയാളുടെ ശമ്പളം കണ്ടെത്തുക.

- Ans
- ☒ 1. ₹4,500
 - ☐ 2. ₹2,500
 - ☐ 3. ₹3,000
 - ☐ 4. ₹5,000

Q.41 2023-ൽ, പ്രഥമ _____ ട്രാൻസ്പോർട്ട് എയർക്രാഫ്റ്റ് ഇന്ത്യൻ വ്യോമസേനയിൽ ഔദ്യോഗികമായി ഉൾപ്പെടുത്തി.

- Ans
- ☐ 1. C-275 MW
 - ☐ 2. C-225 MW
 - ☐ 3. C-250 MW
 - ☒ 4. C-295 MW

Q.42 2024 ഓഗസ്റ്റ് പ്രകാരം ഇന്ത്യയുടെ ഏറ്റവും പ്രായം കുറഞ്ഞ ഒളിമ്പിക് മെഡൽ ജേതാവ് നൽകിയിരിക്കുന്നവരിൽ ആരാണ്?

- Ans
- ☐ 1. മനു ഭാക്കർ
 - ☐ 2. നീരജ് ചോപ്ര
 - ☐ 3. ലക്ഷ്യ സെൻ
 - ☒ 4. അമൻ ഷെരാവത്

Q.43 ഓരോന്നും 2 വർഷത്തെ ഇടവേളകളിൽ ജനിച്ച 5 കുട്ടികളുടെ പ്രായത്തിന്റെ തുക 40 വയസ്സാണ്. ഏറ്റവും മൂത്ത കുട്ടിയുടെ പ്രായം എത്രയാണ്?

- Ans
- ☐ 1. 16 വയസ്സ്
 - ☒ 2. 12 വയസ്സ്
 - ☐ 3. 10 വയസ്സ്
 - ☐ 4. 14 വയസ്സ്

Q.44 Fe_3O_4 രൂപപ്പെടാൻ ഇരുമ്പ് ആറ്റത്തിന്റെ മൂന്ന് തന്മാത്രകളുമായി പ്രവർത്തിക്കാൻ എത്ര ജല തന്മാത്രകൾ ആവശ്യമാണ്?

- Ans
- ☐ 1. 3
 - ☐ 2. 1
 - ☐ 3. 2
 - ☒ 4. 4

Q.45 A, B, C, D, E, F, G എന്നീ ഏഴു പെട്ടികൾ ഒന്നിന് മുകളിൽ ഒന്നായി വെച്ചിരിക്കുന്നു, പക്ഷേ ഇതേ ക്രമത്തിലാകണമെന്നില്ല. A വെച്ചിരിക്കുന്നത് താഴെ നിന്നു രണ്ടാമതായാണ്. E, G എന്നിവയ്ക്കിടയിൽ മൂന്ന് പെട്ടികൾ മാത്രമേ വെച്ചിട്ടുള്ളൂ. G വെച്ചിരിക്കുന്നത് ഏറ്റവും മുകളിലല്ല. C-ക്കു തൊട്ട് മുകളിലായാണ് F വെച്ചിരിക്കുന്നത്. E-ക്കു തൊട്ട് മുകളിലായാണ് C വെച്ചിരിക്കുന്നത്. മുകളിൽ നിന്നു നാലാമതായല്ല B വെച്ചിരിക്കുന്നത്.

C, A എന്നിവയ്ക്കിടയിൽ എത്ര പെട്ടികളാണ് വെച്ചിരിക്കുന്നത്?

- Ans
- ☐ 1. നാല്
 - ☐ 2. ഒന്ന്
 - ☐ 3. രണ്ട്
 - ☒ 4. മൂന്ന്

Q.46 അന്താരാഷ്ട്ര ഹോക്കി ഫെഡറേഷന്റെ (FIH) 2023-ലെ പുരുഷ ലോകകപ്പ് _____-ൽ വെച്ച് നടന്നു.

- Ans
- ☐ 1. കൊച്ചി, കേരളം
 - ☐ 2. പട്ന, ബീഹാർ
 - ☒ 3. റൂർക്കേല, ഒഡീഷ
 - ☐ 4. അമരാവതി, ആന്ധ്രാപ്രദേശ്

Q.47 ഒരു കാർ, 80 km ദൂരം 20 km/h വേഗത്തിലും, അടുത്ത 30 km ദൂരം 30 km/h വേഗത്തിലും സഞ്ചരിക്കുന്നു. അതിന്റെ ശരാശരി വേഗം എത്രയാണ്?

- Ans
- ☐ 1. 40 km/h
 - ☐ 2. 30 km/h
 - ☒ 3. 22 km/h
 - ☐ 4. 20 km/h

Q.48 തന്നിരിക്കുന്നവയിൽ ഏതാണ് എമൽഷന്റെ ഉദാഹരണം?

- Ans
- ☐ 1. സ്പോഞ്ച്
 - ☐ 2. ഫോം
 - ☒ 3. ഫെയ്സ് ക്രീം
 - ☐ 4. റബ്ബർ

Q.49 'P' എന്നാൽ 'x' എന്നും, 'Q' എന്നാൽ '÷' എന്നും, 'R' എന്നാൽ '-' എന്നും, 'S' എന്നാൽ '+' എന്നും ആണെങ്കിൽ, തന്നിരിക്കുന്ന സമവാക്യത്തിൽ ചോദ്യചിഹ്നത്തിന്റെ (?) സ്ഥാനത്ത് വരുന്നത് എന്ത്?

$$15 P 6 R 11 P 4 S 38 R 41 S 2 P 5 = ?$$

- Ans
- ☐ 1. 49
 - ☐ 2. 61
 - ☒ 3. 53
 - ☐ 4. 41

Q.50 മണൽ, മണ്ണ് തുടങ്ങിയ അയിരിൽ അടങ്ങിയിരിക്കുന്ന വലിയ അളവിലുള്ള മാലിന്യങ്ങളെ _____ എന്ന് വിളിക്കുന്നു

- Ans
- ☒ 1. ഗാങ് (Gangue)
 - ☐ 2. അയിരിന്റെ കാഠിന്യം (Hardness of ore)
 - ☐ 3. സ്പോഞ്ചി (Spongy)
 - ☐ 4. റോട്ട് (Wrought)

Q.51 ഒരു അടഞ്ഞ ചതുരപ്പട്ടിയുടെ നീളം, വീതി, ഉയരം എന്നിവ യഥാക്രമം 2.5 m, 2 m, 90 cm എന്നിങ്ങനെയാണ്. ഒരു m^2 -ന് ₹70 വിലയുള്ള ക്യാൻവാസ് ഉപയോഗിച്ച് ഈ പെട്ടി പൂർണ്ണമായും പൊതിയാൻ എന്ത് ചിലവ് വരും?

- Ans
- ☐ 1. ₹1,348
 - ☒ 2. ₹1,267
 - ☐ 3. ₹1,507
 - ☐ 4. ₹1,448

Q.52 50-ൽ താഴെയുള്ള അഭാജ്യ സംഖ്യകളുടെ ആകെ എണ്ണം:

- Ans
- ☒ 1. 15
 - ☐ 2. 14
 - ☐ 3. 13
 - ☐ 4. 17

Q.53 A, B, C, D, E, F എന്നിവർ വൃത്താകൃതിയിലുള്ള ഒരു മേശയ്ക്കു ചുറ്റും മധ്യഭാഗത്തിന് അഭിമുഖമായി ഇരിക്കുന്നു. F, C എന്നിവർക്കിടയിൽ രണ്ട് പേർ മാത്രമാണ് ഇരിക്കുന്നത്. F-ന്റെ തൊട്ട് വലതുവശത്താണ് D ഇരിക്കുന്നത്. B-യുടെയും C-യുടെയും തൊട്ടടുത്താണ് A. B-യെ അപേക്ഷിച്ച് E-യുടെ സ്ഥാനം എവിടെയാണ്?

- Ans**
- ✓ 1. വലതുവശത്ത് മൂന്നാമത്
 - ✗ 2. ഇടതുവശത്ത് രണ്ടാമത്
 - ✗ 3. തൊട്ട് വലതുവശത്ത്
 - ✗ 4. തൊട്ട് ഇടതുവശത്ത്

Q.54 രണ്ട് സമാന്തര റോഡുകൾക്കിടയിൽ, 10 m ഉയരമുള്ള ഒരു ടവർ ഉണ്ട്. ടവറിന്റെ മുകൾഭാഗത്ത് നിന്നുള്ള റോഡുകളിലേക്കുള്ള കീഴ്കോണുകൾ 30° , 45° എന്നിങ്ങനെ ആണ്. റോഡുകൾ പരസ്പരമുള്ള അകലം എത്ര(ഏകദേശം)?

- Ans**
- ✗ 1. 29.56 m
 - ✓ 2. 27.32 m
 - ✗ 3. 30.82 m
 - ✗ 4. 26.44 m

Q.55 പട്ടണം B-യുടെ വടക്കുഭാഗത്ത് പട്ടണം A സ്ഥിതിചെയ്യുന്നു. പട്ടണം A-യുടെ തെക്കുഭാഗത്ത് പട്ടണം C സ്ഥിതിചെയ്യുന്നു. പട്ടണം C-യുടെ വടക്കുകിഴക്ക് ഭാഗത്ത് പട്ടണം D സ്ഥിതിചെയ്യുന്നു. പട്ടണം D-യുടെ തെക്കുഭാഗത്ത് പട്ടണം E സ്ഥിതി ചെയ്യുന്നു. പട്ടണം E-യുടെ വടക്കുപടിഞ്ഞാറ് ഭാഗത്ത് പട്ടണം B സ്ഥിതിചെയ്യുന്നു. പട്ടണം C-യുടെ തെക്കുഭാഗത്ത് പട്ടണം B സ്ഥിതിചെയ്യുന്നു. പട്ടണം C-യെ അപേക്ഷിച്ച് പട്ടണം E-യുടെ സ്ഥാനം എന്ത്?

- Ans**
- ✗ 1. വടക്കുപടിഞ്ഞാറ്
 - ✗ 2. വടക്കുകിഴക്ക്
 - ✗ 3. തെക്കുപടിഞ്ഞാറ്
 - ✓ 4. തെക്കുകിഴക്ക്

Q.56 തന്നിരിക്കുന്ന നാല് അക്ഷരക്കൂട്ട ജോഡികളിൽ മൂന്നെണ്ണം, ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമമനുസരിച്ച്, ഒരു പ്രത്യേക രീതിയിൽ ഒരുപോലെയും, അങ്ങനെ ഒരു ഗ്രൂപ്പ് രൂപപ്പെടുത്തുന്നവയുമാണ്. ആ ഗ്രൂപ്പിൽ പെടാത്ത ജോഡി ഏത്?

(ശ്രദ്ധിക്കുക: ഗ്രൂപ്പിൽ പെടാത്തത് വ്യഞ്ജനാക്ഷരങ്ങളുടെ/സ്വരാക്ഷരങ്ങളുടെ എണ്ണത്തെയോ അക്ഷരക്കൂട്ടത്തിലെ അവയുടെ സ്ഥാനത്തെയോ അടിസ്ഥാനമാക്കിയല്ല.)

- Ans**
- ✗ 1. PV – XR
 - ✗ 2. DJ – LF
 - ✓ 3. CH – MR
 - ✗ 4. GM – OI

Q.57 ഒരു പ്രത്യേക കോഡ് ഭാഷയിൽ, 'ALSO' എന്നത് '8693' എന്നും, 'SALE' എന്നത് '2836' എന്നും കോഡ് ചെയ്തിരിക്കുന്നു. നൽകിയിരിക്കുന്ന കോഡ് ഭാഷയിൽ 'E' എന്നതിന്റെ കോഡ് എന്ത്?

- Ans**
- ✓ 1. 2
 - ✗ 2. 3
 - ✗ 3. 8
 - ✗ 4. 9

Q.58 COINAGE എന്ന വാക്കിലെ ഓരോ അക്ഷരവും ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തിൽ ക്രമീകരിച്ചിരിക്കുന്നു. അങ്ങനെ രൂപപ്പെട്ട പുതിയ അക്ഷരക്കൂട്ടത്തിൽ, ഇടതുവശത്ത് നിന്ന് നാലാമതും വലതുവശത്ത് നിന്ന് മൂന്നാമതും വരുന്ന അക്ഷരങ്ങൾക്കിടയിൽ ഇംഗ്ലീഷ് അക്ഷരമാലയിൽ എത്ര അക്ഷരങ്ങളുണ്ട്?

- Ans
- ✓ 1. ഒന്ന്
 - ✗ 2. രണ്ട്
 - ✗ 3. അഞ്ച്
 - ✗ 4. നാല്

Q.59 അരുൺ ₹9,000 എന്ന തുക ജയശ്രീയിൽ നിന്ന് വാർഷികമായി കൂട്ടി ചേർക്കുന്ന കൂട്ടുപലിശയിൽ പ്രതിവർഷം 10% എന്ന നിരക്കിൽ വായ്പ വാങ്ങി. 2 വർഷത്തിന് ശേഷം കൂടിശ്ശിക തീർക്കാൻ അരുൺ അടച്ച തുക കണ്ടെത്തുക.

- Ans
- ✗ 1. ₹10,089
 - ✓ 2. ₹10,890
 - ✗ 3. ₹10,980
 - ✗ 4. ₹10,098

Q.60 നൽകിയിരിക്കുന്ന സമവാക്യം ശരിയാക്കാൻ, പരസ്പരം മാറ്റേണ്ട രണ്ട് സംഖ്യകൾ ഏതൊക്കെ?

$$56 + 18 - 11 \times 3 + 4 \times (66 \div 2) + 22 = 151$$

(ശ്രദ്ധിക്കുക: തന്നിരിക്കുന്ന സംഖ്യയിലെ അക്കങ്ങളെല്ലാ, സംഖ്യകൾ പൂർണ്ണമായാണ് പരസ്പരം മാറ്റേണ്ടത്.)

- Ans
- ✗ 1. 56, 66
 - ✗ 2. 3, 2
 - ✓ 3. 11, 22
 - ✗ 4. 18, 11

Q.61 മൂന്നു സംഖ്യകൾ 5 : 6 : 8 എന്ന അനുപാതത്തിലാണ്. അവയുടെ തുക 3800 ആണെങ്കിൽ, അവയിൽ ഏറ്റവും വലിയ സംഖ്യ എത്ര?

- Ans
- ✗ 1. 1200
 - ✗ 2. 1000
 - ✓ 3. 1600
 - ✗ 4. 2000

Q.62 കാർബൺ, അതിന്റെ എല്ലാ അലോട്രോപ്പിക് രൂപങ്ങളിലും, ഓക്സിജന്റെ സാന്നിധ്യത്തിൽ ജ്വലിച്ച് _____ നൽകുന്നു.

- Ans
- ✗ 1. കാർബൺ മോണോക്സൈഡ്
 - ✓ 2. കാർബൺ ഡയോക്സൈഡ്
 - ✗ 3. മീഥെയ്ൻ
 - ✗ 4. കാർബോണിക് ആസിഡ്

Q.63 തന്നിട്ടുള്ള ശ്രേണി യുക്തിപരമായി പൂർണ്ണമാവാൻ ചോദ്യചിഹ്നത്തിന് (?) പകരം വരേണ്ട ഓപ്ഷൻ ഏത്?

13, 24, 46, 79, 123,?

- Ans
- ☐ 1. 174
 - ☐ 2. 176
 - ☐ 3. 172
 - ☒ 4. 178

Q.64 3-ന്റെ ആദ്യ അഞ്ച് ഗുണിതങ്ങളുടെ ശരാശരി എന്ത്?

- Ans
- ☐ 1. 12
 - ☐ 2. 15
 - ☐ 3. 3
 - ☒ 4. 9

Q.65 2024-ലെ രാഷ്ട്രീയ വിജ്ഞാന പുരസ്കാരത്തിൽ വിജ്ഞാൻ രത്ന അവാർഡ് ലഭിച്ചത് നൽകിയിരിക്കുന്നവരിൽ ആർക്ക്?

- Ans
- ☐ 1. ഡോ. ആനന്ദരാമകൃഷ്ണൻ സി
 - ☒ 2. പ്രൊഫ.ഗോവിന്ദരാജൻ പത്മനാഭൻ
 - ☐ 3. പ്രൊഫ.ഉമേഷ് വർഷ്ണേ
 - ☐ 4. ഡോ.അവേഷ് കുമാർ ത്യാഗി

Q.66 താഴെ നൽകിയിരിക്കുന്ന രണ്ട് ത്രയങ്ങളുടെ അതേ പാറ്റേൺ പിന്തുടരുന്ന ത്രയം തെരഞ്ഞെടുക്കുക. രണ്ട് ത്രയങ്ങളും ഒരേ പാറ്റേൺ ആണ് പിന്തുടരുന്നത്.

PK-RM-TU

HC-JE-LM

- Ans
- ☒ 1. MH-OJ-QR
 - ☐ 2. MH-OJ-PR
 - ☐ 3. MH-OJ-QS
 - ☐ 4. MG-OJ-QR

Q.67 ഇംഗ്ലീഷ് അക്ഷരമാലാക്രമത്തെ അടിസ്ഥാനമാക്കി, നൽകിയിരിക്കുന്ന ശ്രേണിയിലെ ചോദ്യചിഹ്നത്തിന് (?) പകരം വരേണ്ട ഓപ്ഷൻ തന്നിരിക്കുന്നവയിൽ ഏത്?

ZTQ, XRO, VPM, TNK, ?

- Ans
- ☐ 1. RKL
 - ☒ 2. RLI
 - ☐ 3. SMK
 - ☐ 4. RML

Q.68 തന്നിരിക്കുന്ന ഗണിതവാക്യത്തിന്റെ മൂല്യം എന്ത്?

$$12 + 18 \div 3$$

Ans ☐ 1. 12

☐ 2. 10

☒ 3. 18

☐ 4. 22

Q.69 450, 1500, 1650 എന്നിവയുടെ HCF:

Ans ☐ 1. 200

☐ 2. 50

☒ 3. 150

☐ 4. 100

Q.70 ഒരു ചാലകത്തിലൂടെയുള്ള വൈദ്യുതി സൃഷ്ടിക്കുന്ന കാന്തികമണ്ഡലത്തിന്റെ പാറ്റേൺ നിർണ്ണയിക്കുന്നത് എന്താണ്?

Ans ☐ 1. കറണ്ടിന്റെ ദിശ

☐ 2. ചാലകത്തിന്റെ പദാർത്ഥം

☒ 3. ചാലകത്തിന്റെ രൂപം

☐ 4. ചാലകത്തിന്റെ നിറം

Q.71 ഒരു ഡീലിൻമേൽ ഏർപ്പെടുത്തിയ 30%, 35% എന്നീ രണ്ട് തുടർച്ചയായ കിഴിവുകൾക്ക് തുല്യമായ ഒറ്റക്കിഴിവ് ഏതാണ്?

Ans ☐ 1. 65%

☐ 2. 55.5%

☐ 3. 60%

☒ 4. 54.5%

Q.72 ഒരു ക്ലോസ്ഡ് സർക്യൂട്ടിൽ, 100 കൂളോം ചാർജ് 50 sec നേരത്തേക്ക് ഒഴുകുന്നുവെങ്കിൽ, സർക്യൂട്ടിലെ വൈദ്യുതി _____ ആണ്.

Ans ☐ 1. 5 A

☐ 2. 0.2 A

☒ 3. 2 A

☐ 4. 0.5 A

Q.73 PQRS എന്ന ചതുർഭുജത്തിൽ, $\angle Q, \angle S$ എന്നീ കോണുകളുടെ തുക 150° , $\angle P, \angle R$ എന്നീ കോണുകൾ 4 : 3 എന്ന അനുപാതത്തിലുമാണ്. എങ്കിൽ $\angle R$ എന്നതിന്റെ അളവ്?

Ans ☐ 1. 120°

☐ 2. 210°

☒ 3. 90°

☐ 4. 150°

Q.74 P-യുടെയും Q-യുടെയും ഒരുമിച്ചുള്ള ശമ്പളം ₹2,000 ആണ്. P തന്റെ ശമ്പളത്തിന്റെ 95% ചെലവഴിക്കുന്നു, Q അയാളുടെ ശമ്പളത്തിന്റെ 85%-വും ചെലവഴിക്കുന്നു. എന്നിട്ടും അവരുടെ സമ്പാദ്യം തുല്യമാണെങ്കിൽ, P-യുടെ ശമ്പളം എത്ര?

- Ans
- ☐ 1. ₹1,250
 - ☒ 2. ₹1,500
 - ☐ 3. ₹500
 - ☐ 4. ₹750

Q.75 ഒരു പ്രത്യേക കോഡ് ഭാഷയിൽ,
A + B എന്നാൽ 'B-യുടെ അമ്മയാണ് A' എന്നും,
A - B എന്നാൽ 'B-യുടെ സഹോദരനാണ് A' എന്നും,
A × B എന്നാൽ 'B-യുടെ ഭാര്യയാണ് A' എന്നും,
A ÷ B എന്നാൽ 'B-യുടെ അച്ഛനാണ് A' എന്നും,
A # B എന്നാൽ 'B-യുടെ മകളാണ് A' എന്നും ആണ് അർത്ഥം.
'Q - S + P - T # R ÷ K' എന്നാണെങ്കിൽ, P എങ്ങനെയാണ് K-യുമായി ബന്ധപ്പെട്ടിരിക്കുന്നത്?

- Ans
- ☐ 1. സഹോദരി
 - ☐ 2. അച്ഛൻ
 - ☒ 3. സഹോദരൻ
 - ☐ 4. അമ്മ

2024/12/02-17:39:51



Test Center Name	Daripally Anantha Ramulu College of Engineering & Technology
Test Date	26/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Which of the following options does NOT represent a property of suspensions?

- Ans
- ☒ 1. A suspension is a heterogeneous mixture.
 - ☒ 2. The particles of a suspension scatter a beam of light passing through it.
 - ☒ 3. A suspension is unstable in nature.
 - ☒ 4. The particles of a suspension cannot be seen by the naked eyes.

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

- Ans
- ☒ 1. 6 : 4 : 3
 - ☒ 2. 6 : 3 : 4
 - ☒ 3. 9 : 4 : 6
 - ☒ 4. 9 : 6 : 4

Q.3 Jaggu can make one wooden chair in 3 days and Rabhu can make the same chair in 4 days. If they work together, in how many days will they make 14 chairs of the same kind?

- Ans
- ☒ 1. 20 days
 - ☒ 2. 24 days
 - ☒ 3. 18 days
 - ☒ 4. 16 days

Q.4 In what duration will a sum of money double itself at 10% per annum rate of simple interest?

- Ans
- ☒ 1. 5 years
 - ☒ 2. 12 years
 - ☒ 3. 10 years
 - ☒ 4. 8 years

Q.5 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some beds are tables.

No tables are chairs.

Conclusions:

(I) All tables are beds.

(II) Some chairs are beds.

- Ans**
- ☒ 1. Both conclusions (I) and (II) follow.
 - ☒ 2. Only conclusion (II) follows.
 - ☒ 3. Only conclusion (I) follows.
 - ☒ 4. Neither conclusion (I) nor (II) follows.

Q.6 Indian women team won the Chess Olympiad 2024 title by defeating which of the following teams?

- Ans**
- ☒ 1. Azerbaizan
 - ☒ 2. Taiwan
 - ☒ 3. Spain
 - ☒ 4. France

Q.7 As of March 2024, what does Morgan Stanley's research forecast for India's GDP growth rate in FY25?

- Ans**
- ☒ 1. 0.9%
 - ☒ 2. 6.8%
 - ☒ 3. 2.4%
 - ☒ 4. 12.5%

Q.8 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

HLA, BFU, VZO, PTL, ?

- Ans**
- ☒ 1. JMB
 - ☒ 2. JNC
 - ☒ 3. JMC
 - ☒ 4. JNB

Q.9 Other than the nervous system, which other system helps in control and coordination in our body?

- Ans**
- ☒ 1. Respiratory system
 - ☒ 2. Endocrine system
 - ☒ 3. Excretory system
 - ☒ 4. Digestive system

Q.10 In a certain code language, 'climb the mountains' is coded as 'js bg md' and 'climb the tree' is coded as 'bg cx js'. What is the code for 'tree' in the given code language?

- Ans**
- ☐ 1. bg
 - ☐ 2. js
 - ☒ 3. cx
 - ☐ 4. md

Q.11 Which of the following options represents two successive discounts that are equivalent to a single discount of 84%?

- Ans**
- ☒ 1. 20% and 80%
 - ☐ 2. 10% and 90%
 - ☐ 3. 40% and 60%
 - ☐ 4. 30% and 70%

Q.12 Which of the following statements is/are correct?

Statements:

I) Electromagnet is a device used to convert magnetic field into electrical energy.

II) Electromagnet is a device used to convert mechanical energy into magnetic energy.

- Ans**
- ☐ 1. Both Statements I and II
 - ☒ 2. Neither Statement I nor II
 - ☐ 3. Statement II only
 - ☐ 4. Statement I only

Q.13 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

CFI, LOR, UXA, DGJ, ?

- Ans**
- ☒ 1. MPS
 - ☐ 2. MOQ
 - ☐ 3. LNP
 - ☐ 4. LOR

Q.14 If each vowel in the word HISTORY is changed to the letter preceding it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order, then how many vowels will be there in the group of letters thus formed?

- Ans**
- ☐ 1. 3
 - ☒ 2. 2
 - ☐ 3. 1
 - ☐ 4. 0

Q.15 ACE is related to BDF in a certain way. In the same way, GIK is related to HJL. To which of the following options is MOQ related, to following the same logic?

- Ans**
- ☐ 1. OPQ
 - ☐ 2. NPS
 - ☐ 3. NOP
 - ☒ 4. NPR

Q.16 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All ropes are chains.

All chains are strings.

Conclusions:

(I) All strings are ropes.

(II) All ropes are strings.

- Ans**
- ☐ 1. Neither conclusion (I) nor (II) follows
 - ☒ 2. Only conclusion (II) follows
 - ☐ 3. Only conclusion (I) follows
 - ☐ 4. Both conclusions (I) and (II) follow

Q.17 A solid metallic sphere of radius 12 cm is melted and recast in the form of small spheres of radius 2 cm. How many small spheres are formed?

- Ans**
- ☐ 1. 48
 - ☒ 2. 216
 - ☐ 3. 864
 - ☐ 4. 96

Q.18 What is the valency of carbon?

- Ans**
- ☐ 1. Six
 - ☒ 2. Four
 - ☐ 3. Two
 - ☐ 4. Three

Q.19 The work done by a constant force of 5 Newton acting on a body is 5 joules. The displacement of the body in the direction of the applied force is _____.

- Ans**
- ☐ 1. 10 m
 - ☒ 2. 1m
 - ☐ 3. 1000 m
 - ☐ 4. 100 m

Q.20 Find the total surface area of a cylinder whose radius of base is 7 cm and height is 12 cm.

- Ans
- ✓ 1. $266\pi \text{ cm}^2$
 - ✗ 2. $208\pi \text{ cm}^2$
 - ✗ 3. $303\pi \text{ cm}^2$
 - ✗ 4. $280\pi \text{ cm}^2$

Q.21 For preparation of which of the following compounds is the chlor-alkali process used?

- Ans
- ✗ 1. Na_2CO_3
 - ✗ 2. NaCl
 - ✓ 3. $\text{NaOH} + \text{Cl}_2$
 - ✗ 4. NaHCO_3

Q.22 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 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.)

- Ans
- ✗ 1. TQ-NS
 - ✗ 2. RO-LQ
 - ✗ 3. VS-PU
 - ✓ 4. YV-SW

Q.23 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(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.)

X : 112 :: 15 : Y

- Ans
- ✗ 1. X = 10, Y = 148
 - ✓ 2. X = 12, Y = 184
 - ✗ 3. X = 16, Y = 192
 - ✗ 4. X = 14, Y = 166

Q.24 A diver rowing at the speed of 3 km/h in still water takes double the time going 50 km upstream compared to going 50 km downstream. The speed of the diver against the stream is:

- Ans
- ✓ 1. 2 km/h
 - ✗ 2. 1 km/h
 - ✗ 3. $\frac{7}{3}$ km/h
 - ✗ 4. $\frac{4}{3}$ km/h

Q.25 Select the number from among the given options that can replace the question mark (?) in the following series.

549 525 477 405 309 ?

Ans ☐ 1. 145

☐ 2. 139

☒ 3. 189

☐ 4. 167

Q.26 Which two numbers should be interchanged to make the given equation correct?

$$186 - 82 + (129 \div 3) - 6 \times 8 + (31 - 19) \times 2 = 85$$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

Ans ☐ 1. 2 and 6

☐ 2. 82 and 31

☐ 3. 8 and 19

☒ 4. 186 and 129

Q.27 Who among the following participated in the United Nations 'World Climate Action Summit (COP28)' in Dubai?

Ans ☐ 1. Droupadi Murmu

☐ 2. Ram Nath Kovind

☒ 3. Narendra Modi

☐ 4. Jagdeep Dhankhar

Q.28 The successful automotive trials of the Zorawar light tank on 13 September 2024 were an important milestone for India's defence sector. Which organisation is responsible for developing this light tank?

Ans ☐ 1. Indian Army

☒ 2. Defence Research and Development Organisation (DRDO)

☐ 3. Hindustan Aeronautics Limited (HAL)

☐ 4. Bharat Electronics Limited (BEL)

Q.29 Shailesh Nayak has been conferred Padma Shri award in 2024 in which field?

Ans ☒ 1. Science and Engineering

☐ 2. Sports

☐ 3. Medicine

☐ 4. Literature & Education

Q.30 The simplified value of 0.002×0.5 is:

Ans ☐ 1. 0.1

☒ 2. 0.001

☐ 3. 0.0001

☐ 4. 0.01

Q.31 According to the law of constant proportion, what will be the correct ratio of obtained oxygen and hydrogen (O : H) after decomposition of 18 g water?

Ans ☐ 1. 4 : 14

☐ 2. 14 : 4

☐ 3. 2 : 16

☒ 4. 16 : 2

Q.32 In which month was the Guru Kelucharan Mohapatra Awards 2024 organised by the Srjan-Guru Kelucharan Mohapatra Odissi Nrityabasa?

- Ans
- ☐ 1. August
 - ☐ 2. July
 - ☒ 3. September
 - ☐ 4. October

Q.33 If the mode of the following data is 7, then find the value of k.
2, 4, 6, 7, 5, 6, 10, 6, 7, $2k + 1$, 9, 7, 13

- Ans
- ☐ 1. 6
 - ☒ 2. 3
 - ☐ 3. 4
 - ☐ 4. 2

Q.34 Khelo India Para games (2023) were held in _____.

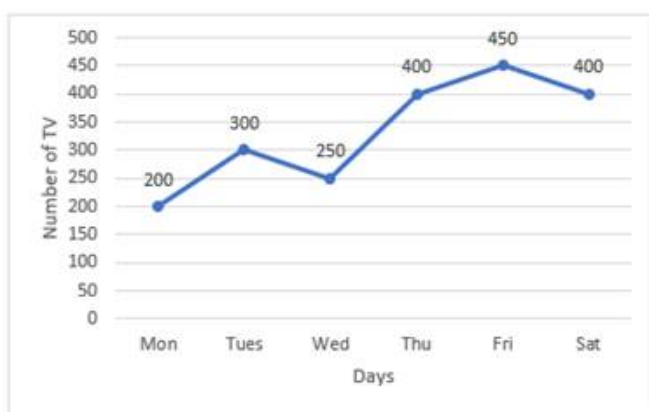
- Ans
- ☐ 1. Patna
 - ☒ 2. New Delhi
 - ☐ 3. Ahmedabad
 - ☐ 4. Dispur

Q.35 If a regular polygon has 20 diagonals, then the number of sides of this polygon is:

- Ans
- ☐ 1. 6
 - ☐ 2. 10
 - ☐ 3. 5
 - ☒ 4. 8

Q.36 Study the given graph and answer the question that follows.

The graph shows the daily production of TV sets in a factory for 6 days of a week.



How many units of TV sets were produced on Monday and Tuesday together?

- Ans
- ☒ 1. 500
 - ☐ 2. 400
 - ☐ 3. 700
 - ☐ 4. 600

Q.37 Out of his total income, Sanjay spends 20% on house rent and 70% of the rest on household expenses. If he saves ₹1,800, then his total income is:

- Ans**
- ☐ 1. ₹8,000
 - ☒ 2. ₹7,500
 - ☐ 3. ₹9,000
 - ☐ 4. ₹10,000

Q.38 Magnification produced by a convex mirror for a given object of height 5 cm is 0.2. Here, the height of the image is _____.

- Ans**
- ☐ 1. 1.5 cm
 - ☒ 2. 1 cm
 - ☐ 3. 10 cm
 - ☐ 4. 0.4 cm

Q.39 In the word OPTICAL, each vowel is changed to the letter immediately succeeding it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. Which of the following letters is repeated twice in the new group of letters thus formed?

- Ans**
- ☐ 1. K
 - ☐ 2. P
 - ☐ 3. O
 - ☒ 4. B

Q.40 Which is the internal energy reserve in plants?

- Ans**
- ☒ 1. Starch
 - ☐ 2. Glycogen
 - ☐ 3. Glucose
 - ☐ 4. Sucrose

Q.41 In a certain code language, 'PLOW' is coded as '7164' and 'WOLF' is coded as '1564'. What is the code for 'F' in the given code language?

- Ans**
- ☒ 1. 5
 - ☐ 2. 6
 - ☐ 3. 1
 - ☐ 4. 7

Q.42 In a row of 48 students facing North, Tinu is 15th from the left end. If Dinesh is 9th to the right of Tinu, what is Dinesh's position from the right end of the line?

- Ans**
- ☐ 1. 22nd
 - ☒ 2. 25th
 - ☐ 3. 23rd
 - ☐ 4. 24th

- Q.43 Which phenomenon causes bending of the ray of light when it moves in the earth's atmosphere?
- Ans ☒ 1. Atmospheric refraction
☐ 2. Atmospheric reflection
☐ 3. Atmospheric dispersion
☐ 4. Atmospheric scattering
- Q.44 A sells a bicycle to B at a profit of 20% and B sells it to C at a profit of 25%. If C pays ₹1,500, then what did A pay for it?
- Ans ☒ 1. ₹1,000
☐ 2. ₹1,100
☐ 3. ₹1,125
☐ 4. ₹825
- Q.45 In which of the following types of reaction is there an exchange of ions between the reactants?
- Ans ☐ 1. Decomposition
☐ 2. Addition reaction
☒ 3. Double displacement reaction
☐ 4. Disproportion reaction
- Q.46 ____ has been honoured as an International Anti-Corruption Champion by the US government for the year 2023.
- Ans ☒ 1. Nikhil Dey
☐ 2. Medha Patkar
☐ 3. Anna Hazare
☐ 4. Aruna Roy
- Q.47 The LCM of 24, 42 and 56 is:
- Ans ☐ 1. 816
☐ 2. 186
☐ 3. 618
☒ 4. 168
- Q.48 If each vowel in the word MARKETING is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which of the following letters will be fourth from the left in the group of letters thus formed?
- Ans ☐ 1. Q
☒ 2. J
☐ 3. F
☐ 4. S
- Q.49 What percentage of the numbers from 1 to 70, both included, have 1 or 7 in the unit's digit?
- Ans ☐ 1. 21
☒ 2. 20
☐ 3. 14
☐ 4. 1

Q.50 Which of the following non-metals is a liquid?

- Ans**
- ☐ 1. Sulphur
 - ☐ 2. Fluorine
 - ☐ 3. Chlorine
 - ☒ 4. Bromine

Q.51 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Due to water pipeline work planned in Grant Road for the next 3 days, the road will be closed for traffic till further notice.

Courses of Action:

(I) Traffic police should increase the number of personnel present at Grant Road to physically coordinate traffic diversion effectively.

(II) Traffic police should issue a notification in major newspapers regarding traffic diversions and alternate routes that can be taken by the general public till the Grant Road closure continues.

- Ans**
- ☐ 1. Neither I nor II follows
 - ☐ 2. Only II follows
 - ☐ 3. Only I follows
 - ☒ 4. Both I and II follow

Q.52 When an empty bottle is closed air tight and pushed inside water it bounces back when it is released. This is because _____.

- Ans**
- ☐ 1. gravitational force acting on the bottle is greater than the upthrust of water
 - ☐ 2. water does not exert force on an empty bottle
 - ☒ 3. upthrust of water on a bottle is greater than the gravitational force acting on the bottle
 - ☐ 4. gravitational force on a bottle is equal to the buoyant force of the water

Q.53 Which of the following organisms does NOT show asexual reproduction by means of fission?

- Ans**
- ☐ 1. Plasmodium
 - ☐ 2. Leishmania
 - ☐ 3. Amoeba
 - ☒ 4. Earthworm

Q.54 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(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.)

X : 68.4 :: 22 : Y

Ans ☒ 1. X = 14, Y = 68.8

☒ 2. X = 20, Y = 74.8

☒ 3. X = 16, Y = 70.4

☒ 4. X = 18, Y = 83.6

Q.55 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

JG-NK-RT

EB-IF-MO

Ans ☒ 1. HE-LI-PR

☒ 2. IF-MJ-QR

☒ 3. GD-KI-OQ

☒ 4. FC-JG-NO

Q.56 A, B, E, F, L, M and P are sitting around a circular table, facing the centre. F sits second to the left of E. A sits third to the right of B. M sits third to the left of L. A sits to the immediate right of M. P is not an immediate neighbour of M. Who sits second to the left of F?

Ans ☒ 1. B

☒ 2. A

☒ 3. M

☒ 4. P

Q.57 Which of the following organisms is/are NOT unicellular?

Ans ☒ 1. Plants

☒ 2. Amoeba

☒ 3. Chlamydomonas

☒ 4. Paramecium

Q.58 The draft of the 'Telecommunications (Administration of Digital Bharat Nidhi) Rules, 2024' was published for public consultation on which date?

Ans ☒ 1. 5 September 2024

☒ 2. 30 June 2024

☒ 3. 1 August 2024

☒ 4. 4 July 2024

Q.59 A car can cover 275 km in 5 hours. If its speed is reduced by 5 km/hr, then how much time will the car take to cover a distance of 250 km?

- Ans**
- ✓ 1. 5 hr
 - ✗ 2. 4 hr 30 min
 - ✗ 3. 5 hr 30 min
 - ✗ 4. 6 hr

Q.60 Which Indian singer was awarded the Padma Bhushan award, one of India's highest civilian awards, for the first time in 2024?

- Ans**
- ✗ 1. Alka Yagnik
 - ✓ 2. Usha Uthup
 - ✗ 3. Lata Mangeshkar
 - ✗ 4. Asha Bhosle

Q.61 Which of the following lacks membrane?

- Ans**
- ✓ 1. Viruses
 - ✗ 2. Plant cell
 - ✗ 3. Animal cell
 - ✗ 4. Fungi cell

Q.62 Seven people, B, C, D, E, F, G and K are sitting in a straight line, facing north. Only two people sit to the left of B. Only three people sit between B and K. F sits second to the right of B. Only two people sit between F and C. G sits at some place to the right of E but at some place to the left of D. How many people sit to the right of G?

- Ans**
- ✗ 1. One
 - ✗ 2. Two
 - ✗ 3. Four
 - ✓ 4. Three

Q.63 A tree breaks and falls to the ground such that its upper part is still partially attached to its stem. At what height did it break, if the original height of the tree was 24 m and it makes an angle of 30° with the ground?

- Ans**
- ✗ 1. 9 m
 - ✗ 2. 10 m
 - ✓ 3. 8 m
 - ✗ 4. 12 m

Q.64 Evaluate the given expression.

$$13 - 12 \div 4 \times 2$$

- Ans**
- ✗ 1. 9
 - ✗ 2. 6
 - ✗ 3. 8
 - ✓ 4. 7

Q.65 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 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.)

- Ans**
- ☐ 1. BK-VE
 - ☐ 2. EN-YH
 - ☒ 3. ZI-UD
 - ☐ 4. TC-NW

Q.66 In a certain code language,

$A + B$ means 'A is the mother of B',

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

$A \times B$ means 'A is the wife of B',

$A \div B$ means 'A is the father of B',

and $A \# B$ means 'A is the daughter of B'.

How is K related to Q if ' $P \times Q \div T + Z - S \# K$ '?

- Ans**
- ☐ 1. Wife's father
 - ☒ 2. Daughter's husband
 - ☐ 3. Wife's brother
 - ☐ 4. Husband's mother

Q.67 Evaluate 297×303 .

- Ans**
- ☐ 1. 79991
 - ☐ 2. 89091
 - ☐ 3. 90991
 - ☒ 4. 89991

Q.68 Which part of the neuron is responsible for acquiring information?

- Ans**
- ☐ 1. Cell body
 - ☒ 2. Dendritic tip
 - ☐ 3. Synapse
 - ☐ 4. Axon

Q.69 If $+$ means $-$, $-$ means $\times$, $\times$ means $\div$, $\div$ means $+$, then what will come in place of the question mark (?) in the following equation?

$$22 - 5 \div 3 + 12 \times 3 = ?$$

- Ans**
- ☐ 1. 110
 - ☒ 2. 109
 - ☐ 3. 111
 - ☐ 4. 112

Q.70 Which of the following does NOT increase the rate of evaporation?

- Ans
- ☐ 1. Increase in surface area
 - ☐ 2. Decrease in humidity
 - ☒ 3. Decrease in temperature
 - ☐ 4. Increase in wind speed

Q.71 The sum of a two-digit number and the number obtained by reversing the digits is 99. If the digits of the number differ by 5, then the two-digit number can be:

- Ans
- ☐ 1. 83
 - ☐ 2. 16
 - ☒ 3. 27
 - ☐ 4. 18

Q.72 The equivalent resistance of the two resistors of resistance R ohm each connected in series is _____.

- Ans
- ☐ 1. $3R$ ohm
 - ☐ 2. $R/2$ ohm
 - ☒ 3. $2R$ ohm
 - ☐ 4. $2/R$ ohm

Q.73 The arithmetic mean of the observations 39, 49, 59, 60, 70, 80, 90, 93 and 90 is:

- Ans
- ☐ 1. 78
 - ☒ 2. 70
 - ☐ 3. 79
 - ☐ 4. 76

Q.74 Rohit starts from Point A and drives 25 km towards the East. He then takes a right turn, drives 17 km, turns right and drives 14 km. He then takes a right turn and drives 11 km. He takes a final left turn, drives 11 km and stops at Point P. How far (shortest distance) and towards which direction should he drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)

- Ans
- ☐ 1. 4 km towards the North
 - ☒ 2. 6 km towards the North
 - ☐ 3. 8 km towards the North
 - ☐ 4. 6 km towards the South

Q.75 Which of the following physical quantities represents the rate of change of velocity?

- Ans
- ☒ 1. Acceleration
 - ☐ 2. Distance
 - ☐ 3. Velocity
 - ☐ 4. Speed



Test Center Name	Narayanam Info Online
Test Date	26/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 The average of the first 30 natural numbers is:

- Ans
- ☒ 1. 15
 - ☐ 2. 16
 - ☐ 3. 16.5
 - ☒ 4. 15.5

Q.2 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 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.)

- Ans
- ☒ 1. VZ-TX
 - ☐ 2. CG-VZ
 - ☐ 3. WA-PT
 - ☐ 4. GK-ZD

Q.3 In a certain code language,

$A + B$ means 'A is the mother of B',

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

$A \times B$ means 'A is the wife of B' and

$A \div B$ means 'A is the father of B'.

Based on the above, how is Q related to T if ' $P + Q - R \times S \div T$ '?

- Ans
- ☐ 1. Mother's mother
 - ☒ 2. Mother's brother
 - ☐ 3. Father's brother
 - ☐ 4. Brother

Q.4 What is the effect of heating on the rate of diffusion?

- Ans
- ✓ 1. It increases with increase of temperature
 - ✗ 2. It decreases with increase of temperature
 - ✗ 3. It first increases and then, decreases after some time.
 - ✗ 4. There is no effect of temperature on the rate of diffusion.

Q.5 In our body, brain and spinal cord together constitute the:

- Ans
- ✗ 1. autonomic nervous system
 - ✗ 2. endocrine system
 - ✓ 3. central nervous system
 - ✗ 4. peripheral nervous system

Q.6 Town L lies to the west of Town M. Town D lies to the northeast of Town L. Town A lies to the west of Town D. Town R lies to the east of Town D. What is the position of Town R with respect to Town L?

- Ans
- ✗ 1. Southwest
 - ✓ 2. Northeast
 - ✗ 3. Southeast
 - ✗ 4. Northwest

Q.7 Which of the following statements is/are correct?

Statements:

I) A current carrying conductor acts like a magnet.

II) Moving electrons perpendicular to the magnetic field do not experience any force.

- Ans
- ✓ 1. Statement I only
 - ✗ 2. Neither Statement I nor II
 - ✗ 3. Statement II only
 - ✗ 4. Both Statements I and II

Q.8 The Sangameshwara Temple had been submerged in the backwaters of the Srisailem project due to heavy rainfall in the monsoon of 2024. This temple lies on the banks of which river?

- Ans
- ✓ 1. Krishna
 - ✗ 2. Ganga
 - ✗ 3. Narmada
 - ✗ 4. Yamuna

Q.9 The sum of the length, the breadth and the height of a cuboid is 38 cm and the length of its diagonal is 22 cm. Find the total surface area of the cuboid.

- Ans
- ✗ 1. 432 cm^2
 - ✗ 2. 480 cm^2
 - ✗ 3. 864 cm^2
 - ✓ 4. 

Q.10 Which two numbers should be interchanged to make the given equation correct?

$$46 + 24 - (12 + 19) \times 2 + 38 \times 6 + 44 \div 4 = 262$$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

Ans ☒ 1. 24 and 44

☐ 2. 6 and 2

☐ 3. 2 and 4

☐ 4. 24 and 38

Q.11 Select the number from among the given options that can replace the question mark (?) in the following series.

184 242 275 333 366 424 ?

Ans ☐ 1. 426

☒ 2. 457

☐ 3. 464

☐ 4. 478

Q.12 Which of the following will be formed when dilute hydrochloric acid is added to a beaker having copper oxide?

Ans ☐ 1. A solution with green colour is formed due to the formation of copper (II) chloride.

☐ 2. A colourless solution is formed due to the formation of copper (II) chloride.

☐ 3. A solution with blue-green colour is formed due to the formation of copper (III) chloride.

☒ 4. A solution with blue-green colour is formed due to the formation of copper (II) chloride.

Q.13 Which sexually transmitted diseases are caused by a viruses?

Ans ☐ 1. Gonorrhoea and Syphilis

☐ 2. Warts and Gonorrhoea

☐ 3. Warts and AIDS

☒ 4. Syphilis and AIDS

Q.14 Given below is a cause followed by three effects numbered I, II and III. Read the cause carefully and decide which of the three can be a/the possible effect(s).

Cause - A major train accident occurred at Katpadi Junction last night, where seven bogies of G.T. Express derailed and fell across the tracks.

Effect I - Many trains on the Katpadi - Chennai route are running several hours late today.

Effect II - Long queues were seen at the railway ticket booking counters in Bangalore.

Effect III - Railways has decided to run two holiday special trains between Kolkata and Patna from October to December 2023.

Ans ☐ 1. Both II and III are possible effects.

☐ 2. Both I and II are possible effects.

☐ 3. Only II is a possible effect.

☒ 4. Only I is a possible effect.

Q.15 Which of the following statements is INCORRECT regarding metals?

- Ans
- ☐ 1. Metals are good conductors of heat.
 - ☐ 2. Metals have to be drawn into thin wires.
 - ☐ 3. Metals, in their pure state, have a shining surface.
 - ☒ 4. Lead and mercury are comparatively good conductors of heat.

Q.16 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 961 :: 34 : Y

- Ans
- ☒ 1. X = 41, Y = 576
 - ☐ 2. X = 39, Y = 529
 - ☐ 3. X = 47, Y = 729
 - ☐ 4. X = 45, Y = 625

Q.17 Select the correct pair from the following options.

- Ans
- ☐ 1. Object's resistance to change its state of motion—Gravitation
 - ☐ 2. Object's resistance to change its state of motion—Acceleration
 - ☒ 3. Object's resistance to change its state of motion—Inertia
 - ☐ 4. Object's resistance to change its state of motion—Momentum

Q.18 The book authored by Vijay Lokpally on Virat Kohli in the year 2023 is _____.

- Ans
- ☐ 1. The Cover Drive: The Virat Kohli Story (Revised and Updated World Cup Edition)
 - ☒ 2. Driven: The Virat Kohli Story (Revised and Updated World Cup Edition)
 - ☐ 3. The Straight Drive: The Virat Kohli Story (Revised and Updated World Cup Edition)
 - ☐ 4. The Cover Shot: The Virat Kohli Story (Revised and Updated World Cup Edition)

Q.19 In the word HYPNOTIC, each letter of the word is changed to the letter immediately succeeding it in the English alphabetical order and then the new group of letters thus formed is rearranged according to the English alphabetical order. Which letter is second to the left in the new rearranged group of letters?

- Ans
- ☒ 1. I
 - ☐ 2. J
 - ☐ 3. D
 - ☐ 4. O

Q.20 In 2023, 'Garba' was declared as an intangible cultural heritage by UNESCO. Which of the following states is Garba from?

- Ans
- ☐ 1. West Bengal
 - ☐ 2. Kerala
 - ☒ 3. Gujarat
 - ☐ 4. Assam

Q.21 The angle of elevation of the top of a small tree from a point on the ground 300 m away from the foot of the tree was 30° . When the tree grew taller, its angle of elevation became 60° from the same point. By how much did the tree grow?

- Ans**
- ☒ 1. $200\sqrt{3}$ m
 - ☐ 2. $\frac{200}{\sqrt{3}}$ m
 - ☐ 3. $\frac{100}{\sqrt{3}}$ m
 - ☐ 4. $100\sqrt{3}$ m

Q.22 DEF is related to CDE in a certain way. In the same way, MNO is related to LMN. To which of the following options is UVW related, following the same logic?

- Ans**
- ☐ 1. FED
 - ☐ 2. EFD
 - ☒ 3. TUV
 - ☐ 4. FDE

Q.23 If 'A' stands for '+', 'B' stands for ' $\times$ ', 'C' stands for '+', and 'D' stands for ' $-$ ', what will come in place of the question mark '?' in the following equation?

$$61 \text{ D } 39 \text{ C } 14 \text{ C } (62 \text{ A } 2) \text{ B } 4 = ?$$

- Ans**
- ☐ 1. 145
 - ☐ 2. 110
 - ☒ 3. 160
 - ☐ 4. 180

Q.24 If each vowel in the word PARKING is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order, then which of the following letters will be third from the left in the group of letters thus formed?

- Ans**
- ☐ 1. O
 - ☒ 2. S
 - ☐ 3. J
 - ☐ 4. L

Q.25 India's rank in the Corruption Perceptions Index (CPI) improved from ____ in 2022 to ____ in 2023.

- Ans**
- ☐ 1. 85; 40
 - ☐ 2. 40; 39
 - ☒ 3. 85; 93
 - ☐ 4. 93; 85

Q.26 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.)

- Ans**
- ☐ 1. RXU
 - ☐ 2. GMJ
 - ☒ 3. BHF
 - ☐ 4. KQN

Q.27 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. A sits fifth from the right end. Only two people sit between E and A. C is an immediate neighbour of G and E. B sits to the immediate right of F. How many people sit between D and B?

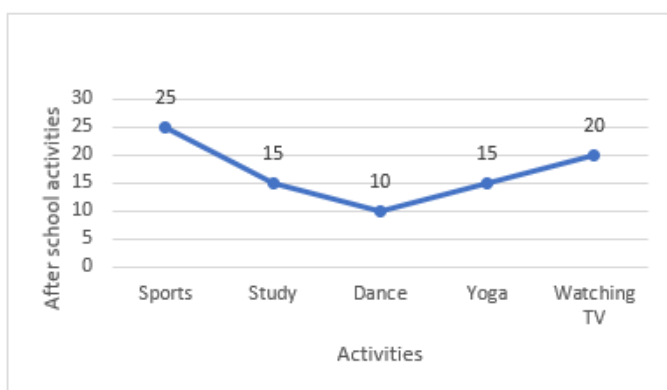
- Ans**
- ☐ 1. Three
 - ☐ 2. Two
 - ☒ 3. Four
 - ☐ 4. One

Q.28 The relation between focal length 'f', object distance 'u' and image distance 'v' in the case of reflection of light by a spherical mirror is given by _____.

- Ans**
- ☒ 1. $1/f = (1/u) + (1/v)$
 - ☐ 2. $1/f = (1/v) - (1/u)$
 - ☐ 3. $1/f = (1/u) - (1/v)$
 - ☐ 4. $1/f = (uv)/(u+v)$

Q.29 Study the given graph and answer the question that follows.

The graph shows the number of students involved in different after-school activities.



What is the average number of students participating in Sports and Yoga?

- Ans**
- ☐ 1. 30
 - ☒ 2. 20
 - ☐ 3. 40
 - ☐ 4. 50

Q.30 In which of the following are CFCs NOT used?

- Ans**
- ☐ 1. Aerosol sprays
 - ☒ 2. Fire extinguishers
 - ☐ 3. Grinders
 - ☐ 4. Refrigerators

Q.31 In the word BLEACH, each consonant is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order. Which of the following letters is repeated twice in the new group of letters thus formed?

- Ans**
- ☐ 1. F
 - ☐ 2. K
 - ☒ 3. B
 - ☐ 4. A

Q.32 What constant speed should be maintained in order to reach a distance of 600 km in 10 hrs?

- Ans**
- ☐ 1. 85 km/h
 - ☐ 2. 80 km/h
 - ☒ 3. 60 km/h
 - ☐ 4. 50 km/h

Q.33 Select the correct balanced equation option for the reaction $\text{Fe} + \text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + \text{H}_2$.

- Ans**
- ☒ 1. $3\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$
 - ☐ 2. $2\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$
 - ☐ 3. $4\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$
 - ☐ 4. $3\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 2\text{H}_2$

Q.34 The particles size of a solution is:

- Ans**
- ☐ 1. smaller than 100 nm in diameter
 - ☒ 2. smaller than 1 nm in diameter
 - ☐ 3. smaller than 28 nm in diameter
 - ☐ 4. smaller than 52 nm in diameter

Q.35 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

ACDF, GIJL, MOPR, SUVX, YABD, ?

- Ans**
- ☐ 1. EGFJ
 - ☐ 2. EFHJ
 - ☒ 3. EGHJ
 - ☐ 4. EGIK

Q.36 In October 2023, Prime Minister Narendra Modi formally announced India's interest in bidding for the _____ Olympics at the 141st IOC Session.

- Ans**
- ☐ 1. 2028
 - ☐ 2. 2032
 - ☒ 3. 2036
 - ☐ 4. 2040

Q.37 Which of the following organisations is responsible for the development of the Long-Range Glide Bomb (LRGB), GAURAV, tested in August 2024?

- Ans**
- ✓ 1. Defence Research and Development Organisation (DRDO)
 - ✗ 2. Hindustan Aeronautics Limited (HAL)
 - ✗ 3. Indian Space Research Organisation (ISRO)
 - ✗ 4. Indian Navy

Q.38 Which of the following statements is/are correct?

Statements:

I) The mass of an object is the same as its weight.

II) The mass of an object is not the same as its weight.

III) Mass is scalar quantity, whereas weight is vector quantity.

- Ans**
- ✗ 1. Statement III
 - ✓ 2. Statements II and III
 - ✗ 3. Statements I and III
 - ✗ 4. Statements I and II

Q.39 In a certain code language, 'LOBE' is coded as '2653' and 'BORE' is coded as '6823'. What is the code for 'L' in the given code language?

- Ans**
- ✗ 1. 3
 - ✗ 2. 8
 - ✓ 3. 5
 - ✗ 4. 2

Q.40 If $25 : x :: x : 36$, and $x > 0$, then what is the value of x ?

- Ans**
- ✓ 1. 30
 - ✗ 2. 27
 - ✗ 3. 21
 - ✗ 4. 18

Q.41 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BDG, DFI, FHK, HJM, JLO, ?

- Ans**
- ✗ 1. OPR
 - ✗ 2. NLQ
 - ✓ 3. LNQ
 - ✗ 4. POR

Q.42 If $(584)^2 = 3,41,056$, then the value of square root of 34.1056 is:

- Ans**
- ✗ 1. 0.584
 - ✓ 2. 5.84
 - ✗ 3. 0.0584
 - ✗ 4. 0.000584

Q.43 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All bees are insects.

All bees are hives.

Conclusions:

(I) Some hives are insects.

(II) All hives are bees.

Ans ☒ 1. Neither conclusion (I) nor (II) follows

☒ 2. Only conclusion (I) follows

☒ 3. Only conclusion (II) follows

☒ 4. Both conclusions (I) and (II) follow

Q.44 A, B, C, D, E and F are sitting around a circular table facing the centre. E sits to the immediate right of D. A is an immediate neighbour of B and D. F sits second to the right of D. What is the position of C with respect to D?

Ans ☒ 1. Second to the right

☒ 2. Second to the left

☒ 3. Third to the left

☒ 4. Immediate left

Q.45 Who coined the term 'protoplasm' for the fluid substance of the cell?

Ans ☒ 1. Robert Hooke

☒ 2. Purkinje

☒ 3. Robert Brown

☒ 4. Virchow

Q.46 Ravi and Kumar are working on an assignment. Ravi takes 6 hours to type 32 pages on a computer, while Kumar takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages?

Ans ☒ 1. 8 hours

☒ 2. 8 hours 25 minutes

☒ 3. 7 hours 30 minutes

☒ 4. 8 hours 15 minutes

Q.47 Why does carbon make a stable compound?

Ans ☒ 1. Due to higher enthalpy carbon forms strong bonds.

☒ 2. Due to small size carbon forms strong bonds.

☒ 3. Due to big size carbon forms strong bonds.

☒ 4. Due to higher electronegativity carbon forms strong bonds.

Q.48 Amita is 2 years older than her friend Amrita. Amita's father is twice as old as Amita, and Amrita is twice as old as her sister. The ages of Amita's father and Amrita's sister differ by 43 years. The sum of the ages (in years) of Amita and Amrita is:

- Ans**
- ☐ 1. 68
 - ☒ 2. 54
 - ☐ 3. 64
 - ☐ 4. 50

Q.49 IIT Bombay and _____ have partnered to develop India's first Quantum Diamond Microchip Imager.

- Ans**
- ☐ 1. Google
 - ☒ 2. TCS
 - ☐ 3. Mahindra and Mahindra
 - ☐ 4. L&T

Q.50 CYBS is related to GWFQ in a certain way based on the English alphabetical order. In the same way, KUJO is related to OSNM. To which of the following options is SQRK related, following the same logic?

- Ans**
- ☐ 1. UOWH
 - ☒ 2. WОВI
 - ☐ 3. UPVH
 - ☐ 4. VNWJ

Q.51 When 10% of the inhabitants of a village died of cholera, a panic set in, during which 25% of the remaining inhabitants left the village. The population then reduced to 4050. Find the number of original inhabitants.

- Ans**
- ☐ 1. 7000
 - ☐ 2. 5000
 - ☒ 3. 6000
 - ☐ 4. 8000

Q.52 The highest common factor of a set of coprime numbers is equal to:

- Ans**
- ☐ 1. the lowest among them
 - ☐ 2. 2
 - ☐ 3. the highest among them
 - ☒ 4. 1

Q.53 Which of the following statements is INCORRECT about Rutherford's model of an atom?

- Ans**
- ☒ 1. Electrons revolve around the nucleus in elliptical paths.
 - ☐ 2. There is a positively charged centre in an atom, which is called the nucleus.
 - ☐ 3. The size of the nucleus is very small as compared to that of the atom.
 - ☐ 4. Electrons revolve around the nucleus in circular paths.

Q.54 In 2024, which company entered into a Memorandum of Understanding (MoU) with iCreate to promote AI startups in India?

- Ans**
- ☐ 1. Meta
 - ☒ 2. Microsoft
 - ☐ 3. Google
 - ☐ 4. Infosys

Q.55 The radius of a cylinder is 5 cm more than its height. If the curved surface area of the cylinder is 792 cm^2 , then the volume of the cylinder (in cm^3), is _____. [Use $\pi = \frac{22}{7}$]

- Ans
- ☐ 1. 5306
 - ☐ 2. 5254
 - ☒ 3. 5544
 - ☐ 4. 5712

Q.56 Seven boxes A, B, C, D, E, F and G are kept one over the other but not necessarily in the same order. G is kept third from the bottom. Only two boxes are kept between C and E. A is kept immediately above D. D is kept at one of the positions above G. Only two boxes are kept between B and E. B is not kept at the top-most position.

How many boxes are kept between D and B?

- Ans
- ☐ 1. Two
 - ☐ 2. Four
 - ☒ 3. Three
 - ☐ 4. One

Q.57 A trader lost 20% by selling a watch for ₹1,024. What percentage will he gain by selling it for ₹1,472?

- Ans
- ☐ 1. 12%
 - ☐ 2. 20%
 - ☒ 3. 15%
 - ☐ 4. 10%

Q.58 Simplify the following expression:

$$(a + 2b - c)(b - c) + (a - c)2b + b^2$$

- Ans
- ☐ 1. $3ab - 5bc - ac - 2abc$
 - ☐ 2. $2b^2 + 3ab - 4bc + c$
 - ☐ 3. $3b^2 + 3ab - 5bc - ac$
 - ☒ 4. $3b^2 + c^2 + 3ab - 5bc - ac$

Q.59 Three years ago, the average age of a family of six members was 19 years. Since then a boy has been born and the average age of the family is the same today as it was three years ago. What is the age of the boy?

- Ans
- ☒ 1. 1 year
 - ☐ 2. 2 years
 - ☐ 3. 2.5 years
 - ☐ 4. 1.5 years

Q.60 If a sum of money doubles itself in 10 years on compound interest, then in how many years will it become 16 times of itself at the same rate of interest?

- Ans
- ☐ 1. 10
 - ☐ 2. 30
 - ☒ 3. 40
 - ☐ 4. 20

Q.61 The 2024 philately scholarship scheme was launched by the Department of Posts under the _____.

- Ans
- ☐ 1. Pradhan Mantri Kaushal Vikas Yojana
 - ☒ 2. Deen Dayal SPARSH Yojan
 - ☐ 3. Digital India Program
 - ☐ 4. Sarva Shiksha Abhiyan

Q.62 From a 2.25-litre mango drink bottle, how many small glasses of 45 ml can be filled?

- Ans
- ☐ 1. 40
 - ☒ 2. 50
 - ☐ 3. 45
 - ☐ 4. 55

Q.63 Select the set, from the given options, in which the numbers are related in the same way as are the numbers of the following sets.

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

(11, 44, 2)

(6, 54, 3)

- Ans
- ☐ 1. (12, 72, 3)
 - ☐ 2. (7, 98, 2)
 - ☒ 3. (2, 32, 4)
 - ☐ 4. (10, 50, 5)

Q.64 Magnification produced by a spherical mirror is equal to _____.

- Ans
- ☐ 1. Object distance $\times$ image distance
 - ☐ 2. Height of the image $\times$ height of the object
 - ☐ 3. $\frac{\text{Object distance}}{\text{Image distance}}$
 - ☒ 4. $\frac{\text{Height of the image}}{\text{Height of the object}}$

Q.65 Which department's Disaster Management Division organised the conference on 'Experience Sharing and Capacity Building in Disaster Management' in August 2024?

- Ans
- ☐ 1. Ministry of Communications
 - ☐ 2. National Institute of Disaster Management (NIDM)
 - ☐ 3. National Disaster Response Force (NDRF)
 - ☒ 4. Department of Telecommunications (DoT)

Q.66 The tax on a commodity is reduced by 10%, but its consumption is increased by 20%. The percentage increase in the tax revenue derived from it is:

- Ans
- ☒ 1. 8%
 - ☐ 2. 15%
 - ☐ 3. 20%
 - ☐ 4. 10%

Q.67 The angles of a quadrilateral are in the ratio 2 : 5 : 7 : 10. Find the difference between the greatest and the smallest angles of the quadrilateral.

Ans ✓ 1. 120°

✗ 2. 50°

✗ 3. 60°

✗ 4. 180°

Q.68 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All oceans are rivers.

Some rivers are ponds.

Conclusions:

(I) All ponds are oceans.

(II) Some oceans are ponds.

Ans ✗ 1. Only conclusion (I) follows.

✗ 2. Only conclusion (II) follows.

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

✗ 4. Both conclusions (I) and (II) follow.

Q.69 Which organelle is found ONLY in plant cells?

Ans ✓ 1. Mitochondria

✗ 2. Lysosome

✗ 3. Chloroplast

✗ 4. Nucleus

Q.70 Two angles are complementary. The larger angle is 6° less than five times the measure of the smaller angle. What is the measure of the larger angle?

Ans ✓ 1. 74°

✗ 2. 63°

✗ 3. 66°

✗ 4. 87°

Q.71 An article is sold for ₹ x after offering two successive discounts of 25% and 8% on its marked price of ₹500. The value of x is:

Ans ✓ 1. 345

✗ 2. 300

✗ 3. 285

✗ 4. 280

Q.72 In a certain code language, 'lost in space' is coded as 'vp dc ez' and 'never get lost' is coded as 'gb ez cy'. What is the code for 'lost' in the given code language?

- Ans**
- ☐ 1. dc
 - ☐ 2. gb
 - ☐ 3. vp
 - ☒ 4. ez

Q.73 The work done in moving 10 coulomb charges across the potential difference of 5 volts is _____.

- Ans**
- ☒ 1. 50 joules
 - ☐ 2. 5 joules
 - ☐ 3. 20 joules
 - ☐ 4. 2 joules

Q.74 Which of the following statements refer/s to the law of conservation of energy?

Statements:

I) Energy can be converted from one form to another form of energy.

II) Energy can neither be created nor destroyed.

- Ans**
- ☐ 1. Only Statement I
 - ☒ 2. Both Statements I and II
 - ☐ 3. Neither Statement I nor II
 - ☐ 4. Only Statement II

Q.75 Select the INCORRECT pair regarding Asexual reproduction

- Ans**
- ☐ 1. Yeast – spore formation
 - ☐ 2. Plasmodium – multiple fission
 - ☒ 3. Hydra – multiple fission
 - ☐ 4. Leishmania – binary fission

2024/12/02-19:58:40



Test Center Name	iON Digital Zone iDZ Kannur
Test Date	26/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Where does the centre of curvature of a concave mirror lie?

- Ans
- ☐ 1. At the centre of the mirror
 - ☐ 2. At the edge of the mirror
 - ☐ 3. Behind the mirror
 - ☒ 4. In front of the mirror

Q.2 If a regular polygon has 35 diagonals, then the sum of its interior angles is:

- Ans
- ☐ 1. 1980°
 - ☒ 2. 1440°
 - ☐ 3. 1800°
 - ☐ 4. 1620°

Q.3 For a data, if the mean is 28.5 and the median is 32, then the mode using empirical formula is:

- Ans
- ☐ 1. 41
 - ☐ 2. 42
 - ☒ 3. 39
 - ☐ 4. 40

Q.4 Select the correct law for the following statement.

During a chemical reaction mass is neither created nor destroyed.

- Ans
- ☐ 1. Law of thermodynamic
 - ☒ 2. Law of conversation of mass
 - ☐ 3. Henry's Law
 - ☐ 4. Charles Law

Q.5 Which award has been conferred to Narayan Chakraborty for his contribution in Science and Engineering in 2024?

- Ans**
- ☒ 1. Padma Shri
 - ☐ 2. Padma Vibhusan
 - ☐ 3. Bharat Ratna
 - ☐ 4. Padma Bhushan

Q.6 The value of $(0.000001)^{1/3}$ is:

- Ans**
- ☐ 1. 0.000001
 - ☐ 2. 0.001
 - ☐ 3. 0.1
 - ☒ 4. 0.01

Q.7 A cyclist covers 2.5 km in 4 minutes 10 seconds. How long will he take to cover 6 km at the same speed?

- Ans**
- ☐ 1. 11 minutes
 - ☐ 2. 12 minutes
 - ☒ 3. 10 minutes
 - ☐ 4. 9 minutes

Q.8 A invests ₹8,000 and B invests ₹11,000 at the same rate of simple interest per annum. If, at the end of 3 years, B gets ₹720 more interest than A, then find the rate of simple interest per annum.

- Ans**
- ☐ 1. 6%
 - ☒ 2. 8%
 - ☐ 3. 12%
 - ☐ 4. 10%

Q.9 Which physical quantity represents the rate at which electric energy is dissipated or consumed in an electric circuit?

- Ans**
- ☒ 1. Electric power
 - ☐ 2. Potential difference
 - ☐ 3. Heat energy
 - ☐ 4. Electrical energy

Q.10 JHFDA is related to OMKIF in a certain way based on the English alphabetical order. In the same way, NLJHE is related to SQOMJ. To which of the following options is KIGEB related, following the same logic?

- Ans**
- ☐ 1. QOMKI
 - ☐ 2. QOMKH
 - ☒ 3. PNLJG
 - ☐ 4. PNLJH

Q.11 If each consonant in the word DANCER is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order, then which of the following letters is repeated twice in the new group of letters thus formed?

- Ans**
- ☐ 1. M
 - ☐ 2. C
 - ☒ 3. B
 - ☐ 4. Q

Q.12 Which of the following organisms reproduces by budding?

- Ans
- ☐ 1. Cockroach
 - ☐ 2. Frog
 - ☐ 3. Earthworm
 - ☒ 4. Hydra

Q.13 Find the median of the data 11, 16, 33, 15, 51, 19, 71, 75, 21, 17.

- Ans
- ☐ 1. 22
 - ☐ 2. 24
 - ☐ 3. 18
 - ☒ 4. 20

Q.14 A car moves with a uniform velocity (v) in a particular direction for a distance (s) under the action of a force (F) acting in the same direction. The work done by the force will be:

- Ans
- ☐ 1. Fv
 - ☒ 2. Fs
 - ☐ 3. $-Fs$
 - ☐ 4. $-Fv$

Q.15 Simplify the following expression:

$$\frac{4.33 \times 4.33 - 2.65 \times 2.65}{1.68}$$

- Ans
- ☐ 1. 6.99
 - ☐ 2. 6.94
 - ☒ 3. 6.98
 - ☐ 4. 6.96

Q.16 The relation between thrust (T), pressure (P) and area (A) of an object in a given medium is _____.

- Ans
- ☐ 1. $T = P + A$
 - ☒ 2. $T = P \times A$
 - ☐ 3. $T = P / (A \times A)$
 - ☐ 4. $T \times A = P$

Q.17 RGEL is related to SIHO in a certain way based on the English alphabetical order. In the same way, VOQX is related to WQTA. To which of the following options is YUZG related, following the same logic?

- Ans
- ☐ 1. ZYCJ
 - ☒ 2. ZWCJ
 - ☐ 3. ZYBJ
 - ☐ 4. ZWCK

Q.18 As of September 2024, who among the following cricketers (men) is India's second highest wicket taker in the Test Matches?

- Ans
- ☐ 1. Harbhajan Singh
 - ☒ 2. R Ashwin
 - ☐ 3. Kapil Dev
 - ☐ 4. Anil kumble

- Q.19** In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

The price of wheat has been steadily rising across the country since the last 3 weeks, due to shortages reported from major wholesale markets.

Courses of Action:

(I) The Government should set up an urgent investigation to check the reasons for the shortages.

(II) The Government should provide oil at subsidised rates to citizens till wheat supplies are restored.

Ans ☒ 1. Only II follows

☒ 2. Only I follows

☒ 3. Neither I nor II follows

☒ 4. Both I and II follow

- Q.20** If a person can see far objects distinctly but cannot see nearby objects clearly, then this eye defect can be corrected by using _____.

Ans ☒ 1. a plane mirror

☒ 2. a concave lens of suitable power

☒ 3. a plane glass plate

☒ 4. a convex lens of suitable power

- Q.21** The income of X is 60% more than Y's income and the income of Y is 40% more than Z's income. By what percentage is X's income more than Z's income?

Ans ☒ 1. 124%

☒ 2. 134%

☒ 3. 234%

☒ 4. 224%

- Q.22** As of September 2024, who among the following Indian Cricketers has a record of scoring 6 centuries and 522 wickets in test cricket to his credit?

Ans ☒ 1. Ravichandra Ashwin

☒ 2. Hardik Pandya

☒ 3. Akshar Patel

☒ 4. Ravindra Jadeja

- Q.23** Two numbers are in the ratio 3 : 2. Their LCM and HCF are 24 and 4, respectively. The greater of the two numbers is:

Ans ☒ 1. 8

☒ 2. 12

☒ 3. 14

☒ 4. 10

Q.24 In a row of people, Marshall is sitting 13th from the left end and 36th from the right end. What is the total number of persons in the row?

- Ans**
- ✓ 1. 48
 - ✗ 2. 49
 - ✗ 3. 50
 - ✗ 4. 46

Q.25 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is same as that on the right side of ::?

(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.)

X : 30 :: 175 : Y

- Ans**
- ✗ 1. X = 145, Y = 38
 - ✓ 2. X = 160, Y = 33
 - ✗ 3. X = 180, Y = 44
 - ✗ 4. X = 195, Y = 27

Q.26 If the radius of a sphere is increased by 50%, find the increase percent in the volume.

- Ans**
- ✗ 1. 225%
 - ✗ 2. 337.5%
 - ✗ 3. 325%
 - ✓ 4. 237.5%

Q.27 Reflex arcs are formed in which part of the nervous system?

- Ans**
- ✗ 1. Medulla
 - ✗ 2. Fore brain
 - ✗ 3. Cerebellum
 - ✓ 4. Spinal cord

Q.28 The joint exercise involving the Indian Army's Kharga Corps and the Indian Air Force in 2024 was conducted in which state?

- Ans**
- ✗ 1. Gujarat
 - ✗ 2. Rajasthan
 - ✓ 3. Punjab
 - ✗ 4. Haryana

Q.29 If 9 lines of a print, in a column of a book, contain 36 words, how many words will a column of 51 lines contain?

- Ans**
- ✓ 1. 204
 - ✗ 2. 208
 - ✗ 3. 192
 - ✗ 4. 196

Q.30 What was the score for Goal 1 (No Poverty) in the 2023-24 SDG India Index?

- Ans**
- ☒ 1. 72
 - ☐ 2. 67
 - ☐ 3. 60
 - ☐ 4. 54

Q.31 In a certain code language, 'fair weather friend' is coded as 'kl ph gb' and 'best friend ever' is coded as 'ju fv kl'. How is 'friend' coded in the given language?

- Ans**
- ☐ 1. fv
 - ☐ 2. ph
 - ☐ 3. gb
 - ☒ 4. kl

Q.32 Which of the following statements is INCORRECT about sodium carbonate?

- Ans**
- ☐ 1. Sodium carbonate can be used as a cleaning agent for domestic purposes.
 - ☒ 2. Sodium carbonate is used to neutralise excess acid in the stomach.
 - ☐ 3. Sodium carbonate is used in glass, soap and paper industries.
 - ☐ 4. Sodium carbonate is used in the manufacture of sodium compounds, such as borax.

Q.33 If $a : b = 3 : 4$ and $b : c = 4 : 1$, then $a : b : c = ?$

- Ans**
- ☐ 1. 4 : 3 : 1
 - ☐ 2. 4 : 1 : 3
 - ☒ 3. 3 : 4 : 1
 - ☐ 4. 3 : 1 : 4

Q.34 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All engines are rockets.

All planes are rockets.

Conclusions:

(I) Some engines are planes.

(II) All planes are engines.

- Ans**
- ☐ 1. Only conclusion (I) follows
 - ☐ 2. Both conclusions (I) and (II) follow
 - ☒ 3. Neither conclusion (I) nor (II) follows
 - ☐ 4. Only conclusion (II) follows

Q.35 Blood brings carbon dioxide from the rest of the body for release into the:

- Ans
- ☐ 1. intestines
 - ☐ 2. stomach
 - ☒ 3. alveoli
 - ☐ 4. oesophagus

Q.36 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

24, 26, 30, 36, 44, ?

- Ans
- ☐ 1. 57
 - ☐ 2. 53
 - ☐ 3. 51
 - ☒ 4. 54

Q.37 A textbook has a total of 662 pages. It is divided into two parts. The second part of the book has 52 pages less than the first part. How many pages are there in the first part of the book?

- Ans
- ☐ 1. 324
 - ☒ 2. 357
 - ☐ 3. 372
 - ☐ 4. 305

Q.38 Simplify the expression: $\sin A + \frac{\cos A}{\tan(90 - A)}$

- Ans
- ☐ 1. $\tan A$
 - ☒ 2. $2\sin A$
 - ☐ 3. $\cot A$
 - ☐ 4. $2\operatorname{cosec} A$

Q.39 Town A lies to the southwest of Town R. Town D lies to the east of Town A. Town T lies to the southeast of Town D. Town R lies to the north of Town T. Town M lies to the southeast of Town T. What is the position of Town M with respect to Town D?

- Ans
- ☐ 1. Southwest
 - ☐ 2. Northwest
 - ☒ 3. Southeast
 - ☐ 4. Northeast

Q.40 In 2024, which bank partnered with Veefin Solutions to launch the SmartFin, a digital supply-chain finance platform?

- Ans
- ☐ 1. ICICI Bank
 - ☐ 2. HDFC Bank
 - ☒ 3. YES Bank
 - ☐ 4. UCO Bank

Q.41 Two plumbers, X and Y, are paid a total of ₹660 per day by their employer. If X is paid 120% of the sum paid to Y, then how much is Y paid per day?

- Ans**
- ☐ 1. ₹250
 - ☐ 2. ₹350
 - ☐ 3. ₹200
 - ☒ 4. ₹300

Q.42 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 521 :: 794 : Y

- Ans**
- ☐ 1. X = 628, Y = 594
 - ☐ 2. X = 698, Y = 612
 - ☐ 3. X = 674, Y = 588
 - ☒ 4. X = 659, Y = 656

Q.43 Burning of naphthalene on a spatula gives a _____.

- Ans**
- ☒ 1. yellow flame
 - ☐ 2. clean flame
 - ☐ 3. sooty flame
 - ☐ 4. red flame

Q.44 Under which Section of the Telecommunications Act, 2023, was the Universal Service Obligation Fund renamed as Digital Bharat Nidhi?

- Ans**
- ☐ 1. Section 20(1)
 - ☐ 2. Section 30(2)
 - ☐ 3. Section 12(3)
 - ☒ 4. Section 24(1)

Q.45 Variegated leaves are found in which of the following plants?

- Ans**
- ☐ 1. Banana
 - ☐ 2. Rose
 - ☐ 3. Neem
 - ☒ 4. Croton

Q.46 What was the unemployment rate in India for individuals aged 15 years and above from July 2023 to June 2024?

- Ans**
- ☐ 1. 3.1%
 - ☒ 2. 3.2%
 - ☐ 3. 3.0%
 - ☐ 4. 3.3%

Q.47 In Fleming's left hand rule, which physical quantity is represented by the middle finger?

- Ans**
- ☐ 1. Direction of force
 - ☒ 2. Direction of electric current
 - ☐ 3. Direction of the motion of conductor
 - ☐ 4. Direction of the magnetic field

Q.48 Which of the following metals are mixed with iron to get stainless steel?

- Ans**
- ☐ 1. nickel and zinc
 - ☐ 2. nickel and copper
 - ☒ 3. nickel and chromium
 - ☐ 4. nickel and tin

Q.49 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All clothes are rings.

No cloth is a bottle.

Conclusions:

(I) Some rings are bottles.

(II) Some rings are clothes.

- Ans**
- ☐ 1. Neither conclusion (I) nor (II) follows
 - ☐ 2. Both conclusions (I) and (II) follow
 - ☐ 3. Only conclusion (I) follows
 - ☒ 4. Only conclusion (II) follows

Q.50 The radius of the base and the height of a closed cylinder are in the ratio 1 : 3. Using $\pi = \frac{22}{7}$, find its total surface area if its curved surface area is 924 m^2 .

- Ans**
- ☐ 1. 1848 m^2
 - ☐ 2. 1512 m^2
 - ☒ 3. 1232 m^2
 - ☐ 4. 908 m^2

Q.51 A solution contains 40 ml of acid in 120 ml of water. Calculate the concentration in terms of volume by volume percentage of the solution.

- Ans**
- ☐ 1. 30%
 - ☐ 2. 45%
 - ☐ 3. 12%
 - ☒ 4. 25%

Q.52 Study the given table and answer the question that follows.

The table depicts new admissions in the Primary and Middle wings of a school in the years 2021 and 2022.

Years	New admission in Primary Wing	New admission in Middle Wing
2021	25	20
2022	12	15

How many new admissions were there in the Primary wing of the school in the years 2021 and 2022 together?

- Ans**
- ☐ 1. 33
 - ☐ 2. 35
 - ☒ 3. 37
 - ☐ 4. 31

Q.53 Solid CO_2 gets converted directly into the gaseous state upon decreasing the pressure to _____.

- Ans**
- ☐ 1. 3 atmosphere, without coming to the liquid state
 - ☐ 2. 4 atmosphere, without coming to the liquid state
 - ☒ 3. 1 atmosphere, without coming to the liquid state
 - ☐ 4. 2 atmosphere, without coming to the liquid state

Q.54 An article is sold for ₹ x after offering two successive discounts of 20% and 15% on its marked price of ₹500. The value of x is:

- Ans**
- ☐ 1. 280
 - ☐ 2. 345
 - ☒ 3. 340
 - ☐ 4. 285

Q.55 Which elements of xylem tissue form interconnected water-conducting channels?

- Ans**
- ☒ 1. Vessels and Tracheids
 - ☐ 2. Only Vessels
 - ☐ 3. Tracheids and Xylem fibres
 - ☐ 4. Vessels and Xylem fibres

Q.56 If each letter of the word WELDING is changed to the letter immediately succeeding it in the English alphabetical order and the new group of letters thus formed is rearranged in English alphabetical order, then which letter is the third from the left in the new rearranged group of letters?

- Ans**
- ☐ 1. J
 - ☐ 2. E
 - ☒ 3. H
 - ☐ 4. F

Q.57 Which of the following Indian states hosted the 2023 Hornbill Music Festival?

- Ans**
- ☐ 1. Gujarat
 - ☐ 2. Odisha
 - ☒ 3. Nagaland
 - ☐ 4. Kerala

Q.58 What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and '×' and '÷' are interchanged?

$$76 \div 4 + 108 \times 3 - 5 = ?$$

- Ans**
- ☐ 1. 265
 - ☐ 2. 271
 - ☒ 3. 273
 - ☐ 4. 275

Q.59 In a certain code language,

A + B means 'A is the mother 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'.

Based on the above, how is Q related to T if 'P - Q × R ÷ S + T'?

- Ans**
- ☒ 1. Mother's mother
 - ☐ 2. Mother's brother
 - ☐ 3. Mother
 - ☐ 4. Daughter

Q.60 In June 2024, which of the following Indian cities was officially recognised as World Craft City by the World Crafts Council?

- Ans**
- ☐ 1. Kolkata
 - ☐ 2. New Delhi
 - ☐ 3. Bhopal
 - ☒ 4. Srinagar

Q.61 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 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.)

- Ans**
- ☒ 1. SW-UY
 - ☐ 2. TW-UX
 - ☐ 3. LO-MP
 - ☐ 4. CF-DG

Q.62 Seven people, B, C, D, E, F, G, and K, are sitting in a straight line, facing north. Only K sits to the left of G. Only four people sit between K and C. Only E sits between F and D and F is not an immediate neighbour of C.

Who sits at the extreme right of the line?

- Ans**
- ☐ 1. F
 - ☐ 2. G
 - ☒ 3. B
 - ☐ 4. C

Q.63 If 'A' stands for '+', 'B' stands for '×', 'C' stands for '÷' and 'D' stands for '−', what will come in place of question mark '?' in the following equation?

$$92 \text{ D } 12 \text{ B } 3 \text{ C } (63 \text{ A } 3) \text{ D } 15 = ?$$

- Ans**
- ☒ 1. 62
 - ☐ 2. 80
 - ☐ 3. 78
 - ☐ 4. 54

Q.64 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

HKN, QTW, ZCF, ILO, ?

- Ans**
- ☐ 1. QTW
 - ☐ 2. QSU
 - ☒ 3. RUX
 - ☐ 4. RTV

Q.65 A moving body covers 10 m distance along a straight path in each second. The body is under which type of motion?

- Ans**
- ☒ 1. Uniform motion
 - ☐ 2. Uniformly accelerated motion
 - ☐ 3. Non-uniformly accelerated motion
 - ☐ 4. Circular motion

Q.66 In the word KNIGHT, each consonant is changed to the letter immediately succeeding it in the English alphabetical order and each vowel is changed to the letter immediately preceding it in the English alphabetical order. How many vowels are present in the new group of letters thus formed?

- Ans**
- ☐ 1. Four
 - ☐ 2. None
 - ☐ 3. Two
 - ☒ 4. Three

Q.67 Which of the following is obtained upon heating ferrous sulphate?

- Ans**
- ☒ 1. Ferric oxide, sulphur dioxide and sulphur trioxide
 - ☐ 2. ferric oxide and sulphur trioxide
 - ☐ 3. ferric oxide and sulphur dioxide
 - ☐ 4. Only ferric oxide

Q.68 Simplify: $3889 + 12.952 - 47.95$

- Ans**
- ☐ 1. 3853.892
 - ☐ 2. 3853.982
 - ☐ 3. 3854.012
 - ☒ 4. 3854.002

Q.69 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.)

- Ans**
- ☐ 1. UPR
 - ☐ 2. DYA
 - ☐ 3. LGI
 - ☒ 4. OKL

Q.70 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

FLB, IOE, LRH, OUK, ?

- Ans**
- ☐ 1. RXM
 - ☐ 2. RYN
 - ☒ 3. RXN
 - ☐ 4. RYM

Q.71 A, B, C, D, E and F are sitting around a circular table facing the centre. A sits second to the left of B. E sits to an immediate left of A. C sits to the immediate right of F. What is the position of C with respect to D?

- Ans**
- ☐ 1. Second to the right
 - ☒ 2. Third to the left
 - ☐ 3. Immediate right
 - ☐ 4. Second to the left

Q.72 A dishonest shopkeeper pretends to sell his goods at cost price. However, he uses a false weight on which 984 gm is written, but actually weighs lesser. Using this false weight, the shopkeeper makes a gain of 23%. The actual measure of the weight used is:

- Ans**
- ☐ 1. 850 gm
 - ☐ 2. 935 gm
 - ☒ 3. 800 gm
 - ☐ 4. 900 gm

Q.73 In a certain code language, 'KNEW' is coded as '4682' and 'KINE' is coded as '6238'. What is the code for 'I' in the given code language?

- Ans**
- ☒ 1. 3
 - ☐ 2. 6
 - ☐ 3. 8
 - ☐ 4. 2

Q.74 Which cell organelle serves as a channel for transport of material between various regions of cytoplasm?

- Ans**
- ☐ 1. Mitochondria
 - ☐ 2. Chloroplast
 - ☒ 3. Endoplasmic reticulum
 - ☐ 4. Lysosomes

Q.75 8 men and 12 women can build a wall in 10 days. 6 men and 8 women can build the same wall in 14 days. How many more days will 1 woman take to build that wall alone compared to the number of days 1 man will take to build the same wall alone?

- Ans**
- ✓ 1. 140 days
 - ✗ 2. 35 days
 - ✗ 3. 280 days
 - ✗ 4. 70 days

2024/12/02-20:10:29



Test Center Name	iON Digital Zone IDZ Karmanghat
Test Date	27/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 A dishonest shopkeeper pretends to sell his goods at cost price. However, he uses a false weight on which 200 gm is written, but which actually weighs lesser. Using this false weight, the shopkeeper makes a gain of 25%. The actual measure of the weight used is:

- Ans**
- ✓ 1. 160 gm
 - ✗ 2. 150 gm
 - ✗ 3. 200 gm
 - ✗ 4. 180 gm

Q.2 Which of the following is the highest award in the Rashtriya Vigyan Puraskar awards?

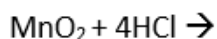
- Ans**
- ✗ 1. Vigyan Shri
 - ✗ 2. Vigyan Vajra
 - ✗ 3. Vigyan Mahan
 - ✓ 4. Vigyan Ratna

Q.3 Simplify the following expression:

$$\frac{4.32 \times 4.32 - 2.64 \times 2.64}{1.68}$$

- Ans**
- ✗ 1. 6.56
 - ✗ 2. 6.94
 - ✗ 3. 6.99
 - ✓ 4. 6.96

Q.4 Which of the following options represents the product(s) of the reaction given below?



Ans ☒ 1. Only MnCl_2

☒ 2. MnCl_2 , Cl_2 and $2\text{H}_2\text{O}$

☒ 3. Only H_2O

☒ 4. Only Cl_2

Q.5 If a man lifts 1 kg of load to the height of 2.5 m from the ground, then assuming acceleration due to gravity is 10 m/sec^2 , magnitude of the work done by the man is _____.

Ans ☒ 1. 2.5 joules

☒ 2. 25 joules

☒ 3. 0.25 joule

☒ 4. 4 joules

Q.6 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

No bike is a car.

All cars are planes.

Conclusions

(I) No plane is a bike.

(II) All planes are cars.

Ans ☒ 1. Only conclusion (I) follows

☒ 2. Both conclusions (I) and (II) follow

☒ 3. Only conclusion (II) follows

☒ 4. Neither conclusion (I) nor (II) follows

Q.7 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some bulbs are sands.

All bulbs are candles.

Conclusion:

(I) Some candles are bulbs.

(II) No candle is a sand.

- Ans**
- ✓ 1. Only conclusion (I) follows.
 - ✗ 2. Both conclusions (I) and (II) follow.
 - ✗ 3. Neither conclusion (I) nor (II) follows.
 - ✗ 4. Only conclusion (II) follows.

Q.8 Which of the following receptors help in the detection of taste?

- Ans**
- ✗ 1. Photoreceptors
 - ✗ 2. Olfactory receptors
 - ✓ 3. Gustatory receptors
 - ✗ 4. Phonoreceptors

Q.9 Which of the following statements is INCORRECT?

- Ans**
- ✓ 1. The oxygen supplied to hospitals in cylinders is not a compressed gas.
 - ✗ 2. Compressed natural gas (CNG) is used as a fuel in vehicles these days.
 - ✗ 3. The oxygen supplied to hospitals in cylinders is a compressed gas.
 - ✗ 4. In the gaseous state, the particles move about randomly at a high speed.

Q.10 Which of the following is the molecular mass of HNO_3 ?

- Ans**
- ✗ 1. 60 u
 - ✗ 2. 67 u
 - ✗ 3. 64 u
 - ✓ 4. 63 u

Q.11 If $x : y = 8 : 3$, then $(x + y) : (x - y) = ?$

- Ans**
- ✗ 1. 2 : 5
 - ✓ 2. 11 : 5
 - ✗ 3. 5 : 11
 - ✗ 4. 5 : 2

Q.12 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

GB-HC-JL

PK-QL-SU

- Ans**
- ☒ 1. SN-TO-VW
 - ☒ 2. NI-OJ-QR
 - ☒ 3. QL-RM-TV
 - ☒ 4. RM-SN-UV

Q.13 The distance between the centre of curvature and pole of a convex mirror of 1 m focal length is _____.

- Ans**
- ☒ 1. 1 m
 - ☒ 2. 2 m
 - ☒ 3. 0.5 m
 - ☒ 4. 1.5 m

Q.14 Which of the following compounds is obtained when gypsum is heated at 373 K?

- Ans**
- ☒ 1. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
 - ☒ 2. CaO
 - ☒ 3. $\text{CaSO}_4 \cdot (1/2 \text{H}_2\text{O})$
 - ☒ 4. $\text{CaSO}_4 \cdot 5\text{H}_2\text{O}$

Q.15 Which Indian city recorded the highest PM_{2.5} level in 2023, making it the most polluted metropolitan area globally?

- Ans**
- ☒ 1. Greater Noida
 - ☒ 2. Begusarai
 - ☒ 3. Mullanpur
 - ☒ 4. Guwahati

Q.16 On which date did the Department of Posts launch the philately scholarship scheme in 2024?

- Ans**
- ☒ 1. 5 September 2024
 - ☒ 2. 24 August 2024
 - ☒ 3. 15 August 2024
 - ☒ 4. 20 July 2024

Q.17 The LCM of two numbers is 84. If the numbers are in the ratio 2 : 3, then the sum of the numbers is:

- Ans**
- ☒ 1. 70
 - ☒ 2. 40
 - ☒ 3. 25
 - ☒ 4. 60

Q.18 The correct expression of 6.4646464646..... in the fractional form is:

- Ans
- ☐ 1. $\frac{640}{100}$
 - ☐ 2. $\frac{6464}{1000}$
 - ☒ 3. $\frac{640}{99}$
 - ☐ 4. $\frac{646}{99}$

Q.19 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 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.)

- Ans
- ☒ 1. MK-IO
 - ☐ 2. OM-KP
 - ☐ 3. IG-EJ
 - ☐ 4. RP-NS

Q.20 Membrane bound organelles are NOT present in:

- Ans
- ☒ 1. Only prokaryotic cells
 - ☐ 2. Only eukaryotic cells
 - ☐ 3. Both eukaryotic and prokaryotic cells
 - ☐ 4. Neither eukaryotic nor prokaryotic cells

Q.21 Why do covalently bonded compounds have low boiling point?

- Ans
- ☒ 1. Have strong covalent bond within molecules but weak intermolecular force
 - ☐ 2. Have strong covalent bond within molecules and also strong intermolecular force
 - ☐ 3. Have strong intermolecular force within molecules but weak covalent bond
 - ☐ 4. Have weak covalent bond within molecules but weak intermolecular force

Q.22 Which of the following singers was awarded the Padma Shri in 2024 for his significant contributions to Himachali folk and classical music?

- Ans
- ☐ 1. Mohit Chauhan
 - ☒ 2. Som Datt Battu
 - ☐ 3. Hansraj Raghuwanshi
 - ☐ 4. Kuldeep Sharma

Q.23 There are two classrooms, A and B. If 7 students are shifted from A to B, then B will have twice the number of students as A. If 3 students are sent from B to A, then both the classrooms will have the same number of students. The positive difference between the number of students in the two classrooms is:

- Ans
- ☐ 1. 5
 - ☒ 2. 6
 - ☐ 3. 8
 - ☐ 4. 7

- Q.24 The equivalent resistance of the series combination of R ohm and 5 ohm is 7 ohm. Here, R is _____.
- Ans ☒ 1. 5 ohm
☒ 2. 7 ohm
☒ 3. 2 ohm
☒ 4. 1 ohm
- Q.25 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?
- 24, 33, 44, 57, 72, ?
- Ans ☒ 1. 96
☒ 2. 100
☒ 3. 89
☒ 4. 94
- Q.26 What is required for the synthesis of thyroxine hormones?
- Ans ☒ 1. Bromine
☒ 2. Chlorine
☒ 3. Nickel
☒ 4. Iodine
- Q.27 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?
- FEB, KJG, POL, UTQ, ?
- Ans ☒ 1. ZXS
☒ 2. YZU
☒ 3. ZVU
☒ 4. ZYV
- Q.28 A retailer would have made a profit of 18% if he had sold an article at its marked price. If the marked price of the article is ₹826, then the cost price of the article is:
- Ans ☒ 1. ₹700
☒ 2. ₹800
☒ 3. ₹750
☒ 4. ₹650
- Q.29 RV11 is related to GK18 in a certain way. In the same way, DH29 is related to SW36. To which of the following options is PT22 related, following the same logic?
- Ans ☒ 1. FI29
☒ 2. FJ29
☒ 3. EI29
☒ 4. EJ29

Q.30 Which of the following animals shows the power of regeneration?

- Ans
- ☐ 1. Leech
 - ☒ 2. Planaria
 - ☐ 3. Earthworm
 - ☐ 4. Tick

Q.31 Given that one cubic cm of marble weighs 25 gms, the weight of a cuboidal marble block 28 cm in width and 5 cm thick is 112 kg. The length of the block is:

- Ans
- ☐ 1. 26.5 cm
 - ☒ 2. 32 cm
 - ☐ 3. 36 cm
 - ☐ 4. 37.5 cm

Q.32 48 men can do a work in 5 days while 40 women can do the same work in 9 days. In how many days can 4 men and 6 women together do the same work?

- Ans
- ☒ 1. 30 days
 - ☐ 2. 48 days
 - ☐ 3. 24 days
 - ☐ 4. 42 days

Q.33 What recent decision did the Union Cabinet make regarding the Ayushman Bharat PM-JAY scheme on 11 September 2024?

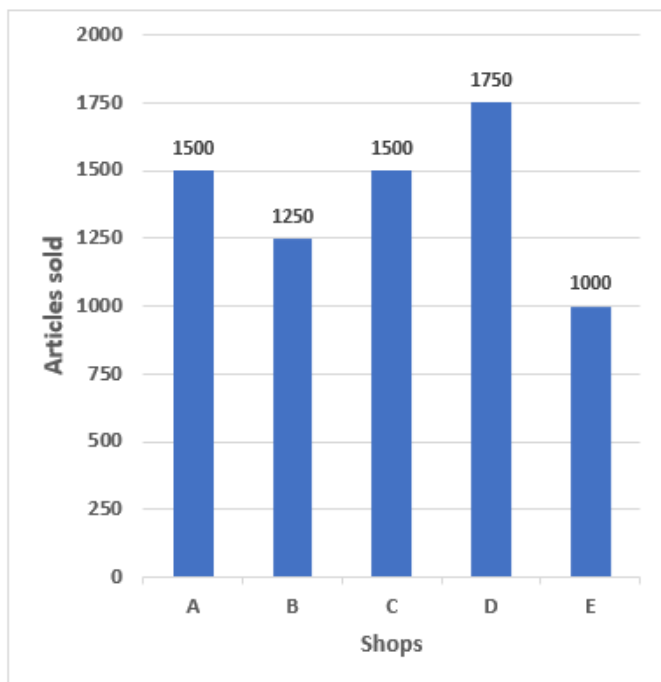
- Ans
- ☐ 1. To limit coverage to only low-income families
 - ☐ 2. To discontinue the scheme
 - ☐ 3. To increase the coverage amount for all citizens
 - ☒ 4. To extend benefits to all citizens aged 70 and above

Q.34 A person saves 30% of his monthly income. If his monthly income increases by 20%, then he saves 20% more than the previous savings. The percentage increase in his expenditure is ____.

- Ans
- ☐ 1. 30%
 - ☐ 2. 25%
 - ☐ 3. 16%
 - ☒ 4. 20%

Q.35 Study the following graph and answer the given question.

The graph shows the number of articles sold in a week by different shops.



What percentage of articles did shop C sell more than shop B?

- Ans ☒ 1. 20%
☒ 2. 50%
☒ 3. 40%
☒ 4. 30%

Q.36 $\frac{\cos 45^\circ}{\tan 30^\circ + \cot 60^\circ}$ is equal to:

- Ans ☒ 1. $\frac{\sqrt{3}}{\sqrt{2}}$
☒ 2. $\frac{\sqrt{3}}{\sqrt{2}(1-\sqrt{3})}$
☒ 3. $\frac{\sqrt{3}}{2\sqrt{2}}$
☒ 4. $\frac{\sqrt{3}}{\sqrt{2}(1+\sqrt{3})}$

Q.37 Which cell has changing shapes?

- Ans ☒ 1. Smooth muscle
☒ 2. Amoeba
☒ 3. Ovum
☒ 4. Nerve cell

Q.38 All 36 students in a class are standing in a row facing north. Preeti is 12th from the right end while Alisha is 22nd from the left end. How many people stand between Preeti and Alisha?

- Ans**
- ☒ 1. 3
 - ☒ 2. 2
 - ☒ 3. 5
 - ☒ 4. 1

Q.39 The value of $(36)^{1/6}$ is:

- Ans**
- ☒ 1. $(6)^{1/3}$
 - ☒ 2. 1
 - ☒ 3. 2
 - ☒ 4. $\sqrt{36}$

Q.40 Amita is 2 years elder than her friend Amrita. Amita's father is twice as old as Amita, and Amrita is twice as old as her sister. The ages of Amita's father and Amrita's sister differ by 43 years. The difference between the ages of Amita and Amrita is:

- Ans**
- ☒ 1. 2
 - ☒ 2. 3
 - ☒ 3. 4
 - ☒ 4. 1

Q.41 Seven people, B, C, D, E, F, G and K are sitting in a straight line, facing north. Only five people sit between B and K. G sits to the immediate left of K. Only one person sits between G and E. D sits at some place to the left of F but at some place to the right of C.

Who sits third from the left end of the line?

- Ans**
- ☒ 1. E
 - ☒ 2. D
 - ☒ 3. F
 - ☒ 4. C

Q.42 In a certain code language, 'DOTH' is coded as '3764' and 'HOLD' is coded as '7943'. What is the code for 'T' in the given code language?

- Ans**
- ☒ 1. 6
 - ☒ 2. 7
 - ☒ 3. 3
 - ☒ 4. 4

Q.43 The surface area of a sphere is $256\pi \text{ m}^2$. Find its diameter.

- Ans**
- ☒ 1. 8 m
 - ☒ 2. 4 m
 - ☒ 3. 12 m
 - ☒ 4. 16 m

Q.44 Which of the following statements is/are correct?

Statements:

I) Gravitational force between two objects is independent of the distance of separation between two objects.

II) Gravitational force between two objects is inversely proportional to the square of the distance of separation between two objects.

III) Gravitational force between two objects is directly proportional to the product of their masses.

Ans ☐ 1. Statements I, II and III

☐ 2. Statements I and II

☒ 3. Statements II and III

☐ 4. Statements I and III

Q.45 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Severe congestion is seen on the service road outside the apartment complex between 7.30 a.m. to 9 a.m. everyday due to many school buses from different schools picking up children from gate of the apartment complex. This is leading to a traffic jam, delaying many people travelling for work at this time.

Courses of Action:

(I) No school buses should be permitted on the service road from 7.30 a.m. to 9 a.m.

(II) School buses should be permitted to enter the society gates.

Ans ☐ 1. Both I and II follow

☐ 2. Only I follows

☐ 3. Only II follows

☒ 4. Neither I nor II follows

Q.46 Which of the following molecules acts as an information source for making proteins?

Ans ☐ 1. Ribonucleic acid

☐ 2. Phospholipids

☒ 3. Deoxyribonucleic acid

☐ 4. Carbohydrates

Q.47 If the refractive index of air, water and crown glass are n_1 , n_2 and n_3 , respectively, then _____.

Ans ☐ 1. $n_1 = n_2 < n_3$

☐ 2. $n_1 > n_2 > n_3$

☐ 3. $n_1 < n_2 = n_3$

☒ 4. $n_1 < n_2 < n_3$

- Q.48** Which of the following physical quantities is equivalent to the total path length covered by a moving body?
- Ans** ☐ 1. Speed
☐ 2. Displacement
☐ 3. Velocity
☒ 4. Distance
- Q.49** A, B, C, D, E and F are sitting around a circular table facing the centre. F sits second to the right of C. D is an immediate neighbour of E and F. A sits second to the left of B. What is the position of E with respect to C?
- Ans** ☐ 1. Immediate right
☒ 2. Second to the left
☐ 3. Third to the left
☐ 4. Second to the right
- Q.50** Who among the following was appointed as the Brand Ambassador of the Ministry of Ports, Shipping and Waterways of the Government of India?
- Ans** ☐ 1. Sarabjot Singh
☐ 2. P R Shreejesh
☐ 3. Neeraj Chopra
☒ 4. Manu Bhaker
- Q.51** In 2024, which country is cooperating with India to counter China's military assertiveness and has discussed technology transfer for UNICORN at the 2+2 ministerial dialogue?
- Ans** ☒ 1. Japan
☐ 2. Australia
☐ 3. The United States of America
☐ 4. France
- Q.52** If each consonant in the word PASTRY is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order, then how many vowels are present in the new group of letters thus formed?
- Ans** ☐ 1. Three
☐ 2. Two
☐ 3. None
☒ 4. One
- Q.53** 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 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.)
- Ans** ☐ 1. SC-NX
☒ 2. XF-SC
☐ 3. AK-VF
☐ 4. RB-MW

Q.54 The final match for Irani Trophy 2024-25, which was won by Mumbai, was conducted at _____.

- Ans
- ☐ 1. Hyderabad
 - ☐ 2. Ahmedabad
 - ☒ 3. Lucknow
 - ☐ 4. Patna

Q.55 Triangle ABC is similar to triangle DEF with $\frac{BC}{EF} = \frac{1}{4}$. Find $\frac{\text{Area (triangle DEF)}}{\text{Area (triangle ABC)}}$.

- Ans
- ☐ 1. $\frac{1}{16}$
 - ☒ 2. 16
 - ☐ 3. 4
 - ☐ 4. $\frac{1}{4}$

Q.56 If each vowel in the word ROMANCE is changed to the nearest consonant succeeding it in the English alphabetical order and each consonant is changed to the nearest vowel succeeding it in English alphabetical order, then which of the following letters is repeated twice in the new group of letters thus formed?

- Ans
- ☒ 1. O
 - ☐ 2. F
 - ☐ 3. U
 - ☐ 4. P

Q.57 A sum of money lent on simple interest becomes $\frac{7}{5}$ of itself in 4 years. Find the rate of interest per annum.

- Ans
- ☐ 1. 12%
 - ☐ 2. 15%
 - ☒ 3. 10%
 - ☐ 4. 6%

Q.58 In a certain code language,

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

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

A × B means 'A is the wife of B',

A ÷ B means 'A is the father of B',

and A # B means 'A is the daughter of B'.

How is Q related to J if 'Q + R - P × S ÷ T - J + K'?

- Ans
- ☐ 1. Father's mother
 - ☐ 2. Daughter's son
 - ☒ 3. Mother's mother
 - ☐ 4. Son's daughter

Q.59 Which of the following is an example of heterogeneous solution?

- Ans
- ✓ 1. Mixture of oil and water
 - ✗ 2. Lemonade
 - ✗ 3. Mixture of ethanol and water
 - ✗ 4. Tincture of iodine

Q.60 In 2023, India imported crude oil from which country, making payments in Indian Rupees (₹), as part of the Rupee-Dirham trade agreement?

- Ans
- ✗ 1. Qatar
 - ✓ 2. UAE
 - ✗ 3. Oman
 - ✗ 4. Russia

Q.61 Which two numbers should be interchanged to make the given equation correct?

$$63 - 45 + 14 + (81 \div 9) \times 4 + 18 \times 3 = 114$$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)

- Ans
- ✗ 1. 45 and 81
 - ✗ 2. 63 and 81
 - ✓ 3. 14 and 18
 - ✗ 4. 4 and 3

Q.62 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?

$$(32 \text{ P } 4) \text{ R } (21 \text{ P } 5) \text{ S } (9 \text{ Q } 3) \text{ P } 6 = ?$$

- Ans
- ✓ 1. 41
 - ✗ 2. 33
 - ✗ 3. 50
 - ✗ 4. 47

Q.63 In a certain code language, 'SKATE' is coded as '35186' and 'TAKER' is coded as '51623'. What is the code for 'R' in the given code language?

- Ans
- ✗ 1. 6
 - ✓ 2. 2
 - ✗ 3. 3
 - ✗ 4. 1

Q.64 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

$$X : 66 :: 9 : Y$$

- Ans
- ✗ 1. X = 9, Y = 81
 - ✓ 2. X = 8, Y = 83
 - ✗ 3. X = 7, Y = 80
 - ✗ 4. X = 8, Y = 81

Q.65 Q starts from Point A and drives 14 km towards the South. He then takes a left turn, drives 10 km, turns left and drives 9 km. He then takes a left turn and drives 7 km. He takes a final right turn, drives 5 km and stops at Point P. How far (shortest distance) and towards which direction should he drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)

- Ans**
- ☐ 1. 3 km towards the East
 - ☒ 2. 3 km towards the West
 - ☐ 3. 3 km towards the North
 - ☐ 4. 3 km towards the South

Q.66 The median of the observations 20, 23, 25, 30, 20, 31, 32, 35, 20, 41, 42, 43, 20, 20 and 20 is:

- Ans**
- ☐ 1. 26
 - ☐ 2. 23
 - ☐ 3. 28
 - ☒ 4. 25

Q.67 If 60% of a number is added to 120, then the result is the number itself. 60% of this number is _____.

- Ans**
- ☐ 1. 200
 - ☒ 2. 180
 - ☐ 3. 320
 - ☐ 4. 300

Q.68 If each vowel in the word WEIGHT is changed to the letter immediately succeeding it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. Which of the following letters is repeated twice in the new group of letters thus formed?

- Ans**
- ☐ 1. G
 - ☐ 2. V
 - ☐ 3. J
 - ☒ 4. F

Q.69 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BDF, IKM, PRT, WYA, ?

- Ans**
- ☐ 1. CEG
 - ☐ 2. CFI
 - ☒ 3. DFH
 - ☐ 4. DGJ

Q.70 Two people drive towards each other from two places which are 56 km apart. The speed of the first person is 12 km/h and the speed of the other is 14 km/h. After how long will they be 4 km apart if they start driving at the same time?

- Ans**
- ☐ 1. 1 hour
 - ☐ 2. 2 hours 10 minutes
 - ☒ 3. 2 hours
 - ☐ 4. 1 hour 30 minutes

Q.71 The Artisan Mahakumbh 2024, organised by the Government of India in Mumbai, was held to promote artisans under which of the following schemes?

- Ans**
- ☐ 1. Pradhan Mantri Kaushal Vikas Yojana
 - ☒ 2. USTAAD (Upgrading the Skills and Training in Traditional Arts/Crafts for Development)
 - ☐ 3. Scheme of Fund for Regeneration of Traditional Industries (SFURTI)
 - ☐ 4. Prime Minister's Employment Generation Programme

Q.72 Which of the following metals is more reactive towards dilute hydrochloric acid?

- Ans**
- ☐ 1. Zn
 - ☐ 2. 
 - ☐ 3. Al
 - ☒ 4. Mg

Q.73 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

(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.)

X : 192 :: 34 : Y

- Ans**
- ☐ 1. X = 45, Y = 136
 - ☐ 2. X = 48, Y = 128
 - ☐ 3. X = 52, Y = 102
 - ☒ 4. X = 59, Y = 117

Q.74 If the mean of a data is 65 and its mode is 23, then the median using empirical formula is:

- Ans**
- ☐ 1. 54
 - ☐ 2. 53
 - ☒ 3. 51
 - ☐ 4. 52

Q.75 Which of the following statements about magnetic field is correct?

- Ans**
- ☐ 1. It is always in the form of straight lines.
 - ☐ 2. It only exists outside the magnet.
 - ☒ 3. Its direction at any point is measured by a magnetic compass.
 - ☐ 4. It is a scalar quantity.

2024/12/02-22:09:17



Test Center Name	ION Digital Zone IDZ KIOT-Campus
Test Date	27/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Which of the following products are formed when sodium sulphate reacts with barium chloride?

- Ans**
- ☒ 1. Black precipitate of BaSO_4 and 2NaCl (aq)
 - ☒ 2. Yellow precipitate of BaSO_4 and 2NaCl (aq)
 - ☒ 3. White precipitate of BaSO_4 and 2NaCl (aq)
 - ☒ 4. Brown precipitate of BaSO_4 and 2NaCl (aq)

Q.2 In June 2024, the Indian Army opened the Khalubar War Memorial to tourists, which is located in ____, India.

- Ans**
- ☒ 1. Chandigarh
 - ☒ 2. Bengaluru
 - ☒ 3. New Delhi
 - ☒ 4. Ladakh

Q.3 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

LG-MH-OP

HC-ID-KL

- Ans**
- ☒ 1. ID-JE-LN
 - ☒ 2. JE-KF-MN
 - ☒ 3. OJ-PK-RT
 - ☒ 4. KF-LG-NP

Q.4 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.)

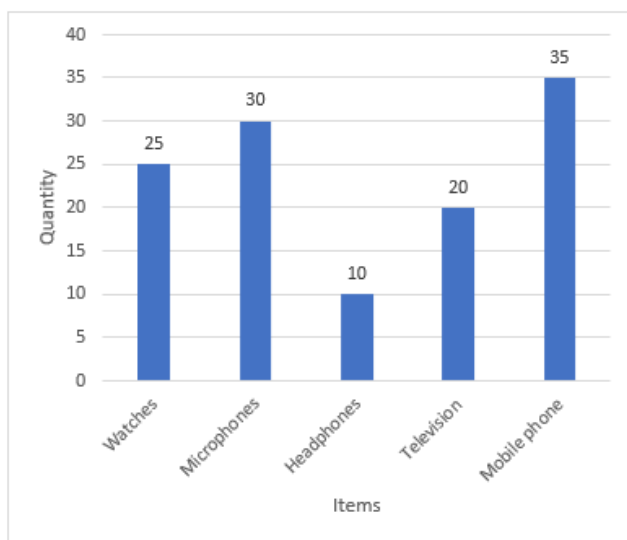
- Ans**
- ☒ 1. LOT
 - ☒ 2. CGK
 - ☐ 3. SVA
 - ☐ 4. GJO

Q.5 The internal bisectors of $\angle Q$ and $\angle R$ of $\triangle PQR$ meet at S. If $m\angle P = 75^\circ$, then $m\angle QSR$ is:

- Ans**
- ☒ 1. 127.5°
 - ☐ 2. 105.5°
 - ☐ 3. 112.5°
 - ☐ 4. 102.5°

Q.6 Study the following graph and answer the given question.

The bar graph shows the number of different items sold by a shopkeeper in their respective quantities.



What is the total units of Headphones and Mobile phones sold put together?

- Ans**
- ☒ 1. 45
 - ☐ 2. 35
 - ☐ 3. 15
 - ☐ 4. 25

Q.7 Which instrument can be used to give the direction of magnetic field lines at any given point?

- Ans**
- ☐ 1. Solenoid
 - ☒ 2. Magnetic compass
 - ☐ 3. Generator
 - ☐ 4. Electric motor

Q.8 A man sells an article at a profit of 25%. If he had bought it at 20% less and sold it for ₹10.50 less, he would have gained 30%. Find the cost price of the article.

- Ans**
- ☒ 1. ₹100
 - ☒ 2. ₹50
 - ☐ 3. ₹25
 - ☐ 4. ₹125

Q.9 Which of the following hormones stimulates the growth of all organs?

- Ans**
- ☒ 1. Growth hormone
 - ☐ 2. Insulin
 - ☐ 3. Adrenaline
 - ☐ 4. Glucagon

Q.10 If the surface area of a sphere is $2124\frac{4}{7} \text{ cm}^2$, then what is the diameter of that sphere? [Use $\pi = \frac{22}{7}$]

- Ans**
- ☒ 1. 26 cm
 - ☐ 2. 28 cm
 - ☐ 3. 14 cm
 - ☐ 4. 13 cm

Q.11 Which of the following fractions is greater than $\frac{2}{3}$ and less than $\frac{4}{5}$?

- Ans**
- ☐ 1. $\frac{5}{6}$
 - ☐ 2. $\frac{9}{11}$
 - ☒ 3. $\frac{3}{4}$
 - ☐ 4. $\frac{1}{2}$

Q.12 In the case of reflection of light from a concave mirror, when a parallel beam of light is incident on the reflecting surface, reflected light _____.

- Ans**
- ☐ 1. appears to diverge from the principal focus
 - ☐ 2. appears to converge at the centre of curvature
 - ☐ 3. appears to diverge from the centre of curvature
 - ☒ 4. appears to converge at the principal focus

Q.13 The expenditure of Swarna is 125% more than her savings. If her expenditure decreases by 6% and savings increases by 26.5%, then by what percentage does her income increase?

- Ans**
- ☒ 1. 4%
 - ☐ 2. 8%
 - ☐ 3. 20.5%
 - ☐ 4. 18.5%

Q.14 Select the number from among the given options that can replace the question mark (?) in the following series.

45 95 245 695 ?

- Ans**
- ☒ 1. 1995
 - ☒ 2. 2125
 - ☒ 3. 2045
 - ☒ 4. 2075

Q.15 In a certain code language, 'know me better' is coded as 'jf bu pd' and 'better know something' is coded as 'bu jf ls'. What is the code for 'something' in the given code language?

- Ans**
- ☒ 1. ls
 - ☒ 2. pd
 - ☒ 3. jf
 - ☒ 4. bu

Q.16 If $x : y = 7 : 3$, then, $(x - y) : (x + y) = ?$

- Ans**
- ☒ 1. 1 : 5
 - ☒ 2. 2 : 5
 - ☒ 3. 5 : 1
 - ☒ 4. 5 : 2

Q.17 The cost of 12 pens and 7 pencils is ₹233. If the cost of a pen decreases by ₹1.50 and the cost of a pencil increases by ₹1, then the cost of 2 pens and 3 pencils is ₹48. What is the original cost of 2 pens and 3 pencils?

- Ans**
- ☒ 1. ₹48
 - ☒ 2. ₹46
 - ☒ 3. ₹41
 - ☒ 4. ₹54

Q.18 Select the set, from the given options, in which the numbers are related in the same way as are the numbers of the following sets.

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

(2, 24, 6)

(4, 32, 2)

- Ans**
- ☒ 1. (5, 70, 3)
 - ☒ 2. (6, 108, 3)
 - ☒ 3. (3, 48, 4)
 - ☒ 4. (9, 80, 1)

Q.19 Which of the following statements is correct about the gravitational force between the earth and the moon?

- Ans
- ☐ 1. Gravitational force is repulsive when the moon is far from the earth.
 - ☐ 2. Gravitational force is attractive and maximum when the moon is far from the earth.
 - ☒ 3. Gravitational force is attractive and maximum when the moon is close to the earth.
 - ☐ 4. Gravitational force is repulsive and minimum when the moon is far from the earth.

Q.20 Which of the following is the longest cell in our body?

- Ans
- ☐ 1. Fat cell
 - ☐ 2. Ovum
 - ☒ 3. Nerve cell
 - ☐ 4. Blood cell

Q.21 If 'I' stands for '+', 'J' stands for '×', 'K' stands for '+', and 'L' stands for '-', what will come in place of question mark '?' in the following equation?

$$(24 \text{ J } 3) \text{ K } 6 \text{ I } (14 \text{ J } 2) \text{ L } 19 = ?$$

- Ans
- ☒ 1. 21
 - ☐ 2. 34
 - ☐ 3. 15
 - ☐ 4. 19

Q.22 In a certain code language, 'big small average' is coded as '22 33 55', 'small treat party' is coded as '55 44 77', and 'party average people' is coded as '77 22 99'. What is the code for 'people' in the given code language?

- Ans
- ☐ 1. 22
 - ☐ 2. 77
 - ☐ 3. 55
 - ☒ 4. 99

Q.23 As of 2024, how many members are there in the steering committee of the GlobE Network, in which India has been elected as a member, as announced by the Central Bureau of Investigation (CBI)?

- Ans
- ☐ 1. 12
 - ☒ 2. 15
 - ☐ 3. 20
 - ☐ 4. 10

Q.24 The arithmetic mean of the observations 3, 6, 8, 10, 12, 14, 18, 24 and 31 is:

- Ans
- ☐ 1. 16
 - ☐ 2. 15
 - ☒ 3. 14
 - ☐ 4. 17

Q.25 The formula unit mass of CaCl_2 is:

- Ans
- ☐ 1. 114 u
 - ☐ 2. 115 u
 - ☐ 3. 110 u
 - ☒ 4. 111 u

Q.26 KGFL is related to OJHM in a certain way based on the English alphabetical order. In the same way, ASNP is related to EVPQ. To which of the following options is MBTS related, following the same logic?

- Ans
- ☐ 1. QEVW
 - ☐ 2. QFVT
 - ☒ 3. QEVT
 - ☐ 4. QEXS

Q.27 If $x + \frac{1}{x} = 4$, then $x^2 + \frac{1}{x^2} = ?$

- Ans
- ☐ 1. 18
 - ☒ 2. 14
 - ☐ 3. 16
 - ☐ 4. 12

Q.28 If a light ray is travelling from medium of refractive index ' n_1 ' to the medium of refractive index ' n_2 ' such that angle of incidence is ' i ' and angle of refraction ' r ' (assuming $0 < i < 90$ degree), then n_1/n_2 is equal to _____.

- Ans
- ☒ 1. $\frac{\sin r}{\sin i}$
 - ☐ 2. $\sin r - \sin i$
 - ☐ 3. $\sin i - \sin r$
 - ☐ 4. $\frac{\sin i}{\sin r}$

Q.29 A solution contains 25 g of copper chloride salt in 250 g of water. Calculate the concentration in terms of mass by mass percentage of the solution.

- Ans
- ☒ 1. 9.09%
 - ☐ 2. 18.01%
 - ☐ 3. 27.01%
 - ☐ 4. 36.01%

Q.30 The Indian Air Force (IAF) contingent returned to India on 10 August 2024 after participating in Exercise _____ in Malaysia.

- Ans
- ☐ 1. Garuda
 - ☐ 2. Cope India
 - ☒ 3. Udara Shakti
 - ☐ 4. Red Flag

- Q.31** Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All chairs are tables.

Some tables are beds.

Conclusions:

(I) All beds are chairs.

(II) Some tables are chairs.

- Ans**
- ☒ 1. Both conclusions (I) and (II) follow
 - ☒ 2. Neither conclusion (I) nor (II) follows
 - ☒ 3. Only conclusion (II) follows
 - ☒ 4. Only conclusion (I) follows

- Q.32** Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some kings are servants.

Some servants are fighters.

Conclusions:

(I) Some fighters are kings.

(II) All servants are kings.

- Ans**
- ☒ 1. Only conclusion (II) follows
 - ☒ 2. Only conclusion (I) follows
 - ☒ 3. Both conclusions (I) and (II) follow
 - ☒ 4. Neither conclusion (I) nor (II) follows

- Q.33** Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

GHM, IJO, KLQ, MNS, OPU, ?

- Ans**
- ☒ 1. QSV
 - ☒ 2. QRV
 - ☒ 3. QSW
 - ☒ 4. QRW

- Q.34** For certain data, the mode is 24.6 and mean is 20.1. What is the median of that data, using empirical formula?
- Ans** ☒ 1. 23.5
☒ 2. 21.6
☒ 3. 24.1
☒ 4. 22.2
- Q.35** If each vowel in the word RELATION is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, and then arranged in reverse order of English alphabetical order, then which of the following letters will be fourth from the right in the group of letters thus formed?
- Ans** ☒ 1. M
☒ 2. K
☒ 3. Q
☒ 4. P
- Q.36** A fraction becomes $\frac{1}{2}$ if 2 is added to the numerator and 5 is added to the denominator. It also becomes $\frac{1}{3}$ if 2 is subtracted from both the numerator and denominator. The positive difference between the denominator and the numerator of the fraction is:
- Ans** ☒ 1. 2
☒ 2. 4
☒ 3. 3
☒ 4. 1
- Q.37** Which of the following elements is extracted by using electrolytic reduction?
- Ans** ☒ 1. Fe
☒ 2. Na
☒ 3. Pb
☒ 4. Zn
- Q.38** In a certain code language,
A + B means 'A is the mother of B',
A - B means 'A is the brother of B',
A × B means 'A is the wife of B',
A ÷ B means 'A is the father of B',
and A # B means 'A is the daughter of B'.
How is P related to F if 'F - E # L × Q - P # N'?
- Ans** ☒ 1. Father's sister
☒ 2. Mother's sister
☒ 3. Brother's daughter
☒ 4. Brother's son

Q.39 Average velocity of a body can be given by the arithmetic mean of initial velocity and final velocity for a given period of time when the body is:

- Ans**
- ☐ 1. moving with uniform velocity
 - ☐ 2. moving with uniform speed
 - ☐ 3. moving with non-uniform acceleration
 - ☒ 4. moving with uniform acceleration

Q.40 The area of the base of a rectangular tank is 6500 cm^2 and the volume of water contained in it is 2.6 cubic meters. The depth of water in the tank is:

- Ans**
- ☒ 1. 4 m
 - ☐ 2. 5 m
 - ☐ 3. 6 m
 - ☐ 4. 3.5 m

Q.41 If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:

- Ans**
- ☐ 1. 5 days
 - ☐ 2. 7 days
 - ☐ 3. 6 days
 - ☒ 4. 4 days

Q.42 Vineet starts from Point Y and drives 10 km towards the North. He then takes a right turn, drives 29 km, turns right and drives 34 km. He then takes a right turn and drives 13 km. He takes a final right turn, drives 24 km and stops at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)

- Ans**
- ☒ 1. 16 km towards the west
 - ☐ 2. 19 km towards the east
 - ☐ 3. 24 km towards the south
 - ☐ 4. 14 km towards the north

Q.43 Who among the following won the Gold medal at Paralympics in the Women's 10m air rifle standing SH1 Shooting category?

- Ans**
- ☒ 1. Avani Lekhara
 - ☐ 2. Manisha Agarwal
 - ☐ 3. Preeti Pal
 - ☐ 4. Amulya Choudhary

Q.44 The square of 42 is:

- Ans**
- ☒ 1. 1764
 - ☐ 2. 1504
 - ☐ 3. 1564
 - ☐ 4. 1664

- Q.45** How many sports personalities have received Major Dhyan Chand Khel Ratna Awards in National Sports Awards 2023?
- Ans** ☐ 1. 6
☐ 2. 3
☐ 3. 5
☒ 4. 2
- Q.46** Which award has been conferred to Ms. Prema Dhanraj in the field of Medicine in 2024?
- Ans** ☒ 1. Padma Shri
☐ 2. Padma Vibhushan
☐ 3. Bharat Ratna
☐ 4. Padma Bhushan
- Q.47** If each consonant in the word VERIFY is changed to the letter immediately succeeding it in the English alphabetical order and each vowel is changed to the letter immediately preceding it in the English alphabetical order, then how many consonants are present in the new group of letters thus formed?
- Ans** ☐ 1. Five
☐ 2. Four
☐ 3. Three
☒ 4. Six
- Q.48** A thief running at a speed of 8 km/h is chased by a policeman whose speed is 10 km/h. If the thief is 100 m ahead of the policeman, then the time required for the policeman to catch the thief will be:
- Ans** ☐ 1. 6 minutes
☒ 2. 3 minutes
☐ 3. 2 minutes
☐ 4. 10 minutes
- Q.49** Which off the following is the roadmap to achieve development and child protection priorities aligned with the Sustainable Development Goals (SDGs)?
- Ans** ☐ 1. Mission Vardan
☐ 2. Mission Surksha
☐ 3. Mission Arpan
☒ 4. Mission Vatsalya
- Q.50** 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.)
(6, 37)
(8, 65)
- Ans** ☒ 1. (9, 82)
☐ 2. (7, 49)
☐ 3. (5, 24)
☐ 4. (3, 27)

Q.51 The smallest four-digit number that is exactly divisible by each of 24, 40 and 56 is:

- Ans**
- ☐ 1. 1080
 - ☐ 2. 1170
 - ☐ 3. 1260
 - ☒ 4. 1680

Q.52 In a row of 37 persons, Aneesha is 12th from the left end. What is her position from the right end?

- Ans**
- ☒ 1. 26
 - ☐ 2. 24
 - ☐ 3. 27
 - ☐ 4. 16

Q.53 Ramesh and Suresh's mud buildings have heights of 8 cm and 15 cm respectively. They are 24 cm apart. How far are the tops of their mud buildings from each other?

- Ans**
- ☐ 1. 24 cm
 - ☐ 2. 31 cm
 - ☐ 3. 30 cm
 - ☒ 4. 25 cm

Q.54 L, P, R, V, X, Y, and Z, are sitting around a circular table facing the centre. R sits to the immediate right of V. Only three people sit between R and Z when counted from the left of R. Only three people sit between V and P. X sits to the immediate right of Y. How many people sit between L and Y, when counted from the left of Y?

- Ans**
- ☐ 1. Three
 - ☐ 2. One
 - ☒ 3. Two
 - ☐ 4. Four

Q.55 Which institute is responsible for the development of the 'Investor Information and Analytics Platform' in 2024?

- Ans**
- ☒ 1. IIT Madras
 - ☐ 2. IIT Bombay
 - ☐ 3. IIT Delhi
 - ☐ 4. IIT Kanpur

Q.56 At what rate (in percentage) per annum will ₹1,300 give ₹520 as simple interest in 5 years?

- Ans**
- ☒ 1. 8%
 - ☐ 2. 5%
 - ☐ 3. 7%
 - ☐ 4. 4%

Q.57 If each vowel in the word GROUPS is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order and then arrange the so formed group of letters in English alphabetical order, then which of the following letters will be third from the left in the group of letter thus formed?

- Ans**
- ☐ 1. S
 - ☒ 2. Q
 - ☐ 3. T
 - ☐ 4. P

Q.58 Which union territory became the first to achieve full functional literacy under the ULLAS-Nav Bharat Saaksharta Karyakram?

- Ans**
- ☒ 1. Ladakh
 - ☐ 2. Chandigarh
 - ☐ 3. Puducherry
 - ☐ 4. Lakshadweep

Q.59 In which of the following phenomena does a solid substance change into a liquid substance?

- Ans**
- ☐ 1. Deposition
 - ☐ 2. Sublimation
 - ☐ 3. Solidification
 - ☒ 4. Fusion

Q.60 A dealer allows a 30% discount on the marked price of an item. What is the marked price of the item if its sale price is ₹12,460?

- Ans**
- ☒ 1. ₹17,800
 - ☐ 2. ₹16,800
 - ☐ 3. ₹17,860
 - ☐ 4. ₹16,760

Q.61 The ability of a fully differentiated organism to give rise to new individuals from their body parts is known as:

- Ans**
- ☐ 1. budding
 - ☐ 2. fission
 - ☒ 3. regeneration
 - ☐ 4. Fragmentation

Q.62 Select the option that shows all biodegradable substances.

- Ans**
- ☐ 1. Medicine bottle, Old shoe, Stale biscuits
 - ☒ 2. Eggshells, Tea leaves, Potato peelings
 - ☐ 3. Glass bottle, Milk packets, Egg shells, Banana peel
 - ☐ 4. Bubble packs, Vegetable peelings, Stale bread

Q.63 Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. E sits third from the left end. Only one person sits to the right of D. G sits second to the left of D. B sits to the immediate right of C. F does not sit to the right of A. How many people sit between F and E?

- Ans**
- ☐ 1. Four
 - ☐ 2. Three
 - ☒ 3. One
 - ☐ 4. Two

Q.64 After a decrease of 24%, the price of an article is ₹988. The actual cost of the article is:

- Ans**
- ☐ 1. ₹1,400
 - ☐ 2. ₹1,200
 - ☐ 3. ₹1,100
 - ☒ 4. ₹1,300

Q.65 The equivalent resistance of the combination of resistors, when 1 ohm and 2 ohm are connected in parallel, is _____.

- Ans
- ☐ 1. 2 ohm
 - ☐ 2. $(3/2)$ ohm
 - ☒ 3. $(2/3)$ ohm
 - ☐ 4. 3 ohm

Q.66 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 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.)

- Ans
- ☐ 1. TR-PS
 - ☐ 2. QO-MP
 - ☒ 3. NL-JL
 - ☐ 4. JH-FI

Q.67 Which of the following compounds is used in soda-acid fire extinguishers?

- Ans
- ☒ 1. Sodium bicarbonate
 - ☐ 2. Sodium carbonate
 - ☐ 3. Calcium chloride
 - ☐ 4. Bleaching powder

Q.68 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

The special task force set up by the government has found that toxic waste is being mixed with dry waste by many apartment complexes before collection by the municipality, causing severe danger to the waste processing personnel and the environment.

Courses of Action:

(I) Apartment complexes should be heavily penalised in instances where toxic and dry waste is not properly segregated before collection.

(II) Apartment complexes should issue clear guidelines on waste segregation to the apartment residents.

- Ans
- ☐ 1. Neither I nor II follows
 - ☐ 2. Only II follows
 - ☐ 3. Only I follows
 - ☒ 4. Both I and II follow

Q.69 Which of the following is the SI unit of work done?

- Ans
- ☐ 1. Metre
 - ☐ 2. Newton
 - ☒ 3. Joule
 - ☐ 4. Erg

Q.70 What is the name of Bhim Singh's book launched on August 11, 2024?

- Ans**
- ☐ 1. Legends of Indian Revolution
 - ☒ 2. 75 Great Revolutionaries of India
 - ☐ 3. Heroes of Indian Freedom
 - ☐ 4. Unsung Warriors of India

Q.71 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

YZX, VWU, STR, PQO, MNL, ?

- Ans**
- ☒ 1. JKI
 - ☐ 2. IJK
 - ☐ 3. CBA
 - ☐ 4. KJI

Q.72 What percentage of solar energy is captured by green plants in terrestrial ecosystem?

- Ans**
- ☐ 1. 10 percent
 - ☐ 2. 5 percent
 - ☐ 3. 100 percent
 - ☒ 4. 1 percent

Q.73 Carbon has the unique ability to form bonds with other atoms of carbon. This property is known as _____.

- Ans**
- ☐ 1. cyclisation
 - ☐ 2. homologous
 - ☐ 3. allotropes
 - ☒ 4. catenation

Q.74 Cells of the meristematic tissue are very active, but they lack:

- Ans**
- ☐ 1. prominent nuclei
 - ☒ 2. vacuoles
 - ☐ 3. dense cytoplasm
 - ☐ 4. thin cellulose walls

Q.75 Which two numbers should be interchanged to make the given equation correct?

$$(27 + 15) \times 2 - (95 \div 5) + 25 \times 4 - 135 = 62$$

(Note: Interchange should be done of entire number and not individual digits of a given number.)

- Ans**
- ☐ 1. 2 and 4
 - ☐ 2. 25 and 27
 - ☒ 3. 95 and 135
 - ☐ 4. 5 and 15



Test Center Name	Global Digital Zone
Test Date	27/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some snakes are lizards.

All roosters are lizards.

Conclusions:

(I) All lizards are roosters.

(II) No roosters are snakes.

Ans ☒ 1. Only conclusion (II) follows.

☒ 2. Both conclusions (I) and (II) follow.

☒ 3. Only conclusion (I) follows.

☒ 4. Neither conclusion (I) nor (II) follows.

Q.2 How many electrons does carbon typically share when bonding with another carbon atom or with atoms of other elements?

Ans ☒ 1. 6

☒ 2. 2

☒ 3. 4

☒ 4. 1

Q.3 Which of the following statements regarding an atom is correct?

- Ans
- ☒ 1. Atoms as a whole are electrically neutral.
 - ☐ 2. An atom does not contain any positive charge
 - ☐ 3. Atoms are not electrically neutral.
 - ☐ 4. Atoms are partially electrically neutral.

Q.4 The sum of the ages of a mother, son and daughter is 70 years. If the mother is thrice as old as her son, and the daughter is 5 years older than her brother, how old is the mother?

- Ans
- ☐ 1. 45 years
 - ☐ 2. 42 years
 - ☒ 3. 39 years
 - ☐ 4. 35 years

Q.5 If A means +, B means -, C means $\times$, D means $\div$, then what will come in place of the question mark (?) in the following equation?

$$10 \text{ B } 27 \text{ D } 9 \text{ A } 4 \text{ C } 3 = ?$$

- Ans
- ☐ 1. 17
 - ☐ 2. 18
 - ☐ 3. 20
 - ☒ 4. 19

Q.6 How much venture capital fund would be set up for space economy in India as announced by the Finance Minister in the Annual Financial Statement 2024-25?

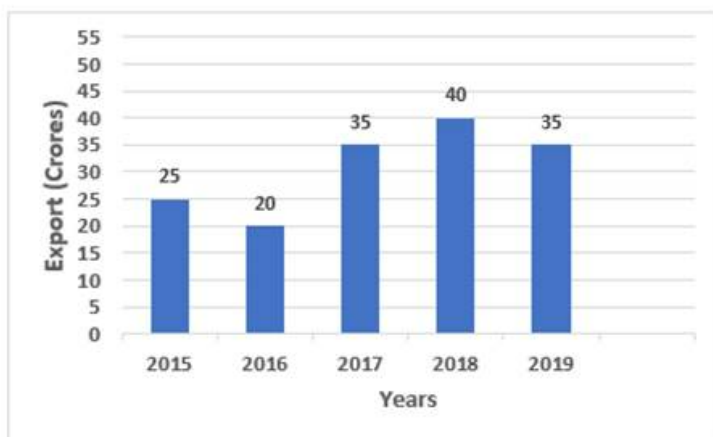
- Ans
- ☐ 1. ₹1,500 crore
 - ☐ 2. ₹700 crore
 - ☒ 3. ₹1,000 crore
 - ☐ 4. ₹500 crore

Q.7 The value of $(256)^{0.16} \times (256)^{0.09}$ is:

- Ans
- ☐ 1. 16
 - ☒ 2. 4
 - ☐ 3. 64
 - ☐ 4. 256

Q.8 Study the following graph and answer the given question.

The following bar graph shows annual exports (in crore) of a company during the period 2015 to 2019.



What is the average export (in crore) of the year 2016 and 2018?

- Ans**
- ☐ 1. 60
 - ☐ 2. 70
 - ☐ 3. 90
 - ☒ 4. 30

Q.9 CKQR is related to FITP in a certain way based on the English alphabetical order. In the same way, WERN is related to ZCUL. To which of the following options is BOLJ related, following the same logic?

- Ans**
- ☐ 1. DNOK
 - ☐ 2. FNNH
 - ☐ 3. DMNJ
 - ☒ 4. EMOH

Q.10 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

No horses are mirrors.

Some lizards are horses.

Conclusions:

(I) Some horses are not lizards.

(II) Some lizards are not mirrors.

- Ans**
- ☐ 1. Both conclusions (I) and (II) follow
 - ☐ 2. Neither conclusion (I) nor (II) follows
 - ☒ 3. Only conclusion (II) follows
 - ☐ 4. Only conclusion (I) follows

- Q.11** In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 711 :: 146 : Y

- Ans**
- ☐ 1. X = 269, Y = 379
 - ☐ 2. X = 237, Y = 418
 - ☐ 3. X = 218, Y = 456
 - ☒ 4. X = 252, Y = 393

- Q.12** The pattern of the magnetic field lines produced by a current carrying conductor:

- Ans**
- ☐ 1. depends on the length of the conductor
 - ☒ 2. depends on the shape of the conductor
 - ☐ 3. is independent of anything related to the conductor
 - ☐ 4. depends on the thickness of the conductor

- Q.13** An article is marked at 50% above its cost price. If the marked price of the article is ₹1,500, then the cost price of the article is:

- Ans**
- ☐ 1. ₹800
 - ☐ 2. ₹1,200
 - ☒ 3. ₹1,000
 - ☐ 4. ₹750

- Q.14** IMOL is related to PTVS in a certain way based on the English alphabetical order. In the same way, FJLI is related to MQSP. To which of the following options is KOQN related, following the same logic?

- Ans**
- ☐ 1. RUVX
 - ☒ 2. RVXU
 - ☐ 3. QUWT
 - ☐ 4. QUWX

- Q.15** Where does the following reaction take place in a cell? The breakdown of glucose, a six-carbon molecule, into a three-carbon molecule.

- Ans**
- ☐ 1. In the mitochondria
 - ☒ 2. In the cytoplasm
 - ☐ 3. In the nucleus
 - ☐ 4. In the Golgi apparatus

- Q.16** Who among the following was appointed as Minister of Health and Family Welfare in June 2024?

- Ans**
- ☐ 1. Sarbananda Sonowal
 - ☐ 2. Manohar Lal
 - ☐ 3. Shivraj Singh Chouhan
 - ☒ 4. Jagat Prakash Nadda

Q.17 In a certain code language, 'SOLVE' is coded as '36598', 'STORE' is coded as '39164', and 'WHOLE' is coded as '27689'. What is the code for 'V' in the given code language?

- Ans**
- ☒ 1. 8
 - ☒ 2. 5
 - ☒ 3. 9
 - ☒ 4. 3

Q.18 When a thick glass slab is placed over printed matter, they appear to be _____ and this is due to _____ of light.

- Ans**
- ☒ 1. lowered; refraction
 - ☒ 2. raised; refraction
 - ☒ 3. raised; reflection
 - ☒ 4. lowered; reflection

Q.19 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 523 :: 9 : Y

- Ans**
- ☒ 1. X = 11, Y = 225
 - ☒ 2. X = 15, Y = 286
 - ☒ 3. X = 13, Y = 250
 - ☒ 4. X = 9, Y = 294

Q.20 What is used to make drinking water free from germs?

- Ans**
- ☒ 1. Baking soda
 - ☒ 2. Sodium hydroxide
 - ☒ 3. Bleaching powder
 - ☒ 4. Washing soda

Q.21 When there are two parallel lines cut by a transversal, which of the following is true?

- a) Corresponding angles are equal.
- b) Alternate interior angles are supplementary.
- c) Consecutive angles on the same side of the transversal are equal.
- d) Alternate interior angles are equal.

- Ans**
- ☒ 1. Only b
 - ☒ 2. a and d
 - ☒ 3. Only a
 - ☒ 4. b and c

Q.22 What sum will earn a simple interest of ₹480 in 3 years at 16% per year rate of interest?

- Ans
- ☐ 1. ₹1,200
 - ☐ 2. ₹600
 - ☐ 3. ₹800
 - ☒ 4. ₹1,000

Q.23 In a row of people, all facing north, Bunty is 8th from the left end. Sneha is 15th from the left end. Sneha is exactly between Bunty and Nupur. If Nupur is 7th from the right end of the line, how many people are there in the row?

- Ans
- ☐ 1. 22
 - ☒ 2. 28
 - ☐ 3. 20
 - ☐ 4. 26

Q.24 If the perimeter of one face of a cube is 48 cm, then its volume is:

- Ans
- ☒ 1. 1728 cm³
 - ☐ 2. 729 cm³
 - ☐ 3. 1024 cm³
 - ☐ 4. 512 cm³

Q.25 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 8 & S & 2 @ % 4 6 3 Ω £ 5 1 9 # * (Right)

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

- Ans
- ☒ 1. One
 - ☐ 2. More than two
 - ☐ 3. Zero
 - ☐ 4. Two

Q.26 Justify the given statement.

‘Plants have low energy needs’.

- Ans
- ☐ 1. Plant bodies have a small proportion of dead cells in many tissues.
 - ☐ 2. Because plants are autotrophic organisms and prepare their own food.
 - ☐ 3. As the plants use relatively fast transport systems.
 - ☒ 4.

Energy needs differ between different body designs. Plants do not move and have a large proportion of dead cells in many tissues.

Q.27 Sumit travelled 10 km 120 m by scooter, 1 km 970 m on foot and 15 km 850 m by bus. What is the total distance travelled by Sumit?

- Ans**
- ☐ 1. 27 km 950 m
 - ☐ 2. 27 km 920 m
 - ☐ 3. 27 km 930 m
 - ☒ 4. 27 km 940 m

Q.28 Which of the following options should come in place of the question mark (?) in the given series?
14 15 18 23 30 ?

- Ans**
- ☒ 1. 39
 - ☐ 2. 41
 - ☐ 3. 37
 - ☐ 4. 40

Q.29 Under the NPS Vatsalya scheme, subsequent contribution of what minimum amount is required per annum with no maximum limit?

- Ans**
- ☐ 1. ₹5,000
 - ☒ 2. ₹1,000
 - ☐ 3. ₹2,500
 - ☐ 4. ₹500

Q.30 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

JFH, KGI, LHJ, MIK, ?

- Ans**
- ☐ 1. JNL
 - ☐ 2. NLJ
 - ☐ 3. JLN
 - ☒ 4. NJL

Q.31 What is the primary purpose of the Artara'24 Fine Arts Exhibition and Competition?

- Ans**
- ☐ 1. To promote art tourism
 - ☐ 2. To conduct art workshops
 - ☒ 3. To discover and nurture emerging artistic talents
 - ☐ 4. To sell artworks

Q.32 A's salary is 20% less than B's salary. By what percentage is B's salary more than A's salary?

- Ans**
- ☐ 1. 20%
 - ☐ 2. 15%
 - ☐ 3. 17%
 - ☒ 4. 25%

- Q.33 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?
- TVX, SUW, RTV, QSU, ?
- Ans ☒ 1. PRT
☐ 2. RPT
☐ 3. PTR
☐ 4. RTP
- Q.34 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 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)
- Ans ☐ 1. QL – SN
☐ 2. KF – MH
☐ 3. EZ – GB
☒ 4. LH – QM
- Q.35 A, B, C, D, E and F are sitting around a circular table facing the centre. A sits second to the right of E. F is the immediate neighbour of D and E. C sits second to the left of B.
- What is the position of F with respect to C?
- Ans ☐ 1. Immediate right
☐ 2. Third to the left
☒ 3. Second to the left
☐ 4. Third to the right
- Q.36 According to the 2024-25 Indian Union Budget, the Government has allocated increased funding towards schemes like 'Sambal' from ₹462 crore in the previous fiscal year to ____.
- Ans ☐ 1. ₹523 crore
☐ 2. ₹756 crore
☒ 3. ₹629 crore
☐ 4. ₹453 crore
- Q.37 A train travelling at a speed of 45 km/h crosses a pole in 24 sec. What is the length of the train?
- Ans ☐ 1. 30 m
☐ 2. 1.5 m
☒ 3. 300 m
☐ 4. 125 m
- Q.38 If $\sec 4A = \operatorname{cosec} (3A - 50^\circ)$, where $4A$ and $3A$ are acute angles, find the value of $\operatorname{cosec} (A + 25^\circ)$.
- Ans ☒ 1. $\sqrt{2}$
☐ 2. 0
☐ 3. 1
☐ 4. $\frac{1}{\sqrt{2}}$

Q.39 A cubic wooden block of side 2 m is lying on a tabletop. If the mass of the wooden block is 10 kg, then the pressure exerted by the wooden block on the tabletop is: (consider $g = 10 \text{ m/s}^2$)

- Ans**
- ☐ 1. 15 N m^{-2}
 - ☒ 2. 
 - ☐ 3. 30 N m^{-2}
 - ☐ 4. 20 N m^{-2}

Q.40 If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same work in 2 days, then the time taken by 20 men for doing the same piece of work will be:

- Ans**
- ☐ 1. 3 days
 - ☐ 2. 4 days
 - ☒ 3. 5 days
 - ☐ 4. 2 days

Q.41 Which of the following controls bladder pressure?

- Ans**
- ☐ 1. Blood Pressure
 - ☐ 2. Heart
 - ☒ 3. Nervous system
 - ☐ 4. Kidneys

Q.42 In a certain code language, 'GIRL' is coded as '1539' and 'ROSE' is coded as '6825'. What is the code for 'R' in the given code language?

- Ans**
- ☐ 1. 3
 - ☒ 2. 5
 - ☐ 3. 6
 - ☐ 4. 8

Q.43 Which of the following is the unit of acceleration?

- Ans**
- ☒ 1. m/s^2
 - ☐ 2. m/s
 - ☐ 3. ms
 - ☐ 4. m s^2

Q.44 What happens when we increase the temperature of solids?

- Ans**
- ☐ 1. The shape of the solid will remain same.
 - ☐ 2. The kinetic energy of the particles will decrease.
 - ☐ 3. No effect of temperature on solids.
 - ☒ 4. The kinetic energy of the particles will increase.

Q.45 In 2024, what has been the main focus of the pavilions displayed at the India Art, Architecture, and Design Biennale?

- Ans**
- ☐ 1. Traditional crafts and modern architecture
 - ☐ 2. Indian film and photography
 - ☐ 3. Interactive technology exhibits
 - ☒ 4. Contemporary art and innovative designs

Q.46 5118 is divisible by:

- Ans
- ☐ 1. 8
 - ☐ 2. 7
 - ☐ 3. 5
 - ☒ 4. 6

Q.47 A body of mass m is taken from the ground to a height h , the gravitational potential energy of the body will be:
Acceleration due to gravity is g .

- Ans
- ☒ 1. mgh
 - ☐ 2. $m \times h$
 - ☐ 3. mg/h
 - ☐ 4. $m \times g$

Q.48 Which gas is passed through calcium hydroxide to form calcium carbonate and water?

- Ans
- ☐ 1. Oxygen gas
 - ☐ 2. Hydrogen gas
 - ☒ 3. Carbon-dioxide gas
 - ☐ 4. Helium gas

Q.49 

- Ans
- ☒ 1. 963
 - ☐ 2. 246
 - ☐ 3. 414
 - ☐ 4. 123

Q.50 What type of reaction takes place when calcium oxide reacts vigorously with water to produce slaked lime?

- Ans
- ☐ 1. Decomposition reaction
 - ☒ 2. Combination reaction
 - ☐ 3. Double displacement reaction
 - ☐ 4. Displacement reaction

Q.51 In a certain code language,

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

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

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

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M - N ÷ P + S x T'?

- Ans
- ☐ 1. Wife's mother's mother's father
 - ☐ 2. Wife's father's brother
 - ☒ 3. Wife's mother's father's brother
 - ☐ 4. Wife's father's father's brother

Q.52 An object is placed at distance of 20cm in front of a concave mirror and its image is formed at a distance of 60cm on the same side as the object, the magnification produced by the mirror will be:

- Ans
- ☐ 1. +3
 - ☐ 2. +1/3
 - ☐ 3. -1/3
 - ☒ 4. -3

Q.53 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 Ω 9 # 1 4 6 @ 8 S 2 & % 7 & * £ 5 (Right)

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

- Ans
- ☒ 1. One
 - ☐ 2. Zero
 - ☐ 3. More than two
 - ☐ 4. Two

Q.54 Which gland secretes Adrenaline?

- Ans
- ☐ 1. Pituitary gland
 - ☐ 2. Pineal gland
 - ☐ 3. Thyroid gland
 - ☒ 4. Adrenal gland

Q.55 If the radius of a sphere is increased by 50%, find the percent increase in the surface area.

- Ans
- ☐ 1. 95%
 - ☒ 2. 125%
 - ☐ 3. 100%
 - ☐ 4. 115%

Q.56 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Despite the teacher's several warnings, a student was caught cheating in the exam.

Courses of Action:

I. The student should be expelled from the exam, and his paper should be cancelled.

II. The teacher should leave the student with another warning.

Ans ☒ 1. Both I and II follow.

☒ 2. Only I follows.

☒ 3. Only II follows.

☒ 4. Neither I nor II follows.

Q.57 What is the mode of reproduction used in the methods such as layering or grafting to grow many plants like sugarcane, roses, or grapes for agricultural purposes?

Ans ☒ 1. Regeneration

☒ 2. Vegetative propagation

☒ 3. Fragmentation

☒ 4. Spore formation

Q.58 Identify one example of change taking place at puberty that can signify sexual maturation.

Ans ☒ 1. Increase in height

☒ 2. New hair-growth patterns

☒ 3. Mood swings

☒ 4. Behaving differently

Q.59 If ₹2,400 is to be distributed between A and B in the ratio of 7 : 5, then the share of A is:

Ans ☒ 1. ₹1,300

☒ 2. ₹1,000

☒ 3. ₹1,600

☒ 4. ₹1,400

Q.60 1 C charge contains:

Ans ☒ 1. 6×10^{19} electrons

☒ 2. 6×10^{18} electrons

☒ 3. 6×10^{20} electrons

☒ 4. 6×10^{17} electrons

Q.61 In 2024, the Royal Australian Air Force debuted its combat aircraft in India during Exercise Tarang Shakti at which location?

- Ans**
- ☐ 1. Air Force Station, Gwalior
 - ☐ 2. Air Force Station, Agra
 - ☒ 3. Air Force Station, Jodhpur
 - ☐ 4. Air Force Station, Pune

Q.62 Who among the following is the author of the book 'I Have the Streets - A Kuttu Cricket Story'?

- Ans**
- ☐ 1. Sourav Ganguly
 - ☒ 2. Ravichandran Ashwin
 - ☐ 3. Kuldeep Yadav
 - ☐ 4. Sachin Tendulkar

Q.63 ____ has been awarded the title of India's Fastest Growing Sustainable Brand for 2023-24.

- Ans**
- ☒ 1. Gruner Renewable Energy
 - ☐ 2. Adani Green Energy
 - ☐ 3. Suzlon Energy
 - ☐ 4. Tata Renewable Energy

Q.64 

- Ans**
- ☒ 1. Two
 - ☐ 2. One
 - ☐ 3. Three
 - ☐ 4. Four

Q.65 If 'A' stands for '+', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

$$55 \text{ C } 7 \text{ D } 54 \text{ A } 9 \text{ B } 8 = ?$$

- Ans**
- ☐ 1. 41
 - ☐ 2. 34
 - ☐ 3. 24
 - ☒ 4. 14

Q.66 Which of the following is an example of a heterogeneous mixture?

- Ans**
- ☒ 1. Oil dissolved in water
 - ☐ 2. Copper sulphate powder dissolved in water
 - ☐ 3. Sugar dissolved in water
 - ☐ 4. Salt dissolved in water

Q.67 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 \$ 9 # 1 * £ 4 7 & 2 & % 3 Ω 5 (Right)

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

- Ans**
- ☐ 1. More than two
 - ☐ 2. Zero
 - ☐ 3. One
 - ☒ 4. Two

Q.68 The average of 10 observations is 46. It was realised later that an observation was misread as 42 in place of 142. Find the correct average.

- Ans**
- ☐ 1. 45
 - ☐ 2. 54
 - ☐ 3. 65
 - ☒ 4. 56

Q.69 The average of the first twelve multiples of 11 is:

- Ans**
- ☐ 1. 69.5
 - ☐ 2. 70.5
 - ☐ 3. 68.5
 - ☒ 4. 71.5

Q.70 Anita starts from her house at Point A and walks 5 m towards South. She takes a right turn, walks 7 m, takes another right and walks 12 m and stops at point P. If a pole is placed 7 m towards East from where she stopped (Point P), how far (shortest distance) and in which direction will her house be from the pole? (All turns are 90 degrees turns only unless specified.)

- Ans**
- ☒ 1. 7 m towards the South
 - ☐ 2. 7 m towards the East
 - ☐ 3. 5 m towards the North
 - ☐ 4. 12 m towards the South

Q.71 Which of the following teams was the winner of the 10th season of Pro Kabaddi League?

- Ans**
- ☐ 1. Patna Pirates
 - ☐ 2. Haryana Steelers
 - ☒ 3. Puneri Paltan
 - ☐ 4. Pink Panthers

Q.72 A shopkeeper bought an article for ₹319.60. Approximately, at what price should he sell the article to make a 25% profit?

- Ans**
- ☐ 1. ₹600
 - ☐ 2. ₹450
 - ☒ 3. ₹400
 - ☐ 4. ₹500

Q.73 What is the product of $(x + a)$ and $(x + b)$?

- Ans**
- ☐ 1. $x^2 + (a - b)x + ab$
 - ☒ 2. $x^2 + (a + b)x + ab$
 - ☐ 3. $x^2 + (a - b)x - ab$
 - ☐ 4. $x^2 + (a + b)x - ab$

Q.74 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 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)

- Ans**
- ☐ 1. LN – QS
 - ☐ 2. RT – WY
 - ☐ 3. TV – YA
 - ☒ 4. YD – WD

Q.75 The monthly income of a person is ₹13,500, and his monthly expenditure is ₹9,000. Approximately what percentage of his monthly income does he save monthly?

- Ans**
- ☒ 1. 33.33%
 - ☐ 2. 21%
 - ☐ 3. 25%
 - ☐ 4. 28.57%

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Test Center Name	iON Digital Zone iDZ Bhuchokalan
Test Date	28/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

- Options shown in green color with a tick icon are correct.
- Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 In an election, only two candidates contested. One candidate secured 70% of the valid votes and won by a majority of 172 votes. The total number of valid votes was:

- Ans**
- ✓ 1. 430
 - ✗ 2. 560
 - ✗ 3. 480
 - ✗ 4. 570

Q.2 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 58 :: 430 : Y

- Ans**
- ✗ 1. X = 260, Y = 90
 - ✗ 2. X = 310, Y = 70
 - ✓ 3. X = 295, Y = 85
 - ✗ 4. X = 355, Y = 95

Q.3 HD Kumaraswamy, who won from Mandya parliamentary seat in Karnataka in 2024 general elections and became Minister of Heavy Industries, belongs to which political party?

- Ans**
- ✗ 1. BSR Congress
 - ✗ 2. Communist Party of India
 - ✗ 3. Bhartiya Janata Party
 - ✓ 4. Janata Dal (S)

Q.4 The distance between the pole and focus of a spherical mirror, in terms of its radius of curvature R , is equal to:

- Ans**
- ☐ 1. $R/4$
 - ☐ 2. $2R$
 - ☐ 3. R
 - ☒ 4. $R/2$

Q.5 In which organism does cell division or fission lead to the creation of new individuals?

- Ans**
- ☐ 1. Plants
 - ☒ 2. Unicellular organisms
 - ☐ 3. Mammals
 - ☐ 4. Reptiles

Q.6 DIJH is related to KPQO in a certain way based on the English alphabetical order. In the same way, MRSQ is related to TYZX. To which of the following options is BGHF related, following the same logic?

- Ans**
- ☒ 1. INOM
 - ☐ 2. JMON
 - ☐ 3. IMQN
 - ☐ 4. JNQM

Q.7 Which of the following teams was the winner of the 17th Edition of Indian Premier league in 2024?

- Ans**
- ☐ 1. Mumbai Indians
 - ☒ 2. Kolkata Knightriders
 - ☐ 3. Gujarat Titans
 - ☐ 4. Delhi Capitals

Q.8 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 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.)

- Ans**
- ☐ 1. BV – GA
 - ☒ 2. ZT – PG
 - ☐ 3. XR – CW
 - ☐ 4. TN – YS

Q.9 In a certain code language,

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

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

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

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M - N + P ÷ S x T'?

- Ans
- ☒ 1. Wife's father's father's brother
 - ☒ 2. Wife's father's mother's brother
 - ☒ 3. Wife's father's mother's father
 - ☒ 4. Wife's father's brother

Q.10 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 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.)

- Ans
- ☒ 1. KM-PJ
 - ☒ 2. GI-LE
 - ☒ 3. OQ-TN
 - ☒ 4. IK-NH

Q.11 In 2024, which program organised youth exchange visits across states, focusing on the '5 Ps', namely Paryatan (Tourism), Parampara (Traditions), Pragati (Development), Paraspar Sampark (People-to-people connect) and Prodyogiki (Technology)?

- Ans
- ☒ 1. Yuva Sangam
 - ☒ 2. Bharat Parv
 - ☒ 3. National Youth Exchange
 - ☒ 4. India Unites

Q.12 In a certain code language, 'PING' is coded as '7953' and 'NOSE' is coded as '4638'. What is the code for 'N' in the given code language?

- Ans
- ☒ 1. 5
 - ☒ 2. 6
 - ☒ 3. 3
 - ☒ 4. 4

Q.13 निम्नलिखित में से कौन-सा नेफ्रॉन का एक कप के आकार का भाग है जिसके साथ वृक्क में प्रत्येक केशिका गुच्छ जुड़ा होता है?

- Ans
- ☒ 1. बोमन झिल्ली (Bowman's capsule)
 - ☒ 2. दूरस्थ कुंडलित नलिका (Distal convoluted tubule)
 - ☒ 3. ग्लोमेरुलस (Glomerulus)
 - ☒ 4. समीपस्थ कुंडलित नलिका (Proximal convoluted tubule)

Q.14 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) * 9 # 1 £ 2 4 & 3 Ω 6 @ 8 \$ 7 5 & % (Right)

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

- Ans**
- ☐ 1. One
 - ☐ 2. More than two
 - ☐ 3. Two
 - ☒ 4. Zero

Q.15 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

RJZ, PMW, NPT, LSQ, ?

- Ans**
- ☒ 1. JVN
 - ☐ 2. IVM
 - ☐ 3. IVN
 - ☐ 4. JUN

Q.16 The sum of five consecutive even numbers is 3720. The sum of the third largest and the largest even numbers among them is:

- Ans**
- ☐ 1. 1388
 - ☒ 2. 1492
 - ☐ 3. 1488
 - ☐ 4. 1392

Q.17 On which date did India and the USA sign their first-ever Cultural Property Agreement (CPA)?

- Ans**
- ☐ 1. 10 August 2024
 - ☐ 2. 15 May 2024
 - ☐ 3. 20 June 2024
 - ☒ 4. 26 July 2024

Q.18 यदि '+' और '-' को आपस में बदल दिया जाए तथा '×' और '÷' को आपस में बदल दिया जाए, तो निम्नलिखित समीकरण में '?' के स्थान पर क्या आएगा?

$$8 \times 2 + 3 - 2 \div 6 = ?$$

- Ans**
- ☐ 1. 11
 - ☐ 2. 14
 - ☐ 3. 12
 - ☒ 4. 13

Q.19 Who among the following were the co-flag bearers for India in the closing ceremony of Paris Olympics 2024?

- Ans**
- ☐ 1. Swapnil Kusale and Aman Sehrawat
 - ☐ 2. Neeraj Chopra and PR Sreejesh
 - ☐ 3. Manu Bhaker and Neeraj Chopra
 - ☒ 4. Manu Bhaker and PR Sreejesh

Q.20 The area of the largest triangle that can be inscribed in a semi-circle of radius 6 cm is:

- Ans
- ✓ 1. 36 cm^2
 - ✗ 2. 38 cm^2
 - ✗ 3. 76 cm^2
 - ✗ 4. 72 cm^2

Q.21 The volume of a cylinder is 5500 m^3 . Find its diameter of base if the height of the cylinder is 70 m. [Use $\pi = \frac{22}{7}$]

- Ans
- ✗ 1. 8 m
 - ✓ 2. 10 m
 - ✗ 3. 5 m
 - ✗ 4. 12 m

Q.22 What is the least positive number that can be added to 2488 so that it is completely divisible by 3, 4, 5 and 6?

- Ans
- ✗ 1. 34
 - ✗ 2. 42
 - ✓ 3. 32
 - ✗ 4. 28

Q.23 A can complete a piece of work in 20 days and B can do the same work in 15 days. B worked alone for 6 days and left. In how many days can A complete the remaining work alone?

- Ans
- ✗ 1. 10
 - ✗ 2. 16
 - ✗ 3. $10\frac{1}{2}$
 - ✓ 4. 12

Q.24 If $\cos^4 \theta - \sin^4 \theta = k$, then the value of $\frac{1-k}{1+k}$ is:

- Ans
- ✓ 1. $\tan^2 \theta$
 - ✗ 2. $\sin^2 \theta$
 - ✗ 3. $\operatorname{cosec}^2 \theta$
 - ✗ 4. $\cot^2 \theta$

Q.25 In a certain code language, 'MEANS' is coded as '75821', 'RANGE' is coded as '84592', and 'PRIME' is coded as '64237'. What is the code for 'G' in the given code language?

- Ans
- ✗ 1. 5
 - ✗ 2. 4
 - ✗ 3. 8
 - ✓ 4. 9

Q.26 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 1 \$ 7 & 3 4 6 @ 8 Ω % 9 # * £ 2 & 5 (Right)

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

- Ans**
- ☒ 1. Zero
 - ☒ 2. Four
 - ☐ 3. Two
 - ☐ 4. One

Q.27 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. E sits third from the left end. Only three people sit between G and E. B is the immediate neighbour of C and F. D sits second to the left of C.

How many people sit between A and F?

- Ans**
- ☒ 1. Four
 - ☐ 2. Three
 - ☐ 3. Two
 - ☐ 4. One

Q.28 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

ORN, PSO, QTP, RUQ, ?

- Ans**
- ☐ 1. USR
 - ☐ 2. SUR
 - ☒ 3. SVR
 - ☐ 4. VSR

Q.29 What repo rate was declared by the Reserve Bank of India's Monetary Policy Committee (MPC) on 9th October 2024?

- Ans**
- ☐ 1. 6.75%
 - ☐ 2. 6.10%
 - ☒ 3. 6.50%
 - ☐ 4. 6.25%

Q.30 FKUZ is related to CORD in a certain way based on the English alphabetical order. In the same way, QJKH is related to NNHL. To which of the following options is JIBP related, following the same logic?

- Ans**
- ☒ 1. GMYT
 - ☐ 2. HOZS
 - ☐ 3. FNAT
 - ☐ 4. HMZU

Q.31 If the perimeters of two similar triangles ABC and DEF are 75 cm and 40 cm respectively, and if $\overline{BC}$ is 15 cm, then the length of $\overline{EF}$ is:

- Ans**
- ☐ 1. 6 cm
 - ☐ 2. 10 cm
 - ☐ 3. 12 cm
 - ☒ 4. 8 cm

Q.32 Venu starts from Point Y and drives 7 km towards south. He then takes a left turn, drives 15 km, turns right and drives 38 km. He then takes a left turn and drives 13 km. He takes a left turn, drives 31 km. He then turns left, drives 28 km, turns left and drives 13 km to stop at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)

- Ans**
- ✓ 1. 27 km towards north
 - ✗ 2. 20 km towards south
 - ✗ 3. 28 km towards east
 - ✗ 4. 24 km towards south

Q.33 According to the Economic Survey 2023-24, India's cumulative installed solar power capacity reached ____ on 30 April 2024, after adding 15.03 GW in 2023-24.

- Ans**
- ✗ 1. 89.64 GW
 - ✗ 2. 86.64 GW
 - ✓ 3. 82.64 GW
 - ✗ 4. 80.64 GW

Q.34 If 'A' stands for '+', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

$$121 \text{ C } 21 \text{ D } 11 \text{ A } 11 \text{ B } 121 = ?$$

- Ans**
- ✓ 1. 21
 - ✗ 2. 41
 - ✗ 3. 11
 - ✗ 4. 31

Q.35 A man sells 320 mangoes at the cost price of 400 mangoes (Cost price of all the articles is same. Selling price of all the articles is same). His gain percentage is:

- Ans**
- ✓ 1. 25%
 - ✗ 2. 15%
 - ✗ 3. 10%
 - ✗ 4. 20%

Q.36 For current carrying circular loop, the field strength is:

- Ans**
- ✓ 1. maximum at the centre
 - ✗ 2. undetermined at the periphery
 - ✗ 3. minimum at the centre
 - ✗ 4. maximum at the periphery

Q.37 Which of following compounds is used as an ingredient in antacids?

- Ans**
- ✗ 1. Nitric acid
 - ✗ 2. Sodium chloride
 - ✓ 3. Sodium hydrogen carbonate
 - ✗ 4. Copper sulphate

Q.38 The value of $(0.04)^{-1.5}$ is:

- Ans
- ☐ 1. 625
 - ☒ 2. 125
 - ☐ 3. 250
 - ☐ 4. 25

Q.39 Which of the following carbon compounds is classified as an alcohol?

- Ans
- ☐ 1. Propanal
 - ☒ 2. Propanol
 - ☐ 3. Propanoic
 - ☐ 4. Propanone

Q.40 The problem of myopia in human eye can be corrected by using:

- Ans
- ☐ 1. a plain glass plate
 - ☐ 2. a convex lens of suitable power
 - ☐ 3. a biconvex lens of suitable power
 - ☒ 4. a concave lens of suitable power

Q.41 The ages of Anita and Sunita differ by 30 years. If 5 years ago, Anita was 3 times as old as Sunita, then the present age of Sunita is:

- Ans
- ☐ 1. 30 years
 - ☒ 2. 20 years
 - ☐ 3. 25 years
 - ☐ 4. 35 years

Q.42 Which of the following solutions is identified by smell?

- Ans
- ☐ 1. Salt in water
 - ☐ 2. Sugar in water
 - ☒ 3. Dettol in water
 - ☐ 4. Potassium permanganate in water

Q.43 Anju ranked 18th from the bottom and 15th from the top in his class. How many students are there in his class?

- Ans
- ☐ 1. 31
 - ☐ 2. 21
 - ☐ 3. 33
 - ☒ 4. 32

Q.44 A ball of mass 0.5 kg is thrown vertically upwards and rises to a height of 20 m. The initial velocity of the ball is: (Consider $g = 10 \text{ m/s}^2$)

- Ans
- ☐ 1. 25 m/s
 - ☒ 2. 20 m/s
 - ☐ 3. 10 m/s
 - ☐ 4. 15 m/s

Q.45 The value of K , satisfying the equation $\frac{0.009}{K} = 0.01$ is:

- Ans ☒ 1. 0.9
☒ 2. 0.0009
☒ 3. 0.09
☒ 4. 9

Q.46 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 9 # 1 * £ 2 & % 4 @ 6 8 \$ 7 & 3 Ω 5 (Right)

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

- Ans ☒ 1. Zero
☒ 2. More than two
☒ 3. One
☒ 4. Two

Q.47 In an election between two candidates, one got 55% of the total valid votes and 20% of the votes were invalid. If the total number of votes was 7500, then the winner won the election by a majority of _____ votes.

- Ans ☒ 1. 700
☒ 2. 750
☒ 3. 800
☒ 4. 600

Q.48 Study the following table and answer the question.

The table depicts the number of cars and bikes manufactured by a company in the year 2012 and 2013.

Years	Number of cars (In Thousand)	Number of bikes (In Thousand)
2012	45	50
2013	40	60

How many cars (In Thousand) were manufactured in the year 2012 and 2013 together?

- Ans ☒ 1. 85
☒ 2. 95
☒ 3. 75
☒ 4. 105

Q.49 Pradhan Mantri Janjatiya Unnat Gram Abhiyan will improve the socio-economic condition of tribal communities, covering around ____ villages as per Union Budget 2024-25.

- Ans ☒ 1. 76,000
☒ 2. 56,000
☒ 3. 53,000
☒ 4. 63,000

Q.50 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some trees are flowers.

All flowers are leaves.

Conclusions:

(I) All leaves are trees.

(II) All flowers are trees.

- Ans**
- ☐ 1. Only conclusion (II) follows.
 - ☒ 2. Neither conclusion (I) nor (II) follows.
 - ☐ 3. Both conclusions (I) and (II) follow.
 - ☐ 4. Only conclusion (I) follows.

Q.51 The _____ moves water and minerals obtained from the soil while _____ transports products of photosynthesis from the leaves where they are synthesised to other parts of the plant.

- Ans**
- ☐ 1. collenchyma, parenchyma
 - ☐ 2. phloem, xylem
 - ☒ 3. xylem, phloem
 - ☐ 4. parenchyma, collenchyma

Q.52 A, B, C, D, E and F are sitting around a circular table facing the centre. D sits to the immediate left of F. B is the immediate neighbour of C and F. A is the immediate neighbour of E and C.

What is the position of D with respect to E?

- Ans**
- ☐ 1. Third to the right
 - ☐ 2. Third to the left
 - ☒ 3. Immediate right
 - ☐ 4. Second to the left

Q.53 A sum of money, on compound interest, amounts to ₹578.40 in 2 years and to ₹614.55 in 3 years. The rate of interest per annum, in case of annual compounding, is:

- Ans**
- ☐ 1. $8\frac{1}{3}\%$
 - ☒ 2. $6\frac{1}{4}\%$
 - ☐ 3. 4%
 - ☐ 4. 5%

Q.54 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 23 :: 476 : Y

- Ans**
- ✓ 1. X = 322, Y = 34
 - ✗ 2. X = 368, Y = 27
 - ✗ 3. X = 314, Y = 21
 - ✗ 4. X = 346, Y = 29

Q.55 What happens when acid is mixed with water?

- Ans**
- ✗ 1. It will increase the concentration of hydroxyl ions per unit volume.
 - ✓ 2. It will increase the concentration of hydronium ions per unit volume.
 - ✗ 3. It will decrease the concentration of hydronium ions per unit volume.
 - ✗ 4. There will be no effect on the concentration of ions.

Q.56 If the length of a conductor is tripled, keeping other factors same, the resistance of the conductor will be:

- Ans**
- ✗ 1. one sixth
 - ✗ 2. one third
 - ✗ 3. same
 - ✓ 4. tripled

Q.57 Select the process responsible for stability of populations of species.

- Ans**
- ✗ 1. Variation
 - ✗ 2. Evolution
 - ✓ 3. Reproduction
 - ✗ 4. Mutation

Q.58 On 26 June 2024, the Defence Research and Development Organisation (DRDO) handed over which of the following to the Indian Navy?

- Ans**
- ✗ 1. Advanced Torpedo
 - ✗ 2. Anti-Submarine Warfare Helicopter
 - ✓ 3. Medium Range-Microwave Obscurant Chaff Rocket (MR-MOCR)
 - ✗ 4. Long Range Surface-to-Air Missile

Q.59 Which of the following conditions is required to have the value of displacement of an object zero?

- Ans**
- ✗ 1. When distance travelled is less than the displacement of the object.
 - ✗ 2. When distance travelled is greater than the displacement of the object.
 - ✗ 3. When distance travelled is equal to the displacement of the object.
 - ✓ 4. When the initial and final position of the object is the same.

Q.60 The sum of the first 8 prime numbers divided by 7 is equal to _____.

- Ans
- ☐ 1. 14
 - ☐ 2. 10
 - ☒ 3. 11
 - ☐ 4. 13

Q.61 The kinetic energy possessed by a body of mass 2 kg is 100 J. The velocity of the body will be:

- Ans
- ☐ 1. 0 m/s
 - ☐ 2. 20 m/s
 - ☐ 3. 50 m/s
 - ☒ 4. 10 m/s

Q.62 When did the Department for Promotion of Industry and Internal Trade (DPIIT) organise the Startup India Innovation Week 2024?

- Ans
- ☒ 1. 10 January 2024 to 18 January 2024
 - ☐ 2. 11 January 2024 to 19 January 2024
 - ☐ 3. 13 January 2024 to 21 January 2024
 - ☐ 4. 12 January 2024 to 20 January 2024

Q.63 The atomic radius of a hydrogen atom is:

- Ans
- ☒ 1. 10^{-10} m
 - ☐ 2. 10^{-9} m
 - ☐ 3. 10^{-8} m
 - ☐ 4. 10^{-7} m

Q.64 When 0.292929..... is converted into a fraction, then the result is:

- Ans
- ☒ 1. $\frac{29}{99}$
 - ☐ 2. $\frac{29}{100}$
 - ☐ 3. $\frac{1}{5}$
 - ☐ 4. $\frac{2}{9}$

Q.65 What type of reaction occurs when limestone gets converted into quicklime on heating?

- Ans
- ☒ 1. Decomposition
 - ☐ 2. Double displacement
 - ☐ 3. Combination
 - ☐ 4. Displacement

Q.66 In this question, two statements, I and II, have been given. These statements maybe independent causes, or effects of independent causes or a common cause. One of the statements maybe the effect of the other statement. Read both the statements and select the correct answer.

I. Government authorities of city X are finding different solutions to reduce air pollution in the city during winter.

II. City X has seen an acute rise in asthma cases during the last winter.

- Ans**
- ✓ 1. II is the cause and I is its possible effect.
 - ✗ 2. I is the cause and II is its possible effect.
 - ✗ 3. Both I and II are effects of independent causes.
 - ✗ 4. Both I and II are independent causes.

Q.67 Rama walks to her office 5 km away from home. In the morning, she covers the distance in 1 hour whereas, while returning home in the evening, she takes 15 more minutes to cover the same distance. Find her average speed (in km/h) during the two-way journey.

- Ans**
- ✗ 1. $4\frac{2}{3}$
 - ✗ 2. $3\frac{1}{8}$
 - ✗ 3. $3\frac{3}{5}$
 - ✓ 4. $4\frac{4}{9}$

Q.68 Subtract the sum of $2x - 3y + 7z$ and $4z - 5x$ from $13x - z$.

- Ans**
- ✗ 1. $3x + 3y - 3z$
 - ✗ 2. $4x + 7y$
 - ✗ 3. $x + 12y - 12z$
 - ✓ 4. $16x + 3y - 12z$

Q.69 Which of the following options should come in place of the question mark (?) in the given series?

75 65 56 48 41 ?

- Ans**
- ✓ 1. 35
 - ✗ 2. 31
 - ✗ 3. 33
 - ✗ 4. 34

Q.70 Which of the following formulas is used to calculate the volume by volume percentage of a solution?

- Ans**
- ✗ 1. $\frac{\text{Mass of solute}}{\text{Volume of solution}} \times 100$
 - ✗ 2. $\frac{\text{Mass of solute}}{\text{Mass of solution}} \times 100$
 - ✓ 3. $\frac{\text{Volume of solute}}{\text{Volume of solution}} \times 100$
 - ✗ 4. $\frac{\text{Volume of solution}}{\text{Mass of solute}} \times 100$

Q.71 In the food vacuole of which organism, complex substances are broken down into simpler ones which then diffuse into the cytoplasm?

- Ans**
- ☐ 1. Spirogyra
 - ☐ 2. Lichen
 - ☐ 3. Plasmodium
 - ☒ 4. Amoeba

Q.72 The shopkeeper offers two successive discounts on a machine that is marked at ₹18,000 so that its selling price gets reduced to ₹12,960. If 10% and $x\%$ are the respective discounts, the value of x is:

- Ans**
- ☐ 1. 15
 - ☐ 2. 10
 - ☐ 3. 12
 - ☒ 4. 20

Q.73 If $a : b = 3 : 4$ and $b : c = 2 : 3$, then $a : b : c = ?$

- Ans**
- ☐ 1. $4 : 2 : 3$
 - ☒ 2. $3 : 4 : 6$
 - ☐ 3. $3 : 4 : 3$
 - ☐ 4. $4 : 3 : 6$

Q.74 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some ribbons are balloons.

Some balloons are eagles.

Conclusions:

(I) All eagles are ribbons.

(II) No ribbons are eagles.

- Ans**
- ☐ 1. Both conclusions (I) and (II) follow
 - ☐ 2. Only conclusion (I) follows
 - ☐ 3. Only conclusion (II) follows
 - ☒ 4. Neither conclusion (I) nor (II) follows

Q.75 Which of the following is the specialised cell that conducts information via electrical impulses from one part of the body to another?

- Ans**
- ☐ 1. Axon
 - ☐ 2. Dendrite
 - ☒ 3. Neuron
 - ☐ 4. Nucleus

2024/12/02-23:59:13

Blackbook



Test Center Name	ION Digital Zone IDZ Powai
Test Date	28/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

- Options shown in green color with a tick icon are correct.
- Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 A vendor sold 10 toffees for a rupee, thereby gaining 20%. How many did he buy for a rupee?

- Ans**
- ☒ 1. 8
 - ☒ 2. 6
 - ☒ 3. 12
 - ☒ 4. 10

Q.2 What are the basic building units of organisms?

- Ans**
- ☒ 1. Cells
 - ☒ 2. Bones
 - ☒ 3. Fibres
 - ☒ 4. Tissues

Q.3 Seven people, A, B, C, D, E, F and G are sitting in a straight line, facing north.

Only two people sit to the left of D. F sits second to the left of D. G sits second to the right of E. E sits second to the right of D. A sits second to the left of B. A is not an immediate neighbour of F.

Who sits at the extreme right end of the line?

- Ans**
- ☒ 1. C
 - ☒ 2. G
 - ☒ 3. B
 - ☒ 4. A

Q.4 _____ was awarded the Green Energy Champion Award for 2023-24 at a meeting hosted by the Indian Wind Power Association in Coimbatore on 18 August 2024.

- Ans**
- ☒ 1. Kerala
 - ☒ 2. Andhra Pradesh
 - ☒ 3. Uttar Pradesh
 - ☒ 4. Gujarat

Q.5 तीन व्यक्तियों की वर्तमान आयु का अनुपात 4 : 5 : 6 है। आठ वर्ष पहले, उनकी आयु का योग 51 था। सबसे बड़े व्यक्ति की वर्तमान आयु ज्ञात कीजिए।

- Ans
- ☐ 1. 36 वर्ष
 - ☒ 2. 30 वर्ष
 - ☐ 3. 28 वर्ष
 - ☐ 4. 45 वर्ष

Q.6 An object is placed between the focus and the pole of a concave mirror, the image formed will be:

- Ans
- ☐ 1. Real, inverted and diminished
 - ☐ 2. Virtual, erect and diminished
 - ☒ 3. Virtual, erect and enlarged
 - ☐ 4. Real, inverted and enlarged

Q.7 What is the path of an object when it is in uniform motion?

- Ans
- ☐ 1. A circle
 - ☒ 2. A straight line
 - ☐ 3. A parabola
 - ☐ 4. An ellipse

Q.8 In the female reproductive organ of flower, the swollen bottom part is the _____, middle elongated part is the _____ and the terminal part that may be sticky is the stigma.

- Ans
- ☐ 1. bud, style
 - ☒ 2. ovary, style
 - ☐ 3. zygote, pollen tube
 - ☐ 4. style, ovary

Q.9 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 826 :: 723 : Y

- Ans
- ☐ 1. X = 604, Y = 1018
 - ☒ 2. X = 542, Y = 1007
 - ☐ 3. X = 593, Y = 941
 - ☐ 4. X = 518, Y = 984

- Q.10** Metabolic activities that generate nitrogenous waste material in human being are removed by:
- Ans** ☐ 1. the vascular system
☐ 2. the circulatory system
☐ 3. the respiratory system
☒ 4. the excretory system
- Q.11** 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 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)
- Ans** ☐ 1. BF – AE
☐ 2. TX – SW
☒ 3. XB – YC
☐ 4. DH – CG
- Q.12** In a certain code language, 'CODE' is coded as '5739' and 'LEGS' is coded as '4256'. What is the code for 'E' in the given code language?
- Ans** ☒ 1. 5
☐ 2. 9
☐ 3. 2
☐ 4. 6
- Q.13** Which of the following options should come in place of the question mark (?) in the given series?
7 13 25 ? 97 193
- Ans** ☐ 1. 39
☒ 2. 49
☐ 3. 35
☐ 4. 32
- Q.14** Consider a long current carrying solenoid. If Rahul plots the magnetic field lines inside this long current carrying solenoid, then it appears:
- Ans** ☐ 1. denser in the middle
☐ 2. to increase from one end to another
☒ 3. uniform at all points
☐ 4. denser at the ends
- Q.15** Which of the following teams was the winner of 2nd edition of Women's Premier League?
- Ans** ☐ 1. Mumbai Indians
☒ 2. Royal Challengers Bangalore (Bengaluru)
☐ 3. UP Warriorz
☐ 4. Delhi Capitals

- Q.16** Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All kites are monkeys.

All monkeys are ants

Conclusions:

- (I) Some ants are kites.
(II) Some monkeys are not kites.

- Ans** ☒ 1. Only conclusion (I) follows.
☐ 2. Neither conclusion (I) nor (II) follows.
☐ 3. Only conclusion (II) follows.
☐ 4. Both conclusions (I) and (II) follow.

- Q.17** Particles of matter are continuously moving because of _____.

- Ans** ☒ 1. kinetic energy
☐ 2. intermixing of particles
☐ 3. size of particles
☐ 4. potential energy

- Q.18** In colloids, which of the following is a correct example of foam?

- Ans** ☐ 1. Fog
☐ 2. Jelly
☐ 3. Mist
☒ 4. Pumice

- Q.19** In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 793 :: 679 : Y

- Ans** ☐ 1. X = 923, Y = 481
☐ 2. X = 886, Y = 443
☐ 3. X = 848, Y = 519
☒ 4. X = 974, Y = 498

Q.20 If the number 6484a6 is divisible by 8, then find the least value of a.

- Ans
- ☐ 1. 0
 - ☒ 2. 1
 - ☐ 3. 7
 - ☐ 4. 3

Q.21 Using $\pi = \frac{22}{7}$, find the total surface area of a closed cylinder having a base radius of 70 m and height of 110 m.

- Ans
- ☐ 1. 78,500 m²
 - ☐ 2. 82,400 m²
 - ☐ 3. 82,500 m²
 - ☒ 4. 79,200 m²

Q.22 Identify the INCORRECT sentence(s).

- a. Some organisms use simple food material obtained from inorganic sources in the form of carbon dioxide and water.
- b. Other organisms utilise complex substances which are broken down into simpler ones before they can be used for the upkeep and growth of the body.
- c. Heterotrophic organisms include plants.

- Ans
- ☐ 1. Only a and b
 - ☐ 2. Only b and c
 - ☐ 3. Only a
 - ☒ 4. Only c

Q.23 What is the position of the apical meristematic tissue in a plant body?

- Ans
- ☐ 1. Near to the root region only
 - ☐ 2. On the lateral side of the stem and roots
 - ☐ 3. Near the node
 - ☒ 4. At the growing tips of the stems and roots

Q.24 All 36 people are standing in a row, facing north. Aman is 11th from the left end, while Pratha is 12th from the right end. How many people are there between Aman and Pratha?

- Ans
- ☒ 1. 13
 - ☐ 2. 15
 - ☐ 3. 10
 - ☐ 4. 18

Q.25 Which of the following numbers represent the atomic mass of calcium?

- Ans
- ☒ 1. 40 u
 - ☐ 2. 14 u
 - ☐ 3. 32 u
 - ☐ 4. 16 u

Q.26 Seven people, A, B, C, D, E, F and G are sitting in a straight line, facing north.

Only two people sit to the left of F. F sits second to the right of G. E sits second to the right of F. C sits fourth to the right of B. D sits second to the left of C. A sits an immediate right of C.

How many people sit between B and G?

- Ans**
- ☐ 1. One
 - ☒ 2. None
 - ☐ 3. Two
 - ☐ 4. Three

Q.27 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some parrots are monkeys.

Some bears are monkeys.

Conclusions:

(I) All bears are parrots.

(II) Some monkeys are not bears.

- Ans**
- ☐ 1. Only conclusion (I) follows.
 - ☒ 2. Neither conclusion (I) nor (II) follows.
 - ☐ 3. Only conclusion (II) follows.
 - ☐ 4. Both conclusions (I) and (II) follow.

Q.28 How many medals were secured by India in Paris Olympics 2024?

- Ans**
- ☐ 1. Three
 - ☐ 2. Four
 - ☐ 3. Five
 - ☒ 4. Six

Q.29 A scheme like 'Buy 5, Get 6' on the same kind of articles with the same marked price offers a ____ discount.

- Ans**
- ☐ 1. 17.5%
 - ☐ 2. 20%
 - ☒ 3. $16\frac{2}{3}\%$
 - ☐ 4. $11\frac{1}{9}\%$

Q.30 The power of a body can be measured in both Kilowatt (KW) as well as Watt(W). Then the value of 1 KW in terms of Watt is:

- Ans**
- ☐ 1. 100
 - ☒ 2. 1000
 - ☐ 3. 10
 - ☐ 4. 10000

Q.31 Anthony starts from Point A and drives 9 km towards West. He takes a left turn, drives 3 km, turns left again and drives 13 km. He then takes a right turn and drives 2 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 degrees turns only unless specified.)

- Ans**
- ✓ 1. 5 km towards the North
 - ✗ 2. 7 km towards the South
 - ✗ 3. 9 km towards the North
 - ✗ 4. 13 km towards the West

Q.32 What is the name of the project launched by the Ministry of Culture in 2024 to showcase India's artistic heritage through public art installations?

- Ans**
- ✗ 1. Project BHARATI
 - ✗ 2. Project KALA
 - ✗ 3. Project SANSKRITI
 - ✓ 4. Project PARI

Q.33 If each vowel in the word ENGLISH is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the second position from the left in the new group of letters thus formed?

- Ans**
- ✗ 1. J
 - ✗ 2. F
 - ✓ 3. M
 - ✗ 4. R

Q.34 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 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.)

- Ans**
- ✗ 1. YI – TD
 - ✓ 2. AK – VH
 - ✗ 3. SC – NX
 - ✗ 4. LV – GQ

Q.35 ICICI Bank has partnered with which of the following agencies in October 2024 to provide instant credit on UPI for pre-approved customers, offering up to ₹2 lakh credit with a 45-day repayment period?

- Ans**
- ✗ 1. Google Pay
 - ✓ 2. PhonePe
 - ✗ 3. Paytm
 - ✗ 4. BharatPe

Q.36 For how many days will the Ashtalakshmi Mahotsav be celebrated in December 2024?

- Ans**
- ✓ 1. Three days
 - ✗ 2. Four days
 - ✗ 3. One day
 - ✗ 4. Two days

- Q.37 In a certain code language,
- 'A # B' means 'A is the mother of B',
- 'A - B' means 'A is the brother of B',
- 'A x B' means 'A is the wife of B'
- and 'A = B' means 'A is the father of B'.

How is N related to S if 'N - P # S x T'?

- Ans
- ☒ 1. Father's mother
 - ☒ 2. Father's brother
 - ☒ 3. Father's father's brother
 - ☒ 4. Mother's brother

- Q.38 If 'A' stands for '+', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '-', what will come in place of the question mark '?' in the following equation?

$$34D54C18A18B324 = ?$$

- Ans
- ☒ 1. 304
 - ☒ 2. 204
 - ☒ 3. 404
 - ☒ 4. 202

- Q.39 When an object falls under gravity, the object experiences:

- Ans
- ☒ 1. no external force
 - ☒ 2. a deceleration
 - ☒ 3. an acceleration
 - ☒ 4. a force only when it hits the surface of the earth

- Q.40 Select the correct statement(s).

A. Testosterone brings about changes in appearance seen in boys at the time of puberty.

B. Progesterone brings about changes in appearance seen in boys at the time of puberty.

- Ans
- ☒ 1. Both the statements are false.
 - ☒ 2. Statement B is true but A is false.
 - ☒ 3. Statement A is true but B is false.
 - ☒ 4. Both the statements are true.

- Q.41 If A means +, B means -, C means ×, D means ÷, then what will come in place of the question mark (?) in the following equation?

$$91 D 13 B 4 A 3 C 2 = ?$$

- Ans
- ☒ 1. 10
 - ☒ 2. 9
 - ☒ 3. 8
 - ☒ 4. 7

Q.42 The work done in moving a charge $+Q$ across two points having a potential difference K is:

- Ans
- ☐ 1. $2QK$
 - ☒ 2. QK
 - ☐ 3. $QK/4$
 - ☐ 4. $QK/2$

Q.43 Which of the following statements is INCORRECT about 'nature of a carbon compound'?

- Ans
- ☐ 1. Compounds of carbon, which are linked by only single bonds between the carbon atoms, are called saturated compounds.
 - ☒ 2. Compounds of carbon are only formed with oxygen.
 - ☐ 3. Compounds of carbon having double or triple bonds between their carbon atoms are called unsaturated compounds.
 - ☐ 4. Carbon has the unique ability to form bonds with other atoms of carbon, giving rise to large molecules. This property is called catenation.

Q.44 If, in the quadrilateral JKLM, the measures of the angles J, K, L, and M are in the ratio $2 : 3 : 5 : 6$, then the quadrilateral is a:

- Ans
- ☐ 1. Kite
 - ☐ 2. square
 - ☐ 3. parallelogram
 - ☒ 4. trapezium

Q.45 Which of the following is obtained by subtracting $x^2 - y^2$ from $y^2 - x^2$?

- Ans
- ☐ 1. $2(x^2 + y^2)$
 - ☐ 2. $2(x^2 - y^2)$
 - ☐ 3. $-2(x^2 + y^2)$
 - ☒ 4. $-2(x^2 - y^2)$

Q.46 What compound is formed when dilute hydrochloric acid is added to a beaker containing a small amount of copper oxide?

- Ans
- ☐ 1. Copper (IV) Chloride
 - ☒ 2. Copper (II) Chloride
 - ☐ 3. Copper (III) Chloride
 - ☐ 4. Copper (I) Chloride

Q.47 Which of the following options gives the correct expression for y , when $\frac{\cos^2 A}{1 - \sin A} = y$, and $\sin A \neq 1$?

- Ans
- ☐ 1. $\cos A + 1$
 - ☐ 2. $\operatorname{cosec} A$
 - ☐ 3. $\sec A + \tan A$
 - ☒ 4. $\sin A + 1$

Q.48 Where was the Fifth Global Standards Symposium (GSS-24) held?

- Ans**
- ☐ 1. Bengaluru
 - ☐ 2. Mumbai
 - ☐ 3. Chennai
 - ☒ 4. New Delhi

Q.49 I walk at a speed of 10 km/h and reach the destination in 2 hrs, exactly on time. If I increase my speed by 5 km/h, how early would I reach my destination?

- Ans**
- ☐ 1. 50 min
 - ☐ 2. 30 min
 - ☐ 3. 20 min
 - ☒ 4. 40 min

Q.50 NCPJ is related to PFTO in a certain way based on the English alphabetical order. In the same way, QAVB is related to SDZG. To which of the following options is UIND related, following the same logic?

- Ans**
- ☐ 1. VKRJ
 - ☐ 2. VMRJ
 - ☐ 3. XLSI
 - ☒ 4. WLRI

Q.51 If $48 : x :: x : 75$, and $x > 0$, then what is the value of x ?

- Ans**
- ☐ 1. 63
 - ☒ 2. 60
 - ☐ 3. 57
 - ☐ 4. 51

Q.52 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.

WGN : ZDQ

IUZ : LRC

- Ans**
- ☐ 1. URL : STI
 - ☒ 2. CAT : FXW
 - ☐ 3. DMV : HHZ
 - ☐ 4. PXH : LCD

Q.53 11 और 30 (दोनों को छोड़कर) के बीच की अभाज्य संख्याओं का औसत कितना होगा?

- Ans**
- ☐ 1. 19.6
 - ☐ 2. 19.5
 - ☒ 3. 20.2
 - ☐ 4. 20.3

Q.54 The smallest natural number that must be multiplied with 1083 to make it a perfect square is:

- Ans**
- ☒ 1. 3
 - ☐ 2. 2
 - ☐ 3. 11
 - ☐ 4. 4

Q.55 When an iron nail is dipped into a copper sulphate solution, which substance gets displaced?

- Ans**
- ☒ 1. Copper
 - ☐ 2. Iron
 - ☐ 3. Copper Sulphate
 - ☐ 4. Sulphate

Q.56 In a certain code language, 'GLOBE' is coded as '84315', 'GRADE' is coded as '89265', and 'BAKED' is coded as '12756'. What is the code for 'R' in the given code language?

- Ans**
- ☐ 1. 6
 - ☐ 2. 2
 - ☐ 3. 8
 - ☒ 4. 9

Q.57 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

LNR, MOS, NPT, OQU, ?

- Ans**
- ☒ 1. PRV
 - ☐ 2. PVR
 - ☐ 3. VRP
 - ☐ 4. VPR

Q.58 When white light is dispersed by a glass prism into seven colours, out of the following colours which colour will be deviated the least?

- Ans**
- ☐ 1. Indigo
 - ☐ 2. Blue
 - ☒ 3. Yellow
 - ☐ 4. Green

Q.59 The average of 70 values is 40. If each value is multiplied by 20, what will be the changed average?

- Ans**
- ☐ 1. 90
 - ☐ 2. 60
 - ☐ 3. 1400
 - ☒ 4. 800

Q.60 A and B can together complete a piece of work in 5 days. They worked together for 4 days and then B left. After another 2 days, A completed the remaining work. In how many days can A complete the entire work alone?

- Ans**
- ☒ 1. 10
 - ☐ 2. 15
 - ☐ 3. 5
 - ☐ 4. 20

Q.61 Who became the first woman fighter pilot to join the elite 18 'Flying Bullets' squadron in 2024?

- Ans ☒ 1. Mohana Singh
☐ 2. Shivangi Singh
☐ 3. Avani Chaturvedi
☐ 4. Bhawana Kanth

Q.62 In this question, two statements, I and II, have been given. These statements maybe independent causes, or effects of independent causes or a common cause. One of the statements maybe the effect of the other statement. Read both the statements and select the correct answer.

I. Most teachers of school X have left the school and joined school Y.

II. The football team of school X has won the champion's trophy in the inter-city football championship.

- Ans ☒ 1. Both I and II are effects of independent causes.
☐ 2. Both I and II are independent causes.
☐ 3. I is the cause and II is its possible effect.
☐ 4. II is the cause and I is its possible effect.

Q.63 निम्नलिखित संख्याओं और प्रतीकों की श्रृंखला को देखिए और नीचे दिए गए प्रश्न का उत्तर दीजिए। संख्याओं और प्रतीकों की गिनती केवल बाएँ से दाएँ ही की जानी चाहिए।

(बाएँ) 9 # 1 2 @ 8 \$ 7 & 3 Ω & % 4 6 * £ 5 (दाएँ)

उपरोक्त श्रृंखला में ऐसे कितने प्रतीक हैं, जिनमें से प्रत्येक के ठीक पहले एक सम संख्या है लेकिन ठीक बाद एक विषम संख्या नहीं है?

- Ans ☐ 1. शून्य
☐ 2. एक
☒ 3. दो
☐ 4. दो से अधिक

Q.64 Which of the following is a prime number?

- Ans ☒ 1. 373
☐ 2. 221
☐ 3. 161
☐ 4. 437

Q.65 As per Women, Business and the Law 2024 (WBL2024), India scores ____ out of 100.0.

- Ans ☐ 1. 75.4
☒ 2. 74.4
☐ 3. 71.4
☐ 4. 70.4

Q.66 निम्नलिखित संख्याओं और प्रतीकों की श्रृंखला को देखिए और नीचे दिए गए प्रश्न का उत्तर दीजिए। संख्याओं और प्रतीकों की गिनती केवल बाएं से दाएं ही की जानी चाहिए।

(बाएं) # 1 * £ 5 8 \$ 4 2 & % 6 7 & @ 3 Ω 9 (दाएं)

उपरोक्त श्रृंखला में ऐसे कितने प्रतीक हैं, जिनमें से प्रत्येक के ठीक पहले एक संख्या है और ठीक बाद एक प्रतीक है?

- Ans**
- ☐ 1. दो
 - ☒ 2. दो से अधिक
 - ☐ 3. एक
 - ☐ 4. शून्य

Q.67 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

UZW, TYV, SXU, RWT, ?

- Ans**
- ☐ 1. QSV
 - ☐ 2. SQV
 - ☐ 3. SVQ
 - ☒ 4. QVS

Q.68 The Public Examinations (Prevention of Unfair Means) Act, 2024 that aims to prevent unfair means in public examinations and common entrance tests held across the country, came into effect in which month of 2024?

- Ans**
- ☐ 1. August
 - ☐ 2. July
 - ☐ 3. May
 - ☒ 4. June

Q.69 The length of the base of a triangle is equal to the perimeter of a square whose diagonal is $7\sqrt{2}$ cm and the corresponding height of the triangle is equal to the length of a side of the square whose area is 169 sq cm. The area (in sq cm) of the triangle is:

- Ans**
- ☐ 1. 130
 - ☐ 2. 152
 - ☒ 3. 182
 - ☐ 4. 156

Q.70 Study the following table and answer the question.

The table shows the number of people who visited hill stations A and B in the years from 2011 to 2013.

Year	A	B
2011	777	566
2012	675	289
2013	470	978

What is the absolute difference between the number of people who visited hill station A in the year 2011 to the number of people who visited hill station B in the same year?

- Ans**
- ☒ 1. 312
 - ☒ 2. 211
 - ☒ 3. 102
 - ☒ 4. 112

Q.71 3 pencils and 5 pens together cost ₹101, whereas 5 pencils and 3 pens together cost ₹91. The cost of 2 pencils and 2 pens together is:

- Ans**
- ☒ 1. ₹32
 - ☒ 2. ₹45
 - ☒ 3. ₹36
 - ☒ 4. ₹48

Q.72 In a country, 55% of the population are females. 80% of the male population is literate. What percentage of females are literate if the total literacy rate is 58%?

- Ans**
- ☒ 1. 55%
 - ☒ 2. 45%
 - ☒ 3. 20%
 - ☒ 4. 40%

Q.73 Find the simple interest on ₹3,000 as a sum borrowed at 4% per year rate of interest for 5 years.

- Ans**
- ☒ 1. ₹400
 - ☒ 2. ₹600
 - ☒ 3. ₹300
 - ☒ 4. ₹800

Q.74 Identify the simplest compound formed by carbon that is used widely as fuel.

- Ans**
- ☒ 1. Methane
 - ☒ 2. Ethane
 - ☒ 3. Methyl
 - ☒ 4. Propane

Q.75 Two students appeared in an examination. One of them secured 9 marks more than the other and his marks were 56% of the sum of their marks. The marks obtained by them were:

- Ans**
- ✓ 1. 42 and 33
 - ✗ 2. 41 and 32
 - ✗ 3. 43 and 34
 - ✗ 4. 39 and 30

2024/12/02-22:40:28



Test Center Name	Futuretec Solutions
Test Date	28/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 In which Indian state was a 1,300-year-old stupa discovered by the Archaeological Survey of India (ASI) in February 2023?

- Ans**
- ☒ 1. West Bengal
 - ☒ 2. Bihar
 - ☒ 3. Odisha
 - ☒ 4. Madhya Pradesh

Q.2 If ₹2,400 is to be distributed between A and B in the ratio of 7 : 5 , then the share of B is:

- Ans**
- ☒ 1. ₹1,000
 - ☒ 2. ₹1,600
 - ☒ 3. ₹1,900
 - ☒ 4. ₹1,300

Q.3 Find the volume of a sphere whose diameter is 84 m. [Use $\pi = \frac{22}{7}$]

- Ans**
- ☒ 1. 313,418 m³
 - ☒ 2. 310,464 m³
 - ☒ 3. 338,808 m³
 - ☒ 4. 323,434 m³

Q.4 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 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.)

- Ans**
- ☒ 1. SL – WP
 - ☒ 2. KD - OF
 - ☒ 3. NG – RK
 - ☒ 4. AT – EX

Q.5 The magnification produced by a spherical mirror is $+0.75$. The image is:

- Ans**
- ☐ 1. Virtual, erect and enlarged
 - ☐ 2. Real, inverted and diminished
 - ☒ 3. Virtual, erect and diminished
 - ☐ 4. Real, inverted and enlarged

Q.6 In 2024, Air Marshal Tejinder Singh was appointed as the _____ at the Air Headquarters (Vayu Bhawan).

- Ans**
- ☐ 1. Chief of Defence Staff
 - ☒ 2. Deputy Chief of the Air Staff
 - ☐ 3. Air Officer Commanding-in-Chief
 - ☐ 4. Chief of the Air Staff

Q.7 Who among the following is the author of the book 'Neeraj Chopra: The Man Who Made History'?

- Ans**
- ☐ 1. Samir Chopra
 - ☐ 2. Shamyra Dasgupta
 - ☐ 3. Navdeep Singh Gill
 - ☒ 4. Norris Pritam

Q.8 Six people, A, B, C, D, E and F are sitting in a straight line, facing north.

Only three people sit to the left of E. B sits second to the right of E. Only three people sit between A and C. C sits immediately left of D.

How many people sit between D and F?

- Ans**
- ☐ 1. Three
 - ☐ 2. One
 - ☐ 3. Two
 - ☒ 4. None

Q.9 What happens when pea plants showing two different characteristics (the tall/short trait and the round seed/wrinkled seed trait), rather than just one are bred with each other?

- Ans**
- ☐ 1. Some F₁ progeny are tall plants with round seeds, and some are short plants with wrinkled seeds.
 - ☐ 2. The tall/short trait and the round seed/wrinkled seed trait are dependently inherited.
 - ☒ 3. The tall/short trait and the round seed/wrinkled seed trait are independently inherited.
 - ☐ 4. They are all tall and have round seeds in F₂ generation.

Q.10 All liquids and gases are:

- Ans**
- ☐ 1. solids
 - ☐ 2. insulators
 - ☐ 3. semiconductors
 - ☒ 4. fluids

Q.11 A dishonest dealer professes to sell his goods at cost price, but uses a false weight and thus gains 25%. For 100 gm, he uses a weight of how many grams?

- Ans**
- ✓ 1. 80 gm
 - ✗ 2. 75 gm
 - ✗ 3. 85 gm
 - ✗ 4. 70 gm

Q.12 The value of $x^2 - 5$ at $x = -1$ is:

- Ans**
- ✗ 1. -1
 - ✗ 2. -5
 - ✓ 3. -4
 - ✗ 4. -2

Q.13 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.

GTC : KWE

WFK : AIM

- Ans**
- ✗ 1. LPA : KMV
 - ✓ 2. OZG : SCI
 - ✗ 3. DGB : GLI
 - ✗ 4. JQP : MVW

Q.14 Identify the single cell organism.

- Ans**
- ✗ 1. Seaweed
 - ✗ 2. Leech
 - ✗ 3. Liver fluke
 - ✓ 4. Amoeba

Q.15 In September 2024, which High Court of India struck down the amended Information Technology Rules 2023, which empowered the Centre to set up a fact check unit (FCU) to identify fake, false and misleading information about the government and its establishments on social media?

- Ans**
- ✓ 1. Bombay High Court
 - ✗ 2. Madras High Court
 - ✗ 3. Patna High Court
 - ✗ 4. Delhi High Court

Q.16 DGEH is related to ILJM in a certain way based on the English alphabetical order. In the same way, GJHK is related to LOMP. To which of the following options is PSQT related, following the same logic?

- Ans**
- ✓ 1. UXVY
 - ✗ 2. UVXZ
 - ✗ 3. UXWY
 - ✗ 4. VUWY

Q.17 Aarav can do a piece of work alone in 6 days and Babita can do it alone in 8 days. Aarav and Babita undertook to do it for ₹2,400. With the help of Chaitanya, they completed the work in 3 days. How much is to be paid to Babita?

- Ans**
- ☐ 1.
 - ☐ 2. ₹1,200
 - ☐ 3. ₹800
 - ☒ 4. ₹900

Q.18 Which of the following represents the ratio by mass of hydrogen to oxygen atoms (H:O) in a water molecule?

- Ans**
- ☐ 1. 1 : 4
 - ☐ 2. 1 : 2
 - ☒ 3. 1 : 8
 - ☐ 4. 3 : 8

Q.19 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Mr. X, a teacher of a high school, often beats his students.

Courses of Action:

- I. Students should complain about this matter to the principal of the school.
- II. Students should quit the school and take admission in another school.

- Ans**
- ☐ 1. Only II follows.
 - ☐ 2. Neither I nor II follows.
 - ☐ 3. Both I and II follow.
 - ☒ 4. Only I follows.

Q.20 From a point on the ground, the angles of elevation of the top and the bottom of a flag that is mounted on an 18 m high pole, are respectively 60° and 30° . The height of the flag is:

- Ans**
- ☐ 1. 60 m
 - ☒ 2. 36 m
 - ☐ 3. 52 m
 - ☐ 4. 48 m

Q.21 Study the following table and answer the given question.

The table shows the expenditure of a family over the given years.

Year	Expenditure in ₹				
	Food	Clothing	Education	Rent	Others
2011	2000	1200	3300	2000	4000
2012	2500	1100	3200	2300	4100

What is the total expenditure (in ₹) on food by the family for the year 2011 and 2012?

- Ans
- ☐ 1. 5,000
 - ☐ 2. 5,500
 - ☐ 3. 6,000
 - ☒ 4. 4,500

Q.22 Under the Prime Minister's Internship Scheme launched in October 2024, candidates will receive a monthly stipend of what amount for the full 12-month internship period?

- Ans
- ☐ 1. ₹2,000
 - ☒ 2. ₹5,000
 - ☐ 3. ₹1,500
 - ☐ 4. ₹6,500

Q.23 Consider a parallel combination of 2 resistors with resistances $4\ \Omega$ and $6\ \Omega$. The equivalent resistance of the circuit is:

- Ans
- ☐ 1. $4.2\ \Omega$
 - ☒ 2. $2.4\ \Omega$
 - ☐ 3. $12\ \Omega$
 - ☐ 4. $10\ \Omega$

Q.24 Two successive discounts of 10% and 5% are equivalent to a single discount of _____.

- Ans
- ☐ 1. 15%
 - ☐ 2. 14%
 - ☐ 3. 15.5%
 - ☒ 4. 14.5%

Q.25 The sum of five consecutive numbers is 260. The sum of the first and the last numbers is:

- Ans
- ☒ 1. 104
 - ☐ 2. 96
 - ☐ 3. 126
 - ☐ 4. 116

Q.26 What determines the chemical properties of a carbon compound?

- Ans
- ☐ 1. Length of the carbon chain
 - ☐ 2. Number of Hydrogen atoms
 - ☒ 3. Functional group
 - ☐ 4. Molecular mass

Q.27 Reena runs at a speed of 8 km/h. How long will she take to cover 200 m?

- Ans
- ☐ 1. 120 seconds
 - ☐ 2. 54 seconds
 - ☒ 3. 90 seconds
 - ☐ 4. 175 seconds

Q.28 If 'A' stands for '+', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

$$144 \text{ C } 44 \text{ D } 12 \text{ A } 12 \text{ B } 144 = ?$$

- Ans
- ☐ 1. 54
 - ☐ 2. 34
 - ☒ 3. 44
 - ☐ 4. 43

Q.29 Which of the following actions is responsible for the survival of species over time?

- Ans
- ☒ 1. Variation
 - ☐ 2. Conservation
 - ☐ 3. Struggle
 - ☐ 4. Reproduction

Q.30 In a certain code language,

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

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

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

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M ÷ N x P − S + T'?

- Ans
- ☒ 1. Mother's brother's wife's father
 - ☐ 2. Mother's brother
 - ☐ 3. Mother's brother's wife's brother
 - ☐ 4. Mother's father

Q.31 What is the use of high-performance computing systems 'Arka' and 'Arunika'?

- Ans**
- ☐ 1. Monitoring unwanted elements on social media
 - ☐ 2. Cyber crime detection
 - ☐ 3. Detecting the location of drugs
 - ☒ 4. Weather forecasting

Q.32 Name the scientist who first discovered the cell in 1665.

- Ans**
- ☐ 1. Theodor Schwann
 - ☒ 2. Robert Hooke
 - ☐ 3. Antonie van Leeuwenhoek
 - ☐ 4. Matthias Jakob Schleiden

Q.33 A class of 30 students appeared in a test. The average score of 12 students is 80, and that of the rest is 75. What is the average score of the class?

- Ans**
- ☐ 1. 67
 - ☐ 2. 87
 - ☐ 3. 56
 - ☒ 4. 77

Q.34 Which of the following options should come in place of the question mark (?) in the given series?

4 5 9 18 34 ?

- Ans**
- ☐ 1. 54
 - ☐ 2. 52
 - ☐ 3. 60
 - ☒ 4. 59

Q.35 Which tissue is responsible for movement in our body?

- Ans**
- ☐ 1. Connective tissue
 - ☒ 2. Muscular tissue
 - ☐ 3. Nervous tissue
 - ☐ 4. Epithelial tissue

Q.36 If each vowel in the word PAINTED is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the third position from the left in the new group of letters thus formed?

- Ans**
- ☐ 1. M
 - ☐ 2. F
 - ☐ 3. B
 - ☒ 4. J

Q.37 If A means +, B means -, C means $\times$, D means $\div$, then what will come in place of the question mark (?) in the following equation?

$$14 \text{ B } 5 \text{ C } 5 \text{ A } 30 \text{ D } 2 = ?$$

- Ans**
- ☐ 1. 1
 - ☐ 2. 2
 - ☒ 3. 4
 - ☐ 4. 3

Q.38 A gardener increases the area of his rectangular garden by increasing its length by 40% and decreasing its breadth by 20%. The area of the new garden is what percentage more than the area of the old garden?

- Ans**
- ☒ 1. 12%
 - ☐ 2. 20%
 - ☐ 3. 8%
 - ☐ 4. 0%

Q.39 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

No dogs are pigs.

All pigs are stones.

Conclusions:

(I) Some stones are pigs.

(II) No stones are dogs.

- Ans**
- ☐ 1. Neither conclusion (I) nor (II) follows
 - ☐ 2. Only conclusion (II) follows
 - ☒ 3. Only conclusion (I) follows
 - ☐ 4. Both conclusions (I) and (II) follow

Q.40 A town had a population of 50,000 in 1988. In one year, by 1989, it increased by 25%. Next year, in 1990, it decreased by 30%. The next year, in 1991, there was an increase of 40%. What is the population at the end of 1991?

- Ans**
- ☐ 1. 66,550
 - ☒ 2. 61,250
 - ☐ 3. 62,250
 - ☐ 4. 60,250

Q.41 Magnetic field lines around a straight current carrying conductor look like:

- Ans**
- ☐ 1. straight lines
 - ☐ 2. hyperbolas
 - ☐ 3. ellipses
 - ☒ 4. concentric circles

Q.42 Which of the following statements is INCORRECT?

- Ans
- ☒ 1. Living organisms can survive only in a narrow range of pH change.
 - ☒ 2. When pH of rain water is more than 5.6, it is called acid rain.
 - ☒ 3. Tooth decay starts when the pH of the mouth is lower than 5.5.
 - ☒ 4. When pH of rain water is less than 5.6, it is called acid rain.

Q.43 Select the correct sentence(s).

- a. The release of energy in the aerobic process is a lot greater than in the anaerobic process.
- b. ATP is broken down giving rise to a fixed amount of energy which can drive the endothermic reactions taking place in the cell.
- c. The pyruvate is converted into lactic acid which is also a three-carbon molecule.

- Ans
- ☒ 1. Only a and b
 - ☒ 2. Only a
 - ☒ 3. Only b and c
 - ☒ 4. a, b and c

Q.44 When white light falls on a glass prism, it splits into seven colours. The phenomena is known as:

- Ans
- ☒ 1. dispersion
 - ☒ 2. deviation
 - ☒ 3. diffraction
 - ☒ 4. refraction

Q.45 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. Only five people sit between A and F. G sits third to the left of F. E is the immediate neighbour of B and F. C is not the immediate neighbour of G.

How many people sit between C and E?

- Ans
- ☒ 1. One
 - ☒ 2. Two
 - ☒ 3. Four
 - ☒ 4. Three

Q.46 The 90th edition of the Ranji Trophy started in October 2024. Which of the following games is the Ranji Trophy related to?

- Ans
- ☒ 1. Badminton
 - ☒ 2. Basketball
 - ☒ 3. Hockey
 - ☒ 4. Cricket

Q.47 If each vowel in the word PLANTED is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the third position from the left in the new group of letters thus formed?

- Ans**
- ☐ 1. C
 - ☐ 2. F
 - ☐ 3. K
 - ☒ 4. B

Q.48 The sum of all prime numbers between 60 and 90 is:

- Ans**
- ☒ 1. 523
 - ☐ 2. 460
 - ☐ 3. 610
 - ☐ 4. 373

Q.49 If we add 1 to the numerator and subtract 1 from the denominator of a given fraction, it becomes 1. It becomes $\frac{2}{3}$ if 1 is added to the denominator of the given fraction while the numerator is left unchanged. The positive difference of numerator and denominator of the fraction is:

- Ans**
- ☐ 1. 7
 - ☐ 2. 5
 - ☒ 3. 2
 - ☐ 4. 3

Q.50 Regarding carbon, which of the following statements is true?

- Ans**
- ☐ 1. Carbon is bivalent.
 - ☐ 2. Carbon is monovalent.
 - ☒ 3. Carbon is tetravalent.
 - ☐ 4. Carbon is trivalent.

Q.51 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 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.)

- Ans**
- ☐ 1. YQ – CU
 - ☒ 2. UM - ZN
 - ☐ 3. DV – HZ
 - ☐ 4. AS – EW

Q.52 In a certain code language, 'MOUSE' is coded as '74651', 'SPOKE' is coded as '52418', and 'PROUD' is coded as '26394'. What is the code for 'K' in the given code language?

- Ans**
- ☐ 1. 1
 - ☒ 2. 8
 - ☐ 3. 2
 - ☐ 4. 5

Q.53 When a motorcar makes a sharp turn at a high speed, we tend to get thrown to one side. This example is based on which law of motion?

- Ans**
- ☐ 1. Third law of motion
 - ☐ 2. Conservation of momentum
 - ☐ 3. Second law of motion
 - ☒ 4. First law of motion

Q.54 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 140.4 :: 38 : Y

- Ans**
- ☐ 1. X = 21, Y = 218.4
 - ☒ 2. X = 26, Y = 205.2
 - ☐ 3. X = 23, Y = 240.6
 - ☐ 4. X = 34, Y = 225.8

Q.55 If a regular polygon has 65 diagonals, then the number of sides this polygon has is:

- Ans**
- ☐ 1. 12
 - ☐ 2. 14
 - ☒ 3. 13
 - ☐ 4. 10

Q.56 Seven boxes, P, Q, R, S, X, Y and Z, are kept one over the other but not necessarily in the same order. Only P is kept above X. Only two boxes are kept between X and S. Only R is kept below Z. Y is not kept immediately above S. Which box is kept fourth from the top?

- Ans**
- ☐ 1. X
 - ☐ 2. Z
 - ☐ 3. R
 - ☒ 4. Q

Q.57 Which of the following is NOT a characteristic of particles of matter?

- Ans**
- ☐ 1. Particles of matter are continuously moving.
 - ☐ 2. Particles of matter have space between them.
 - ☐ 3. Particles of matter attract each other.
 - ☒ 4. Particles of matter are static.

Q.58 When the force and the displacement are in the same direction, then work done will be:

- Ans**
- ☐ 1. either positive or negative
 - ☐ 2. negative
 - ☒ 3. positive
 - ☐ 4. zero

Q.59 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All chairs are tables.

No table is a bed.

Conclusions:

(I) Some beds are chairs.

(II) No bed is a table.

- Ans**
- ☐ 1. Neither conclusion (I) nor (II) follows.
 - ☐ 2. Both conclusions (I) and (II) follow.
 - ☒ 3. Only conclusion (II) follows.
 - ☐ 4. Only conclusion (I) follows.

Q.60 Where does India rank on the Corruption Perceptions Index as of October 2024?

- Ans**
- ☐ 1. 86
 - ☐ 2. 96
 - ☐ 3. 89
 - ☒ 4. 93

Q.61 The concept of 'Prodyogiki' in the Yuva Sangam programme (2023) primarily focuses on which of the following?

- Ans**
- ☐ 1. Economic development
 - ☒ 2. Technology
 - ☐ 3. Political awareness
 - ☐ 4. Cultural preservation

Q.62 The value of $\sqrt{0.0016} \times \sqrt[3]{8000000}$ is:

- Ans**
- ☐ 1. 1.6
 - ☒ 2. 8
 - ☐ 3. 16
 - ☐ 4. 

Q.63 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 3 % 4 6 & 8 \$ 7 * Ω 9 # 1 2 & @ £ (Right)

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

- Ans**
- ☐ 1. Zero
 - ☒ 2. One
 - ☐ 3. More than two
 - ☐ 4. Two

Q.64 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

GJN, ILP, KNR, MPT, ?

- Ans**
- ☒ 1. RVO
 - ☒ 2. ORV
 - ☒ 3. ROV
 - ☒ 4. OVR

Q.65 The Union Cabinet approved the establishment of International Big Cat Alliance (IBCA) with headquarters in India with a one-time budgetary support of ₹150 crore for a period of ____.

- Ans**
- ☒ 1. 10 years
 - ☒ 2. 3 years
 - ☒ 3. 5 years
 - ☒ 4. 7 years

Q.66 Milk is a mixture of:

- Ans**
- ☒ 1. only water
 - ☒ 2. only protein
 - ☒ 3. only fat
 - ☒ 4. water, fat, protein etc.

Q.67 A group of people consists of men, women, and children. 40% of them are men, 35% are women and rest are children, and their average weights are 70 kg, 60 kg and 30 kg, respectively. The average weight of the group is:

- Ans**
- ☒ 1. 46.5 kg
 - ☒ 2. 56.5 kg
 - ☒ 3. 55.5 kg
 - ☒ 4. 45.5 kg

Q.68 What type of reaction takes place when a single reactant breaks down into simpler products?

- Ans**
- ☒ 1. Decomposition
 - ☒ 2. Double displacement
 - ☒ 3. Combination
 - ☒ 4. Displacement

Q.69 In a certain code language, 'HAIR' is coded as '9715' and 'AGED' is coded as '8612'. What is the code for 'A' in the given code language?

- Ans**
- ☒ 1. 1
 - ☒ 2. 2
 - ☒ 3. 8
 - ☒ 4. 7

Q.70 Which of the following numbers is divisible by both 7 and 11?

- Ans**
- ☐ 1. 2684
 - ☒ 2. 1771
 - ☐ 3. 3014
 - ☐ 4. 2534

Q.71 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

BFW, DIS, FLO, HOK, ?

- Ans**
- ☐ 1. KQE
 - ☐ 2. JSG
 - ☐ 3. KRF
 - ☒ 4. JRG

Q.72 If a sum amounts to $2\frac{1}{4}$ times the sum after 2 years on a certain rate of compound interest, compounded annually, then the rate of interest per annum is:

- Ans**
- ☐ 1. 30%
 - ☒ 2. 50%
 - ☐ 3. 40%
 - ☐ 4. 25%

Q.73 Town A is the north of Town B. Town C is to the east of Town B. Town D is to the west of Town C. Town A is to the north-east of Town D. Town M is to the north of Town C. What is the position of Town D with respect to Town M?

- Ans**
- ☐ 1. West
 - ☐ 2. East
 - ☐ 3. North-east
 - ☒ 4. South-west

Q.74 The square of the length of a space diagonal of a closed cube is 2175 cm^2 . What is the total surface area (in cm^2) of the cube?

- Ans**
- ☐ 1. 4305
 - ☒ 2. 4350
 - ☐ 3. 4530
 - ☐ 4. 4272

Q.75 In the following number pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 198 :: 8 : Y

Ans ✓ 1. X = 6, Y = 488

✗ 2. X = 7, Y = 538

✗ 3. X = 4, Y = 512

✗ 4. X = 5, Y = 546

2024/12/02-22:44:52



Test Center Name	iON Digital Zone iDZ Tirunelveli
Test Date	29/11/2024
Test Time	9:00 AM - 10:00 AM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

- Options shown in green color with a tick icon are correct.
- Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 Each letter in the word HYDROMETER is changed to the letter preceding it in the English alphabetical order and then all the letters thus formed are arranged in alphabetical order. Which of the following letters will be fifth from the right in the new group of letters thus formed?

- Ans**
- ☒ 1. G
 - ☒ 2. Q
 - ☒ 3. N
 - ☒ 4. L

Q.2 A, B, E, F, L, M and P are sitting around a circular table, facing the centre. Only three people sit between P and E when counted from the left of P. Only three people sit between M and A when counted from the right of A. L sits to the immediate right of M. F is an immediate neighbour of A as well as E. Who sits second to the left of B?

- Ans**
- ☒ 1. E
 - ☒ 2. P
 - ☒ 3. A
 - ☒ 4. F

Q.3 In a certain code language, 'bright as day' is coded as 'cb mn ju' and 'day and night' is coded as 'mn fd rs'. How is 'day' coded in the given language?

- Ans**
- ☒ 1. fd
 - ☒ 2. ju
 - ☒ 3. cb
 - ☒ 4. mn

Q.4 A dishonest dealer professes to sell goods at the cost price, but uses a false weight of 900 grams instead of a kg. His gain percentage is:

- Ans
- ☐ 1. 11%
 - ☒ 2. $11\frac{1}{9}\%$
 - ☐ 3. $11\frac{2}{9}\%$
 - ☐ 4. 10%

Q.5 The HCF of the numbers 310, 208 and 180 is:

- Ans
- ☐ 1. 6
 - ☒ 2. 2
 - ☐ 3. 8
 - ☐ 4. 4

Q.6 The simple interest on ₹1,280 at 5% p.a. in 3 years is:

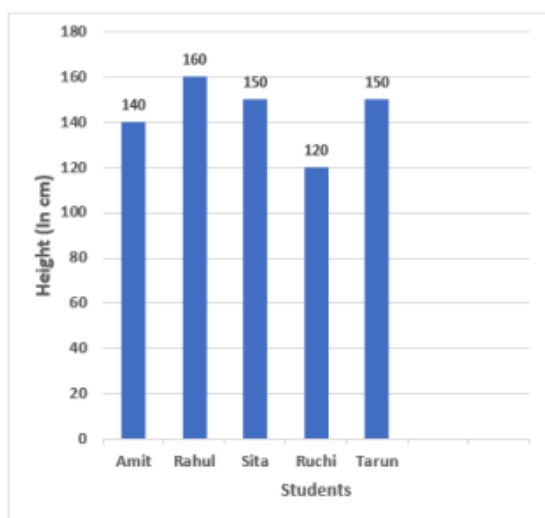
- Ans
- ☐ 1. ₹180
 - ☐ 2. ₹185
 - ☐ 3. ₹195
 - ☒ 4. ₹192

Q.7 Which of the following metals CANNOT be cut with a knife?

- Ans
- ☐ 1. Sodium
 - ☐ 2. Lithium
 - ☐ 3. Potassium
 - ☒ 4. Copper

Q.8 Study the following graph and answer the given question.

The graph shows the height of five students in a class.



What is the respective ratio between the height of Amit and height of Rahul?

- Ans**
- ☐ 1. 12 : 13
 - ☐ 2. 5 : 6
 - ☒ 3. 7 : 8
 - ☐ 4. 9 : 10

Q.9 In a row of 34 students facing North, Jignesh is 12th from the right end. If Kamlesh is 7th to the left of Jignesh, what is Kamlesh's position from the left end of the line?

- Ans**
- ☐ 1. 19th
 - ☐ 2. 18th
 - ☐ 3. 17th
 - ☒ 4. 16th

Q.10 If + means $\times$, $\times$ means $\div$, $\div$ means $+$, then what will come in place of the question mark (?) in the following equation?

$$28 - 6 \div 4 + 14 \times 14 = ?$$

- Ans**
- ☐ 1. 160
 - ☐ 2. 169
 - ☒ 3. 171
 - ☐ 4. 168

Q.11 The median of the observations 4, 14, 11, 8, 7, 8, 9, 12, 4 and 6 is:

- Ans**
- ☐ 1. 11
 - ☐ 2. 9
 - ☒ 3. 8
 - ☐ 4. 10

Q.12 Select the set, from the given options, in which the numbers are related in the same way as are the numbers of the following sets.

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

(6, 13, 78)

(5, 22, 110)

Ans ☒ 1. (8, 19, 162)

☒ 2. (24, 9, 206)

☒ 3. (8, 12, 96)

☒ 4. (7, 13, 90)

Q.13 Which of the following household items does NOT use the heating effect of current?

Ans ☒ 1. Electric water heater

☒ 2. Electric stove (heater)

☒ 3. Electric motor

☒ 4. Electric iron box

Q.14 The weights (in kg) of 9 members of a school cricket team are 50, 63, x, 62, 64, 48, 51, 55, 48. If the mean weight is 56 kg, then the value of x is _____.

Ans ☒ 1. 57

☒ 2. 48

☒ 3. 63

☒ 4. 64

Q.15 What is the title of Parimal Nathwani's book, which was presented to PM Modi in 2024?

Ans ☒ 1. The Pride of Gujarat

☒ 2. Call of the Gir

☒ 3. Asiatic Lions: A Conservation Story

☒ 4. The Kingdom of Lions

Q.16 Two trains of equal length, running at the speeds of 60 km/h and 40 km/h, take 50 seconds to cross each other while they are running in the same direction. What time will they take to cross each other if they are running in opposite directions?

Ans ☒ 1. 7 sec

☒ 2. 10 sec

☒ 3. 8 sec

☒ 4. 9 sec

Q.17 The gravitational force between two objects of masses m_1 and m_2 is directly proportional to _____.

Ans ☒ 1. $m_1 \times m_2$

☒ 2. $m_2 - m_1$

☒ 3. $m_1 - m_2$

☒ 4. $\frac{m_1}{m_2}$

Q.18 Select the number from among the given options that can replace the question mark (?) in the following series.

175 221 267 313 359 ?

- Ans
- ✓ 1. 405
 - ✗ 2. 429
 - ✗ 3. 413
 - ✗ 4. 431

Q.19 Evaluate the given expression.

$(-4) + (-12) \div (-6)$

- Ans
- ✗ 1.
 - ✗ 2. -8
 - ✗ 3. -6
 - ✓ 4. -2

Q.20 The Defence Research and Development Organisation's headquarters is located in _____.

- Ans
- ✗ 1. Hyderabad
 - ✗ 2. Bengaluru
 - ✓ 3. New Delhi
 - ✗ 4. Mumbai

Q.21 Which of the following statements is correct according to the law of conservation of mass?

- Ans
- ✓ 1. Mass can neither be created nor be destroyed in a chemical reaction.
 - ✗ 2. Mass can be destroyed in a chemical reaction.
 - ✗ 3. Mass can be created but cannot be destroyed in a chemical reaction.
 - ✗ 4. Mass can be created in a chemical reaction.

Q.22 Given below is a statement followed by two possible reasons numbered I and II. Read the statement carefully and decide which of the two explain(s) the event/observation/information given in the statement.

Statement – Price of tomatoes has been steadily rising in the last two weeks and has crossed ₹200 per kg in most parts of the country.

Reasons:

(I) Farmers have reported a new unknown insect infestation in tomato crops, which has affected the crop output of tomatoes in many states across the country.

(II) Heavy flooding in many states during the monsoon season has destroyed many standing vegetable crops, leading to shortages in supplies.

- Ans
- ✗ 1. Only I is a possible reason.
 - ✗ 2. Only II is a possible reason.
 - ✓ 3. Both I and II are possible reasons.
 - ✗ 4. Neither I nor II is a possible reason.

Q.23 Simplify the following expression:

$$9991 \times 10009$$

- Ans
- ☐ 1. 9999999
 - ☒ 2. 99999919
 - ☐ 3. 9999919
 - ☐ 4. 91999919

Q.24 A car moving along a straight path slows down and stops. The car is under which type of motion?

- Ans
- ☐ 1. Uniform motion
 - ☒ 2. Non-uniform motion
 - ☐ 3. Periodic motion
 - ☐ 4. Circular motion

Q.25 If $a : b = 3 : 2$ and $b : c = 4 : 5$, then $a : b : c = ?$

- Ans
- ☐ 1. 3 : 4 : 5
 - ☐ 2. 6 : 5 : 4
 - ☒ 3. 6 : 4 : 5
 - ☐ 4. 4 : 5 : 3

Q.26 Which Kashmiri wood carver was honoured with the Padma Shri award in 2024 for his contributions in the field of art?

- Ans
- ☐ 1. Abdul Rashid Khan
 - ☒ 2. Shri Ghulam Nabi Dar
 - ☐ 3. Bashir Ahmad Mir
 - ☐ 4. Mohammad Yousuf

Q.27 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

SHK, WLO, APS, ETW, ?

- Ans
- ☐ 1. IYA
 - ☐ 2. 
 - ☐ 3. IXB
 - ☒ 4. IXA

Q.28 Who among the following is currently the Governor of the Reserve Bank of India (RBI) as of 2024?

- Ans
- ☐ 1. Raghuram Rajan
 - ☒ 2. Shaktikanta Das
 - ☐ 3. Urjit Patel
 - ☐ 4. Duvvuri Subbarao

Q.29 In two triangles ABC and DEF, if $\overline{AB} = \overline{EF}$, $\overline{BC} = \overline{DF}$ and $\overline{CA} = \overline{DE}$, then:

- Ans
- ☒ 1. $\triangle CBA \cong \triangle DFE$
 - ☐ 2. $\triangle DEF \cong \triangle BCA$
 - ☐ 3. $\triangle ABC \cong \triangle DEF$
 - ☐ 4. $\triangle BAC \cong \triangle FDE$

Q.30 Find the perimeter of a rhombus whose diagonals are of lengths 6 cm and 8 cm.

- Ans
- ☐ 1. 24 cm
 - ☐ 2. 26 cm
 - ☒ 3. 20 cm
 - ☐ 4. 25 cm

Q.31 In a certain code language,

$A + B$ means 'A is the mother of B',

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

$A \times B$ means 'A is the wife of B',

$A \div B$ means 'A is the father of B',

and $A \# B$ means 'A is the daughter of B'.

How is P related to K if ' $Q - R \times P \div S - T + K$ '?

- Ans
- ☒ 1. Mother's father
 - ☐ 2. Daughter's son
 - ☐ 3. Son's daughter
 - ☐ 4. Father's father

Q.32 The sum of a two-digit number and the number obtained by reversing the digits is 99. If the digits of the number differ by 7, then the two-digit number can be:

- Ans
- ☐ 1. 19
 - ☐ 2. 92
 - ☒ 3. 81
 - ☐ 4. 29

Q.33 The nature of an image formed by a concave mirror when an object is kept at the position between the principal focus and the pole of the mirror is _____.

- Ans
- ☒ 1. virtual and erect
 - ☐ 2. real and erect
 - ☐ 3. virtual and inverted
 - ☐ 4. real and inverted

Q.34 An order was placed for the supply of a carpet whose breadth was 6 m and whose length were 1.44 times the breadth. What is the cost of a carpet whose length and breadth are 40% more and 25% more respectively than the first carpet. [The cost of a carpet is Rs. 45 per sq m.]

- Ans
- ☐ 1. Rs. 3868.80
 - ☒ 2. Rs. 4082.40
 - ☐ 3. Rs. 4216.20
 - ☐ 4. Rs. 3642.60

Q.35 How many such pairs of letters are there in the word JOURNEY (in forward direction), each of which has as many letter in the same sequence between them in the word as in the English alphabet?

- Ans**
- ✓ 1. Two
 - ✗ 2. One
 - ✗ 3. Four
 - ✗ 4. Three

Q.36 Evaluate the given expression.

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

- Ans**
- ✗ 1. 18
 - ✓ 2. 12
 - ✗ 3. 0
 - ✗ 4. 6

Q.37 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

EGI, KMO, QSU, WYA, ?

- Ans**
- ✓ 1. CEG
 - ✗ 2. DGJ
 - ✗ 3. DFH
 - ✗ 4. CFI

Q.38 Who among the following won the Gold Medal in 2020 Paralympics and Silver in 2024 Paralympics in Shooting?

- Ans**
- ✗ 1. Rubina Francis
 - ✓ 2. Manish Narwal
 - ✗ 3. Nishad Kuamr
 - ✗ 4. Pramod Bhagat

Q.39 What organisation is hosting the six-day international festival on Indian dance from 16 October 2024 in Delhi?

- Ans**
- ✓ 1. Sangeet Natak Akademi
 - ✗ 2. Indian Council for Cultural Relations
 - ✗ 3. Kalakshetra Foundation
 - ✗ 4. Kathak Kendra

Q.40 Amit bought a laptop at a 25% discount on its marked price. If he paid ₹28,500 for the laptop, what was its marked price?

- Ans**
- ✗ 1. ₹38,600
 - ✗ 2. ₹37,000
 - ✓ 3. ₹38,000
 - ✗ 4. ₹37,400

Q.41 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 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.)

- Ans**
- ☐ 1. NJ-MP
 - ☐ 2. PL-OR
 - ☐ 3. LH-KN
 - ☒ 4. SO-RV

Q.42 In a certain code language, 'RUIN' is coded as '3719' and 'RUNG' is coded as '7916'. What is the code for 'G' in the given code language?

- Ans**
- ☐ 1. 1
 - ☐ 2. 7
 - ☐ 3. 9
 - ☒ 4. 6

Q.43 Umesh took 100 chocolates out of 250 chocolates from Ruchi. Umesh gave 20% of his chocolates to Shalaka and 35% of his chocolates to Marry. Then Ruchi gave 50% of her remaining chocolates to Umesh. Find the number of chocolates Umesh had at the end.

- Ans**
- ☒ 1. 120
 - ☐ 2. 75
 - ☐ 3. 125
 - ☐ 4. 130

Q.44 Which two numbers should be interchanged to make the given equation correct?

$$75 \div 5 + 15 \times 4 - 17 \times 3 + (60 \div 6) \times 10 = 100$$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)

- Ans**
- ☐ 1. 17 and 15
 - ☒ 2. 5 and 3
 - ☐ 3. 3 and 6
 - ☐ 4. 3 and 4

Q.45 TRPMK is related to XVTQO in a certain way based on the English alphabetical order. In the same way, LJHEC is related to PNLIG. To which of the following options is KIGDB related, following the same logic?

- Ans**
- ☒ 1. OMKHF
 - ☐ 2. OMKIG
 - ☐ 3. NLJGE
 - ☐ 4. OMKIF

Q.46 RGEL is related to VKAH in a certain way based on the English alphabetical order. In the same way, HWOV is related to LAKR. To which of the following options is TICJ related, following the same logic?

- Ans**
- ☐ 1. XNYF
 - ☒ 2. XMYF
 - ☐ 3. XMZF
 - ☐ 4. XNYG

Q.47 India scripted history at the 2024 edition of Chess Olympiad, winning the gold medal in both the open and women's section for the _____.

- Ans
- ☐ 1. Fourth Time
 - ☐ 2. Third time
 - ☐ 3. Second Time
 - ☒ 4. First Time

Q.48 Which of the following options does NOT represent a property of solids?

- Ans
- ☐ 1. They have distinct boundaries and fixed volumes.
 - ☐ 2. They have a tendency to maintain their shape when subjected to outside force.
 - ☒ 3. It is not difficult to change their shape.
 - ☐ 4. They have a definite shape.

Q.49 In September 2024, Prime Minister Narendra Modi launched three _____ supercomputers, developed indigenously under the National Supercomputing Mission.

- Ans
- ☐ 1. PARAM Shakti
 - ☐ 2. PARAM Surya
 - ☐ 3. Parma Chandra
 - ☒ 4. PARAM Rudra

Q.50 Which element is needed by the thyroid gland to produce thyroxine hormone?

- Ans
- ☐ 1. Calcium
 - ☐ 2. Iodine
 - ☐ 3. Sodium
 - ☒ 4. Potassium

Q.51 Simplify: $(1 - \sec^2 \theta)(1 - \sin \theta)(1 + \sin \theta)(1 + \cot^2 \theta)$.

- Ans
- ☒ 1. -1
 - ☐ 2. 0
 - ☐ 3. 1
 - ☐ 4. 2

Q.52 By how much is 80% of 40 greater than $\frac{4}{5}$ of 25?

- Ans
- ☐ 1. 6
 - ☐ 2. 9
 - ☐ 3. 4
 - ☒ 4. 12

Q.53 Which of the following types of reaction represents formation of slaked lime from calcium oxide and water?

- Ans
- ☐ 1. Displacement reaction
 - ☐ 2. Decomposition reaction
 - ☐ 3. Precipitation reaction
 - ☒ 4. Combination reaction

Q.54 The number of chromosomes become half in a daughter cell by the process of:

- Ans
- ☐ 1. amitosis
 - ☒ 2. meiosis
 - ☐ 3. mitosis
 - ☐ 4. binary fission

Q.55 The magnetic field produced by a current-carrying wire at a given point depends on which of the following factors?

- Ans
- ☐ 1. Current flowing through the wire Only
 - ☐ 2. Distance from the wire Only
 - ☐ 3. Neither distance from the wire nor current through the wire
 - ☒ 4. Both distance from the wire and current through the wire

Q.56 Which of the following organisms does NOT show asexual reproduction by means of fission?

- Ans
- ☐ 1. Leishmania
 - ☐ 2. Plasmodium
 - ☐ 3. 
 - ☒ 4. Earthworm

Q.57 When white light is incident on a glass prism, it undergoes dispersion. This phenomenon is due to _____.

- Ans
- ☐ 1. refractive index of the glass being the same for different colours
 - ☐ 2. diffraction of the light
 - ☒ 3. refractive index of the glass being different for different colours
 - ☐ 4. interference of the light

Q.58 If a force 'F' acts on a body such that body gets displaced through the distance 'x' in the direction of the force, then the work done by the force is _____.

- Ans
- ☐ 1. x/F
 - ☒ 2. Fx
 - ☐ 3. x^2F
 - ☐ 4. F/x

- Q.59** Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some cars are bikes.

All bikes are trucks.

Conclusions:

(I) Some trucks are cars.

(II) All trucks are cars.

- Ans** ☒ 1. Only conclusion (II) follows
☒ 2. Both conclusions (I) and (II) follow
☒ 3. Only conclusion (I) follows
☒ 4. Neither conclusion (I) nor (II) follows

- Q.60** If each vowel in the word ELASTIC is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter following it in the English alphabetical order, then which of the following letters will be fourth from the right in the group of letter thus formed?

- Ans** ☒ 1. B
☒ 2. T
☒ 3. U
☒ 4. M

- Q.61** Sharad starts from Point Y and drives 9 km towards the South. He then takes a left turn, drives 19 km, turns right and drives 23 km. He then takes a right turn and drives 8 km. He takes a right turn and drives 17 km. He then turns left, drives 11 km, turns left and drives 6 km to stop at Point Z. How far (shortest distance) and towards which direction should he drive in order to reach Point Y again? (All turns are 90 degrees turns only unless specified)

- Ans** ☒ 1. 21 km towards the north
☒ 2. 26 km towards the north
☒ 3. 23 km towards the south
☒ 4. 15 km towards the south

- Q.62** Seven people, A, B, C, D, E, F and G, are sitting in a row, facing north. Only two people sit to the left of A. Only three people sit between G and A. C is an immediate neighbour of F and E. D sits second to the left of F. How many people sit to the left of F?

- Ans** ☒ 1. One
☒ 2. Four
☒ 3. Two
☒ 4. Three

- Q.63** A solution contains 40 g of common salt in 320 g of water. What is the concentration of the solution in terms of mass by mass percentage?
- Ans** ☒ 1. 11.1%
☐ 2. 1.0%
☐ 3. 11.3%
☐ 4. 11.0%
- Q.64** Which of the following is formed when carbon dioxide reacts with calcium hydroxide?
- Ans** ☐ 1. Methane
☐ 2. Carbon monoxide
☐ 3. Calcium oxide
☒ 4. Calcium carbonate
- Q.65** P is 30% more efficient than Q. How much time will they, working together, take to complete a job that P alone could have done in 23 days?
- Ans** ☒ 1. 13 days
☐ 2. $20\frac{3}{17}$ days
☐ 3. 10 days
☐ 4. 11 days
- Q.66** In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?
- (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.)
- X : 649 :: 956 : Y
- Ans** ☐ 1. X = 944, Y = 742
☐ 2. X = 876, Y = 724
☐ 3. X = 923, Y = 738
☒ 4. X = 894, Y = 711
- Q.67** 8 men and 12 women can build a wall in 10 days. 6 men and 8 women can build the same wall in 14 days. How long will take for 2 women and 1 man to build it together?
- Ans** ☐ 1. 35 days
☒ 2. 70 days
☐ 3. 140 days
☐ 4. 280 days
- Q.68** Which of the following Acts was amended in 2023 to enhance child protection measures in India?
- Ans** ☐ 1. Protection of Children from Sexual Offences Act
☐ 2. Right to Education Act
☐ 3. Child Labour (Prohibition and Regulation) Act
☒ 4. Juvenile Justice (Care and Protection of Children) Act

Q.69 Select the correct option for liquid connective tissue.

- Ans
- ☐ 1. Blood
 - ☐ 2. Cartilage
 - ☐ 3. Adipose connective tissue
 - ☒ 4. Areolar connective tissue

Q.70 Which of the following substances can move across the cell membrane by diffusion?

- Ans
- ☐ 1. Proteins
 - ☐ 2. Nucleic acid
 - ☐ 3. Starch
 - ☒ 4. Oxygen

Q.71 Which of the following is NOT an example of osmosis?

- Ans
- ☐ 1. Absorption of water by plant roots
 - ☒ 2. 
 - ☐ 3. Movement of O_2 and CO_2 in and out of the living cell
 - ☐ 4. Swelling of raisins when soaked in water

Q.72 Which of the following compounds is unsaturated?

- Ans
- ☐ 1. C_2H_6
 - ☒ 2. C_2H_4
 - ☐ 3. C_3H_8
 - ☐ 4. C_4H_{10}

Q.73 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some gold are silver.

Some silver are diamonds.

Conclusions:

(I) Some diamonds are gold.

(II) Some silver are gold.

- Ans
- ☐ 1. Both conclusions (I) and (II) follow
 - ☐ 2. Only conclusion (I) follows
 - ☐ 3. Neither conclusion (I) nor (II) follows
 - ☒ 4. Only conclusion (II) follows

Q.74 Ms. Yanung Jamoh Lego, who has been conferred with Padma Shri award in the field of Agriculture in 2024, belongs to which state of India?

- Ans**
- ☒ 1. Maharashtra
 - ☐ 2. Arunachal Pradesh
 - ☒ 3. Rajasthan
 - ☒ 4. Madhya Pradesh

Q.75 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 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.)

- Ans**
- ☒ 1. RY-VC
 - ☐ 2. AD-GJ
 - ☒ 3. DK-HO
 - ☒ 4. QX-UB

2024/12/03-04:45:41



Test Center Name	iON Digital Zone iDZ Tirunelveli
Test Date	29/11/2024
Test Time	12:30 PM - 1:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 The line joining the centre of curvature and the pole of a given spherical mirror is called ____.

- Ans
- ☒ 1. principal focus
 - ☒ 2. principal axis
 - ☐ 3. radius of curvature
 - ☐ 4. focal length

Q.2 A can do a certain work in the same time in which B and C together can do it. If A and B together could do it in 10 days and C alone in 50 days, then B alone could do it in:

- Ans
- ☒ 1. 25 days
 - ☐ 2. 20 days
 - ☐ 3. 15 days
 - ☐ 4. 30 days

Q.3 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 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.)

- Ans
- ☐ 1. AD-UX
 - ☐ 2. SV-MP
 - ☐ 3. FI-ZC
 - ☒ 4. TX-RV

Q.4 Which of the following is NOT an example of combination reaction?

- Ans
- ☒ 1. Silver chloride turns grey in sunlight
 - ☐ 2. Burning of natural gas
 - ☐ 3. Formation of water from $H_2(g)$ and $O_2(g)$
 - ☐ 4. Calcium oxide reacts vigorously with water to produce slaked lime

Q.5 According to the '2024 State of the Rhino' Report by the International Rhino Foundation (IRF), which species of rhino could be severely affected by climate change?

- Ans**
- ☐ 1. Greater One-horned Rhino
 - ☐ 2. Javan Rhino
 - ☒ 3. Black Rhino
 - ☐ 4. Sumatran Rhino

Q.6 QLPK is related to IDHC in a certain way based on the English alphabetical order. In the same way, VQUP is related to NIMH. To which of the following options is TOSN related, following the same logic?

- Ans**
- ☒ 1. LGKF
 - ☐ 2. LGFK
 - ☐ 3. GLKF
 - ☐ 4. GLFK

Q.7 Power of a lens of focal length 'f' is directly proportional to _____.

- Ans**
- ☐ 1. f
 - ☒ 2. $1/f$
 - ☐ 3. $1/f^2$
 - ☐ 4. f^2

Q.8 Ariel ranked 6th from the top and 18th from the bottom in her class. How many students are there in the class?

- Ans**
- ☐ 1. 26
 - ☐ 2. 25
 - ☐ 3. 22
 - ☒ 4. 23

Q.9 Two trains travelling in the same direction at 40 km/h and 22 km/h cross each other completely in 1 minute. If the length of the first train is 125 m, what is the length of the second train?

- Ans**
- ☐ 1. 125 m
 - ☐ 2. 150 m
 - ☒ 3. 175 m
 - ☐ 4. 185 m

Q.10 In a certain code language,

$A + B$ means 'A is the mother of B',

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

$A \times B$ means 'A is the wife of B' and

$A \div B$ means 'A is the father of B'.

Based on the above, how is Q related to T if ' $P \times Q \div R - S + T$ '?

- Ans
- ☒ 1. Mother's Father
 - ☐ 2. Brother
 - ☐ 3. Husband
 - ☐ 4. Mother's brother

Q.11 Seven people, B, C, D, E, F, G, and K, are sitting in a straight line, facing north.

Only two people sit between D and G. Only E sits to the right of K. Only one person sits between G and K. C sits at some place to the right of B but at some place to the left of F.

Who sits third from the right end of the line?

- Ans
- ☐ 1. G
 - ☐ 2. C
 - ☐ 3. B
 - ☒ 4. F

Q.12 Which of the following options does NOT represent a property of liquids?

- Ans
- ☒ 1. Liquids do not have fixed volume.
 - ☐ 2. Liquids have no fixed shape.
 - ☐ 3. Liquids flow and change shape.
 - ☐ 4. Liquids take the shape of the container in which they are kept.

Q.13 Malarial parasite shows which type of asexual reproduction?

- Ans
- ☐ 1. Budding
 - ☒ 2. Multiple fission
 - ☐ 3. Regeneration
 - ☐ 4. Binary fission

Q.14 Which of the following has the lowest pH value?

- Ans
- ☐ 1. Blood
 - ☐ 2. Milk of magnesia
 - ☒ 3. Gastric juice
 - ☐ 4. Lemon juice

Q.15 If the radius of a sphere is increased by 2 cm, then its surface area increases by 704 cm^2 . Using $\pi = \frac{22}{7}$, find the radius of the sphere after the increase.

- Ans** ☒ 1. 15 cm
☐ 2. 14 cm
☐ 3. 16 cm
☐ 4. 13 cm

Q.16 Two successive discounts of 25% and 10% on a deal are equivalent to a single discount of:

- Ans** ☒ 1. 32.5%
☐ 2. 34.5%
☐ 3. 35%
☐ 4. 32%

Q.17 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 803 :: 469 : Y

- Ans** ☒ 1. X = 545, Y = 727
☐ 2. X = 526, Y = 758
☐ 3. X = 558, Y = 712
☐ 4. X = 512, Y = 792

Q.18 Which of the following is the correct statement about colloidal solutions?

- Ans** ☐ 1. Colloids do not scatter a beam of light passing through them and make its path visible.
☐ 2. The size of particles of the colloid is not too small.
☐ 3. A colloidal solution is a homogeneous mixture.
☒ 4.

The components of a colloidal solution are the dispersed phase and the dispersion medium.

- Q.19** In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

Long queues are seen outside the electricity bill payment counters on 14th and 15th of each month, as 15th of each month is the last date for payment of electricity bills. Citizens have lodged several complaints with the electricity board regarding this difficulty in payment.

Courses of Action:

(I) The electricity board should set up additional counters for payment collection on 14th and 15th of each month, to make it easier for citizens.

(II) The electricity board should increase the penalty to be paid after the specified last date.

- Ans** ☒ 1. Only II follows

☒ 2. Both I and II follow

☒ 3. Only I follows

☒ 4. Neither I nor II follows

- Q.20** In a certain code language, 'MEND' is coded as '3186' and 'MINE' is coded as '1623'. What is the code for 'I' in the given code language?

- Ans** ☒ 1. 6

☒ 2. 2

☒ 3. 3

☒ 4. 1

- Q.21** Which of the following is NOT a characteristic feature of epithelial tissue?

- Ans** ☒ 1. Separated from the underlying tissue by a cellular, non-fibrous basement membrane

☒ 2. Covers most organs and cavities within the body

☒ 3. Have no intercellular spaces

☒ 4. Are tightly packed

- Q.22** Which indigenously developed technology was used in the AKASH-NG missile during its flight test in 2024?

- Ans** ☒ 1. Radio Frequency Seeker

☒ 2. Laser-guided Seeker

☒ 3. Infrared Seeker

☒ 4. Electro-optical Seeker

- Q.23** In the 2024 Union Budget, the government allocated funds for the development of the Vishnupad Temple Corridor. In which of the following states is the Vishnupad Temple located?

- Ans** ☒ 1. Uttar Pradesh

☒ 2. West Bengal

☒ 3. Tamil Nadu

☒ 4. Bihar

- Q.24** How long will it take for ₹1,500 to become ₹2,040 at a rate of 8% per annum simple interest?
- Ans** ☐ 1. 2 years
☐ 2. 3 years
☐ 3. $4\frac{3}{4}$ years
☒ 4. $4\frac{1}{2}$ years
- Q.25** The corresponding sides of two similar triangles are in the ratio of 2: 3. If the area of the smaller triangle is 36 sq cm, then the area of the bigger triangle is:
- Ans** ☐ 1. 36 sq cm
☒ 2. 81 sq cm
☐ 3. 96 sq cm
☐ 4. 16 sq cm
- Q.26** A reduction of 20% in the price of sugar enables a purchaser to obtain 2.5 kg more for ₹160. The original price per kg of sugar is:
- Ans** ☐ 1. ₹15
☐ 2. ₹20
☐ 3. ₹12
☒ 4. ₹16
- Q.27** Johny starts from Point A and drives 6 km towards the North. He then takes a right turn, drives 17 km, turns right and drives 13 km. He then takes a right turn and drives 8 km. He takes a final right turn, drives 7 km and stops at Point P. How far (shortest distance) and towards which direction should he drive to reach Point A again? (All turns are 90 degrees turns only unless specified.)
- Ans** ☐ 1. 10 km towards the East
☐ 2. 9 km towards the East
☒ 3. 9 km towards the West
☐ 4. 10 km towards the West
- Q.28** In 2024, which of the following Indian banks launched the Green Rupee Term Deposit?
- Ans** ☒ 1. State Bank of India
☐ 2. HDFC Bank
☐ 3. ICICI Bank
☐ 4. Central Bank of India
- Q.29** Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?
- BJL, EMO, HPR, KSU, ?
- Ans** ☐ 1. NVY
☐ 2. NUY
☐ 3. NUW
☒ 4. NVX

Q.30 Study the given table and answer the question that follows.

The table depicts the number of different articles X and Y sold in the year 2019 and 2020.

Years	Number of article X	Number of article Y
2019	125	150
2020	110	130

What is the absolute difference between the number of article X sold in the year 2019 and 2020?

- Ans**
- ☐ 1. 45
 - ☐ 2. 25
 - ☐ 3. 35
 - ☒ 4. 15

Q.31 On 9 November 2023, N Srikant was appointed as the Additional Secretary in the Union Ministry of _____.

- Ans**
- ☒ 1. Power and New and Renewable Energy
 - ☐ 2. Housing and Urban Affairs
 - ☐ 3. Environment and Forests
 - ☐ 4. Finance

Q.32 The 63rd National Open Athletics Championship was conducted in the city of _____.

- Ans**
- ☐ 1. Mumbai
 - ☒ 2. Bengaluru
 - ☐ 3. Hyderabad
 - ☐ 4. Bhopal

Q.33 Different cell organelles such as mitochondria, ribosome, etc., together constitute the basic unit of life called the:

- Ans**
- ☐ 1. organ
 - ☒ 2. cell
 - ☐ 3. organ system
 - ☐ 4. tissue

Q.34 If 'I' stands for '+', 'J' stands for '×', 'K' stands for '÷' and 'L' stands for '−' what will come in place of the question mark '?' in the following equation?

$$(35 \text{ L } 19) \text{ J } 4 \text{ I } 26 \text{ L } (7 \text{ J } 3) \text{ I } 11 = ?$$

- Ans**
- ☐ 1. 105
 - ☐ 2. 120
 - ☒ 3. 80
 - ☐ 4. 60

Q.35 Which two numbers should be interchanged to make the given equation correct?

$$3 \times (9 + 7 - 5) + (64 \div 2) - 22 + 78 - 8 \times 4 = 82$$

(Note: Interchange should be done of the entire number and not individual digits of a given number.)

- Ans
- ☐ 1. 3 and 4
 - ☒ 2. 64 and 78
 - ☐ 3. 7 and 5
 - ☐ 4. 2 and 4

Q.36 Simplify the following expression:

$$9992 \times 10008$$

- Ans
- ☐ 1. 9999964
 - ☐ 2. 9999936
 - ☒ 3. 99999936
 - ☐ 4. 91999964

Q.37 A fruit seller had some apples. He sells 40% of those apples and still has 240 apples. How many apples did he originally have?

- Ans
- ☐ 1. 372
 - ☐ 2. 588
 - ☐ 3. 600
 - ☒ 4. 400

Q.38 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 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.)

- Ans
- ☒ 1. LP-NR
 - ☐ 2. FK-IN
 - ☐ 3. DI-GL
 - ☐ 4. QV-TY

Q.39 Simplify the expression: $\sqrt{\frac{1+\cos \theta}{1-\cos \theta}}$ is:

- Ans
- ☐ 1. $\sec \theta - \cot \theta$
 - ☐ 2. $\operatorname{cosec} \theta - \cot \theta$
 - ☐ 3. $\sec \theta + \cot \theta$
 - ☒ 4. $\operatorname{cosec} \theta + \cot \theta$

Q.40 The book 'Coaching Beyond: My Days with the Indian Cricket Team' is authored by R Sridhar and the foreword is by _____.

- Ans
- ☒ 1. VVS Laxman
 - ☐ 2. Saurabh Ganguly
 - ☐ 3. Rahul Dravid
 - ☐ 4. Sachin Tendulkar

Q.41 By how much is 50% of 60 greater than 30% of 40?

Ans ✓ 1. 18

✗ 2. 13

✗ 3. 15

✗ 4. 20

Q.42 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some vegetables are fruits.

Some fruits are sweets.

Conclusions:

(I) Some fruits are vegetables.

(II) Some sweets are vegetables.

Ans ✗ 1. Only conclusion (II) follows.

✓ 2. Only conclusion (I) follows.

✗ 3. Both conclusions (I) and (II) follow.

✗ 4. Neither conclusion (I) nor (II) follows.

Q.43 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

FB-IE-LM

JF-MI-PQ

Ans ✗ 1. NI-QN-TU

✓ 2. LH-OK-RS

✗ 3. KG-NJ-QS

✗ 4. HD-KG-NP

Q.44 Select the option that shows the correct age range of puberty in human male and female.

Ans ✓ 1. 11-17 years

✗ 2. 9-12 years

✗ 3. 8-11 years

✗ 4. 6-10 years

Q.45 In an election between two candidates, 75% of the voters cast their votes. 2% of the votes cast were declared invalid. A candidate got 9261 votes which were 75% of the total valid votes. The total number of voters enrolled in that election was:

Ans ✗ 1. 16,400

✓ 2. 16,800

✗ 3. 18,000

✗ 4. 10,000

Q.46 Evaluate the given expression.

$$19 - 20 \div 4$$

- Ans
- ☐ 1. -1
 - ☒ 2. 14
 - ☐ 3. 19
 - ☐ 4. 24

Q.47 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of :: ?

(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.)

$$X : 676 :: 17 : Y$$

- Ans
- ☐ 1. $X = 21, Y = 396$
 - ☐ 2. $X = 23, Y = 400$
 - ☐ 3. $X = 28, Y = 361$
 - ☒ 4. $X = 25, Y = 324$

Q.48 The oxygen molecule is a _____.

- Ans
- ☒ 1. diatomic molecule
 - ☐ 2. monoatomic molecule
 - ☐ 3. tetratomic molecule
 - ☐ 4. triatomic molecule

Q.49 The force of attraction between two bodies which is directly proportional to the product of masses of the bodies and inversely proportional to the square of the distance of separation is _____.

- Ans
- ☒ 1. gravitational force
 - ☐ 2. electromotive force
 - ☐ 3. electrostatic force
 - ☐ 4. electromagnetic force

Q.50 If each consonant in the word GRAVITY is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order. How many consonants are present in the new group of letters thus formed?

- Ans
- ☒ 1. Six
 - ☐ 2. Two
 - ☐ 3. Seven
 - ☐ 4. Three

Q.51 The work done by a 10 Newton force acting on a body, which results in the displacement of 2 m in the direction of the force, is ____.

- Ans**
- ☐ 1. 0
 - ☐ 2. 0.2 joule
 - ☐ 3. 10 joules
 - ☒ 4. 20 joules

Q.52 Each vowel in the word JOURNALIST is changed to the letter following it in the English alphabetical order, and each consonant is changed to the letter preceding it in the English alphabetical order. How many letters will appear exactly twice in the group of letters thus formed?

- Ans**
- ☐ 1. One
 - ☐ 2. Two
 - ☐ 3. Three
 - ☒ 4. None

Q.53 If $x : y = 8 : 3$, then $(x - y) : (x + y) = ?$

- Ans**
- ☐ 1. 11 : 5
 - ☐ 2. 2 : 5
 - ☒ 3. 5 : 11
 - ☐ 4. 5 : 2

Q.54 What can be formed by a coil of many circular turns of insulated copper wire wrapped closely in the shape of a cylinder?

- Ans**
- ☐ 1. Circular coil
 - ☒ 2. Solenoid
 - ☐ 3. Straight conductor
 - ☐ 4. Toroid

Q.55 In a certain code language, 'cafe hotel room' is coded as 'aa bb ee', 'room kitchen hall' is coded as 'ff aa bb', and 'hall hotel garden' is coded as 'ee ff tt'. What is the code for 'garden' in the given code language?

- Ans**
- ☐ 1. bb
 - ☐ 2. ee
 - ☒ 3. tt
 - ☐ 4. ff

Q.56 Uniform circular motion is described by which of the following examples?

- Ans**
- ☐ 1. A monkey jumping from one tree to another
 - ☐ 2. A rain drop falling from the sky
 - ☒ 3. motion of clock hands
 - ☐ 4. A car moving on a straight road

Q.57 Select the correct statement.

- Ans
- ☐ 1. Pollination is the growth of pollen tube in ovule.
 - ☐ 2. Pollination is visit of insects to the flower.
 - ☐ 3. Pollination is germination of pollen grains.
 - ☒ 4. Pollination is transfer of pollen grains from stamen to stigma.

Q.58 Find the mean marks of the following distribution.

Marks obtained	No. of students
25	5
30	6
35	3
40	1

- Ans
- ☐ 1. 32
 - ☐ 2. 31
 - ☐ 3. 29
 - ☒ 4. 30

Q.59 An amount is divided between two friends in the ratio 4 : 7. If the second part is ₹6 more than the first, then the difference in amount between two friends is:

- Ans
- ☐ 1. ₹3
 - ☐ 2. ₹4
 - ☒ 3. ₹6
 - ☐ 4. ₹2

Q.60 In the word MAJESTIC, each consonant is changed to the letter immediately preceding it in the English alphabetical order and each vowel is changed to the letter immediately succeeding it in the English alphabetical order. How many vowels are present in the new group of letters thus formed?

- Ans
- ☐ 1. None
 - ☐ 2. Two
 - ☐ 3. Four
 - ☒ 4. One

Q.61 For what value of K is the equation $\frac{0.009}{K} = 0.1$ true?

- Ans
- ☐ 1. 0.9
 - ☐ 2. 9
 - ☒ 3. 0.09
 - ☐ 4. 0.0009

Q.62 If the mean of a distribution is 8.73 and its median is 11, then the mode of the distribution is _____ (using empirical relation).

- Ans
- ☐ 1. 22
 - ☐ 2. 17.46
 - ☐ 3. 19.73
 - ☒ 4. 15.54

Q.63 Which rapper, known for the indie album 'Halaat', has risen from the slums of Dharavi to the forefront of Indian hip hop music?

- Ans**
- ☐ 1. Divine
 - ☐ 2. Naezy
 - ☒ 3. MC Altaf
 - ☐ 4. Emiway Bantai

Q.64 The following substances are stored in the vacuole of plant cells, EXCEPT:

- Ans**
- ☒ 1. sugars
 - ☐ 2. amino acids
 - ☐ 3. proteins
 - ☐ 4. mineral salts

Q.65 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

YRM, PID, GZU, XQL, ?

- Ans**
- ☐ 1. OHB
 - ☐ 2. OGC
 - ☒ 3. OHC
 - ☐ 4. PHC

Q.66 Arnab buys 9 oranges and 8 bananas for ₹276. When the cost of an orange is decreased by 10% and that of a banana remains the same, then the cost of 5 oranges and 10 bananas is ₹210. What is the original cost of 4 oranges and 3 bananas?

- Ans**
- ☐ 1. ₹120
 - ☐ 2. ₹108
 - ☒ 3. ₹116
 - ☐ 4. ₹123

Q.67 According to the reactivity series, iron is more reactive than _____.

- Ans**
- ☐ 1. potassium
 - ☐ 2. calcium
 - ☒ 3. copper
 - ☐ 4. sodium

Q.68 A, B, C, D, E and F are sitting around a circular table facing the centre. C sits to the immediate left of E. F is an immediate neighbour of A and C. D is not an immediate neighbour of E. What is the position of D with respect to F?

- Ans**
- ☐ 1. Third to the left
 - ☒ 2. Second to the left
 - ☐ 3. Immediate left
 - ☐ 4. Third to the right

Q.69 The volume of a wall that is 5 times as high as it is broad and 8 times as long as it is high is 12.8 cubic meters. Find the breadth of the wall.

- Ans**
- ☐ 1. 0.04 meter
 - ☐ 2. 400 cm
 - ☒ 3. 40 cm
 - ☐ 4. 0.004 meter

Q.70 The resistance of a conductor of length 'L' and cross-section area 'A' is directly proportional to _____.

- Ans**
- ☐ 1. L^2
 - ☐ 2. A/L
 - ☒ 3. L/A
 - ☐ 4. A

Q.71 Which of the following missions will lead to India's first human presence on the International Space Station (ISS)?

- Ans**
- ☐ 1. Taxsci-4
 - ☒ 2. Axiom-4
 - ☐ 3. Spacoon-4
 - ☐ 4. VenSpac-4

Q.72 In 2024, the Ministry of Women and Child Development launched the platform ____ to register and monitor complaints of sexual harassment of women at the workplace.

- Ans**
- ☐ 1. Secure Her
 - ☐ 2. WomenSafe
 - ☒ 3. SHe-Box
 - ☐ 4. Work Guard

Q.73 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

125, 128, 133, 140, 149, ?

- Ans**
- ☐ 1. 158
 - ☐ 2. 154
 - ☒ 3. 160
 - ☐ 4. 156

Q.74 Which of the following molecules has triple bond between the two atoms?

- Ans**
- ☐ 1. O_2
 - ☐ 2. F_2
 - ☐ 3. Cl_2
 - ☒ 4. N_2

Q.75 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All water is milk.

No milk is oil.

Conclusions:

(I) Some milk is water.

(II) No oil is water.

- Ans**
- ☒ 1. Only conclusion (II) follows.
 - ☒ 2. Both conclusions (I) and (II) follow.
 - ☒ 3. Neither conclusion (I) nor (II) follows.
 - ☒ 4. Only conclusion (I) follows.

2024/12/03-04:30:48



Test Center Name	Webel Human Resource Development Center
Test Date	29/11/2024
Test Time	4:30 PM - 5:30 PM
Subject	ALP Stage 1

*** Note**

Correct Answer will carry 1 mark per Question.

Incorrect Answer will carry 1/3 Negative mark per Question.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB ALP

Q.1 According to the Centre for Monitoring Indian Economy (CMIE), India's unemployment rate in June 2024 was ____.

Ans ☒ 1. 9.2%

☐ 2. 10.2%

☐ 3. 8.2%

☐ 4. 7.9%

Q.2 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 4 6 @ # 1 * £ 5 8 \$ 7 & 3 2 & % Ω 9 (Right)

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

Ans ☐ 1. One

☐ 2. More than two

☐ 3. Zero

☒ 4. Two

Q.3 Which of the following is a saturated carbon compound?

Ans ☐ 1. Ethylene

☐ 2. Alkene

☐ 3. Alkyne

☒ 4. Alkane

Q.4 The kinetic energy of a moving object is dependent on which of the following quantities:

- i) Mass of the body
- ii) Square of the velocity
- iii) Pressure

Ans ☒ 1. Both (i) and (ii)

☐ 2. Only (iii)

☐ 3. Only (i)

☐ 4. Both (ii) and (iii)

Q.5 Where was the fifth India-U.S. 2+2 Ministerial Dialogue held on 10 November 2023?

Ans ☐ 1. Washington, DC

☒ 2. New Delhi

☐ 3. New York

☐ 4. Mumbai

Q.6 Two circular coils A and B, have the same radius R , and carry the same current I , but have 50 and 100 turns, respectively. The magnetic field produced:

Ans ☒ 1. by $B >$ that of A

☐ 2. by $A =$ by B

☐ 3. by A and B are undetermined

☐ 4. by $A >$ that of B

Q.7 Out of his total income, Sanjay spends 20% on house rent and 70% of the rest on household expenses. If he saves ₹1,800, then his total income is:

Ans ☒ 1. ₹7,500

☐ 2. ₹8,000

☐ 3. ₹10,000

☐ 4. ₹9,000

Q.8 If $\text{LCM}(27, n) = 54$ and $\text{HCF}(27, n) = 9$, then the value of n is:

Ans ☐ 1. 24

☐ 2. 36

☒ 3. 18

☐ 4. 54

Q.9 The value of $(x - y)(x + y) + (y - z)(y + z) + (z - x)(z + x)$ is:

Ans ☐ 1. $x^2 + y^2 + z^2$

☐ 2. $x + y + z$

☒ 3. 0

☐ 4. $xy + yz + zx$

Q.10 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) 9 # 2 6 @ 8 \$ Ω 1 * £ 5 7 & % 4 3 (Right)

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

- Ans**
- ☐ 1. One
 - ☐ 2. Zero
 - ☐ 3. Two
 - ☒ 4. More than two

Q.11 What is used to remove permanent hardness of water?

- Ans**
- ☐ 1. Baking soda
 - ☒ 2. Washing soda
 - ☐ 3. Sodium Hydroxide
 - ☐ 4. Bleaching powder

Q.12 Select the set in which the numbers are related in the same way as are the numbers of the following sets.

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

(144, 12, 6)

(210, 15, 7)

- Ans**
- ☐ 1. (180, 9, 11)
 - ☐ 2. (100,10,4)
 - ☒ 3. (96, 8, 6)
 - ☐ 4. (156, 13, 7)

- Q.13** Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

All flowers are diamonds.

Some clips are flowers.

Conclusions:

(I) All diamonds are clips.

(II) Some diamonds are flowers.

- Ans** ☒ 1. Only conclusion (II) follows
☐ 2. Only conclusion (I) follows
☐ 3. Neither conclusion (I) nor (II) follows
☐ 4. Both conclusions (I) and (II) follow

- Q.14** The pollen needs to be transferred from the stamen to the stigma. If this transfer of pollen occurs in the same flower, it is referred to as _____. On the other hand, if the pollen is transferred from one flower to another, it is known as _____.

- Ans** ☒ 1. self-pollination, cross pollination
☐ 2. translocation, transversion
☐ 3. cross pollination, self-pollination
☐ 4. transversion, translocation

- Q.15** FIGH is related to KNLM in a certain way based on the English alphabetical order. In the same way, RUST is related to WZXY. To which of the following options is HKIJ related, following the same logic?

- Ans** ☒ 1. MPNO
☐ 2. MQNO
☐ 3. LQNO
☐ 4. NPLO

- Q.16** Mr. Hari spends 36% of his income on food items and 25% of the remaining amount on clothes, medical and conveyance. He saves half of the remaining amount every month. If he saves ₹1,80,000 every year, then find his monthly income.

- Ans** ☐ 1. ₹7,50,000
☐ 2. ₹6,50,040
☐ 3. ₹54,170
☒ 4. ₹62,500

Q.17 Select the set in which the numbers are related in the same way as are the numbers of the following sets.

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

(9, 6, 56)

(7, 8, 58)

Ans ✗ 1. (8, 5, 40)

✓ 2. (5, 11, 57)

✗ 3. (12, 10, 118)

✗ 4. (6, 5, 40)

Q.18 The full form of SER, a cell organelle, which helps in the manufacture of fat molecules, or lipids, important for cell function is _____.

Ans ✗ 1. Species Endoplasmic Reticulum

✓ 2. Smooth Endoplasmic Reticulum

✗ 3. Simple Endoplasmic Reticulum

✗ 4. Similar Endoplasmic Reticulum

Q.19 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

GJF, ILH, KNJ, MPL, ?

Ans ✗ 1. RNO

✗ 2. ONR

✓ 3. ORN

✗ 4. RON

Q.20 Which of the following is the most common simple permanent tissue?

Ans ✗ 1. Epidermis

✓ 2. Parenchyma

✗ 3. Phloem

✗ 4. Sclerenchyma

Q.21 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.

ARH : YOJ

SFP : QCR

Ans ✗ 1. WBN : YFT

✓ 2. WLL : UIN

✗ 3. FTH : BNZ

✗ 4. QPV : OLP

Q.22 The cost price of a toy is ₹210. What should be its marked price so that, after a discount of 5%, the shopkeeper gains 90%?

- Ans
- ☐ 1. ₹480
 - ☒ 2. ₹420
 - ☐ 3. ₹400
 - ☐ 4. ₹450

Q.23 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

NJM, PLO, RNQ, TPS, ?

- Ans
- ☐ 1. RUV
 - ☐ 2. VUR
 - ☒ 3. VRU
 - ☐ 4. RVU

Q.24 Who among the following won the Purple cap in the 17th Edition of Indian Premier League in 2024?

- Ans
- ☐ 1. Kuldeep Yadav
 - ☐ 2. Jasprit Bumrah
 - ☐ 3. T Natarajan
 - ☒ 4. Harshal Patel

Q.25 Which of the following events is a consequence of atmospheric refraction?

- Ans
- ☐ 1. Rainbow formation
 - ☒ 2. Advance sunrise and delayed sunset
 - ☐ 3. Shaving mirrors to form large image of face
 - ☐ 4. Image formation by plain mirrors

Q.26 What is the purpose of making urine in the human body?

- Ans
- ☐ 1. To empty the urinary bladder
 - ☐ 2. To clean the impure blood coming to the heart
 - ☒ 3. To filter out waste products from the blood
 - ☐ 4. To remove CO₂ from the blood in the lungs

Q.27 _____, the Managing Editor of Mongabay India, received the 2024 Greenaccord International Media Award at a ceremony in Frascati, Italy on October 12, 2024.

- Ans
- ☒ 1. S Gopikrishna Warrier
 - ☐ 2. Surjit Singh
 - ☐ 3. P Swaminathan Iyer
 - ☐ 4. Laxman Naik

Q.28 In organisms such as Amoeba, the splitting of the two cells during division can take place in _____.

- Ans
- ☐ 1. multiple equal planes
 - ☐ 2. one fixed plane
 - ☐ 3. two fixed planes
 - ☒ 4. any plane

Q.29 8 men and 12 women can build a wall in 10 days. 6 men and 8 women can build the same wall in 14 days. How long will it take for 1 woman to build it alone?

- Ans**
- ☐ 1. 350 days
 - ☒ 2. 280 days
 - ☐ 3. 140 days
 - ☐ 4. 700 days

Q.30 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some keys are pens.

All pens are watches.

Conclusions:

(I) Some watches are keys.

(II) All watches are pens.

- Ans**
- ☒ 1. Only conclusion (I) follows.
 - ☐ 2. Neither conclusion (I) nor (II) follows.
 - ☐ 3. Only conclusion (II) follows.
 - ☐ 4. Both conclusions (I) and (II) follow.

Q.31 In a certain code language, 'tiger is the king' is written as 'ki ni hi li', 'king rules the kingdom' is written as 'di li ti ni', and 'the baby is sleeping' is written as 'gi ni si ki'. How is 'tiger' written in the given language?

- Ans**
- ☐ 1. li
 - ☐ 2. ki
 - ☐ 3. ni
 - ☒ 4. hi

Q.32 Which of the following statements is correct about suspension?

- Ans**
- ☐ 1. A Suspension is a homogeneous mixture.
 - ☐ 2. Particles of a suspension are invisible to the naked eye.
 - ☐ 3. Solids dispersed in gas are called suspensions.
 - ☒ 4. A Suspension is a heterogeneous mixture.

Q.33 In a certain code language, 'NICE' is coded as '2468' and 'CARS' is coded as '1235'. What is the code for 'C' in the given code language?

- Ans**
- ☐ 1. 1
 - ☒ 2. 2
 - ☐ 3. 5
 - ☐ 4. 6

Q.34 For which book did Gaurav Pandey win the Sahitya Akademi Yuva Puraskar in 2024?

- Ans
- ☐ 1. Jeevan Ka Rang
 - ☐ 2. Kavya Ka Prakash
 - ☐ 3. Manzil Ki Talaash
 - ☒ 4. Smritiyon Ke Beech Ghiri Hai Prithvi

Q.35 If the mean of 22, 25, 27, 24 and x is 26, then the value of x is:

- Ans
- ☐ 1. 35
 - ☐ 2. 41
 - ☐ 3. 28
 - ☒ 4. 32

Q.36 A, B, C, D, E, F and G are sitting around a circular table facing the Centre.

D sits third to the left of F. G sits second to the left of D. G sits to the immediate right of E. B sits to the immediate left of A.

What is the position of D with respect to B?

- Ans
- ☐ 1. Immediate right
 - ☒ 2. Immediate left
 - ☐ 3. Second to the left
 - ☐ 4. Second to the right

Q.37 In triangle ABC, $\overline{AB} = 6$ m, $\overline{BC} = 8$ m, and $\overline{AC} = 10$ m. In triangle PRQ, $\overline{PR} = 8$ m, $\overline{PQ} = 10$ m, and $\overline{RQ} = 6$ m. Which of the following is a correct order of congruency?

- Ans
- ☐ 1. $\triangle ABC$ congruent to $\triangle RPQ$
 - ☐ 2. $\triangle CBA$ congruent to $\triangle RPQ$
 - ☒ 3. $\triangle BCA$ congruent to $\triangle RPQ$
 - ☐ 4. $\triangle BAC$ congruent to $\triangle RPQ$

Q.38 Evaluate the given expression.

$$42 \div 7 \times 2$$

- Ans
- ☐ 1. 10
 - ☒ 2. 12
 - ☐ 3. 3
 - ☐ 4. 8

Q.39 All 41 people are standing in a row, facing north. Juno is 23rd from the right end, while Cherry is 31st from the left end. How many people are there between Juno and Cherry?

- Ans
- ☐ 1. 13
 - ☐ 2. 10
 - ☐ 3. 12
 - ☒ 4. 11

Q.40 A ball of radius 10 cm is taken and a cylindrical hole of radius 1 cm is drilled through the centre. Which of the options listed below is the closest in value to the ratio of the total surface area of the hollowed out ball to the surface area of the original ball?

- Ans**
- ✓ 1. $\frac{219}{200}$
 - ✗ 2. $\frac{221}{200}$
 - ✗ 3. $\frac{1}{10}$
 - ✗ 4. $\frac{11}{5}$

Q.41 Which of the following statements is correct about continuous movement of particles of matter?

- Ans**
- ✓ 1. If we increase the temperature, kinetic energy of particles increases.
 - ✗ 2. If we increase the temperature, kinetic energy of particles decreases.
 - ✗ 3. If we decrease the temperature, kinetic energy of particles increases.
 - ✗ 4. Change in temperature has no effect on the kinetic energy of particles.

Q.42 If each vowel in the word FRIENDLY is changed to the letter following it in the English alphabetical order and each consonant is changed to the letter preceding it in the English alphabetical order, then which letter will be in the second position from the right in the new group of letters thus formed?

- Ans**
- ✗ 1. C
 - ✗ 2. Q
 - ✓ 3. K
 - ✗ 4. J

Q.43 Which of the following is NOT a pillar of strategic framework for achieving the objective of National State Policy 2024?

- Ans**
- ✗ 1. National Framework and Regulatory Bodies
 - ✗ 2. Strong Professional Sports Governance, Implementation and Monitoring
 - ✗ 3. Technological Intervention
 - ✓ 4. Restriction on Private Sector Engagement

Q.44 A 250 m long train running at a speed of 100 km/h crosses another train, coming from the opposite direction at a speed of 62 km/h, in 10 seconds. What is the length of the second train?

- Ans**
- ✗ 1. 230 m
 - ✗ 2. 270 m
 - ✗ 3. 240 m
 - ✓ 4. 200 m

Q.45 Where were the indigenously developed Param Rudra Supercomputers deployed, in September 2024?

- Ans**
- ✗ 1. Pune, Bengaluru and Kolkata
 - ✗ 2. Mumbai, Bengaluru and Kolkata
 - ✓ 3. Pune, Delhi and Kolkata
 - ✗ 4. Bengaluru, Delhi and Mumbai

Q.46 Nadi Utsav 2024 was inaugurated at the _____.

- Ans
- ☐ 1. Lalit Kala Akademi
 - ☐ 2. India Habitat Centre
 - ☐ 3. National Museum
 - ☒ 4. Indira Gandhi National Centre for the Arts (IGNCA)

Q.47 If $\frac{155}{0.155} = \frac{15.5}{K}$, then the value of K is:

- Ans
- ☐ 1. 1.55
 - ☐ 2. 15.51
 - ☐ 3. 155
 - ☒ 4. 0.0155

Q.48 What was the theme of 'Financial Literacy Week 2024', conducted by the Reserve Bank of India from 26 February to 01 March 2024?

- Ans
- ☐ 1. Good Financial Behaviour, Your Saviour
 - ☒ 2. Make a Right Start : Become Financially Smart
 - ☐ 3. Credit Discipline and Credit from Formal Institutions
 - ☐ 4. Go Digital, Go Secure

Q.49 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 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.)

- Ans
- ☐ 1. EM – BJ
 - ☒ 2. TB - ZF
 - ☐ 3. SA – PX
 - ☐ 4. LT – IQ

Q.50 If θ is an acute angle, find the denominator D , when

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

- Ans
- ☒ 1. $1 + \cos \theta$
 - ☐ 2. $1 + \sin \theta$
 - ☐ 3. $-\sin \theta - 1$
 - ☐ 4. $-1 - \cos \theta$

Q.51 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 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.)

- Ans
- ☐ 1. FX – CU
 - ☐ 2. ME – JB
 - ☒ 3. UM - GZ
 - ☐ 4. SK – PH

Q.52 The smallest natural number that must be added to 1212 to make it a perfect square is:

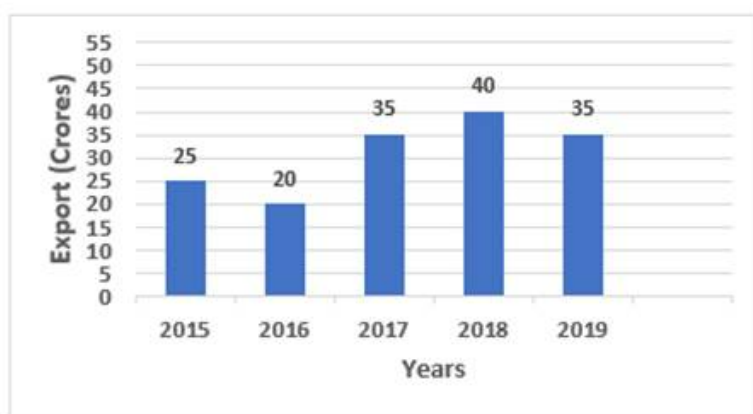
- Ans ☒ 1. 13
☐ 2. 24
☐ 3. 27
☐ 4. 18

Q.53 Which of the following is the formula unit mass of NaCl?

- Ans ☐ 1. 46.5 u
☒ 2. 58.5 u
☐ 3. 71 u
☐ 4. 94 u

Q.54 Study the following graph and answer the given question.

The bar graph shows the annual exports (in crores) of a company during the period 2015 to 2019.



What is the respective ratio between the annual export of 2015 to the annual export of 2017?

- Ans ☒ 1. 5 : 7
☐ 2. 4 : 9
☐ 3. 6 : 11
☐ 4. 13 : 16

Q.55 Identify the correct match of plant hormones with their functions.

Ans Gibberellins : Help in the growth of the stem

✗ 1. Cytokinins : Inhibits growth

Absciscic acid : Promote cell division

Gibberellins : Help in the growth of the stem

✓ 2. Cytokinins : Promote cell division

Absciscic acid : Inhibits growth

Gibberellins : Promote cell division

✗ 3. Cytokinins : Help in the growth of the stem

Absciscic acid : Inhibits growth

Gibberellins : Inhibits growth

✗ 4. Cytokinins : Promote cell division

Absciscic acid : Help in the growth of the stem

Q.56 If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same work in 2 days, then the time taken by 10 men and 20 boys for doing the same piece of work will be:

Ans ✗ 1. 4 days

✗ 2. 2 days

✓ 3. 5 days

✗ 4. 3 days

Q.57 Sally starts from Point A and drives 12 km towards North. She takes a right turn, drives 5 km, and takes another right turn and drives 24 km. She turns right again and drives 17 km, she takes a final right turn, drives 12 km and stops at Point P. How far (shortest distance) and in which direction is she from her starting point? (All turns are 90 degrees turns only unless specified.)

Ans ✓ 1. 12 km towards the West

✗ 2. 12 km towards the East

✗ 3. 5 km towards the East

✗ 4. 22 km towards the North

Q.58 Which type of chemical reaction involves the exchange of ions between the reactants?

Ans ✗ 1. Combination reaction

✓ 2. Double displacement reaction

✗ 3. Decomposition reaction

✗ 4. Displacement reaction

Q.59 Thirteen years ago, Manorama's age was $\frac{2}{5}$ of that of her sister. The ratio of Manorama's and her sister's present ages is 3 : 4. What is the sum of their present ages?

- Ans**
- ☐ 1. 36 years
 - ☐ 2. 48 years
 - ☐ 3. 42 years
 - ☒ 4. 39 years

Q.60 If 'A' stands for '+', 'B' stands for '×', 'C' stands for '+', and 'D' stands for '−', what will come in place of the question mark '?' in the following equation?

$$225 \text{ B } 15 \text{ A } 15 \text{ C } 125 \text{ D } 225 = ?$$

- Ans**
- ☐ 1. 105
 - ☐ 2. 135
 - ☒ 3. 125
 - ☐ 4. 115

Q.61 A dishonest shopkeeper claimed to have sold an item at ₹23/kg, which cost him ₹25/kg. However, by using faulty weights, he gave only 600 gm instead of 1 kg. What is his total percentage profit or loss?

- Ans**
- ☒ 1. $53\frac{1}{3}\%$ profit
 - ☐ 2. 23% loss
 - ☐ 3. 20% loss
 - ☐ 4. $62\frac{1}{2}\%$ profit

Q.62 If the resistance of a conductor is increased to three times, then the current will be:
(voltage V remains constant)

- Ans**
- ☒ 1. one third
 - ☐ 2. nine times
 - ☐ 3. one ninth
 - ☐ 4. three times

Q.63 What is used in the preparation of calcium sulphate hemihydrate?

- Ans**
- ☐ 1. Copper Sulphate
 - ☐ 2. Sodium Carbonate
 - ☐ 3. Sodium Hydrogen Carbonate
 - ☒ 4. Gypsum

Q.64 Which of the following options should come in place of the question mark (?) in the given series?

7 15 24 34 45 ?

- Ans**
- ☐ 1. 55
 - ☐ 2. 58
 - ☐ 3. 60
 - ☒ 4. 57

Q.65 A concave mirror having focal length of magnitude 20 cm forms a real image of an object placed at a distance of 60cm from the mirror. The image distance in (cm) will be:

- Ans**
- ☐ 1. -15
 - ☐ 2. +30
 - ☒ 3. -30
 - ☐ 4. +15

Q.66 The force exerted by the earth on the moon is:

(Consider $G = 6 \times 10^{-11} \text{Nm}^2\text{kg}^{-2}$; mass of the earth $M = 6 \times 10^{24} \text{ kg}$; mass of the moon = $8 \times 10^{22} \text{ kg}$, and distance between earth and moon is $4 \times 10^8 \text{ m}$).

- Ans**
- ☐ 1. $1.8 \times 10^{22} \text{ N}$
 - ☐ 2. $1.8 \times 10^{18} \text{ N}$
 - ☒ 3. $1.8 \times 10^{20} \text{ N}$
 - ☐ 4. $1.8 \times 10^{24} \text{ N}$

Q.67 In this question, two statements, I and II, have been given. These statements maybe independent causes, or effects of independent causes or a common cause. One of the statements maybe the effect of the other statement. Read both the statements and select the correct answer.

I. Citizens of city X have multiplied their wealth by investing in government schemes in the past two years.

II. City X has seen a recent rise in the number of luxury cars.

- Ans**
- ☐ 1. II is the cause and I is its possible effect.
 - ☐ 2. Both I and II are independent causes.
 - ☒ 3. Both I and II are effects of independent causes.
 - ☐ 4. I is the cause and II is its possible effect.

Q.68 A sum of money, on compound interest, amounts to ₹5,290 in 2 years and to ₹6,083.50 in 3 years. If interest is compounded annually, then the rate of interest per annum is:

- Ans**
- ☐ 1. 14%
 - ☐ 2. 12%
 - ☒ 3. 15%
 - ☐ 4. $16\frac{2}{3}\%$

Q.69 In a certain code language,

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

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

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

'A ÷ B' means 'A is the father of B'.

How is M related to T if 'M + N x P - S ÷ T'?

- Ans
- ☐ 1. Father's brother's wife
 - ☒ 2. Father's brother's wife's mother
 - ☐ 3. Father's brother's wife's sister
 - ☐ 4. Father's sister's daughter

Q.70 If A means +, B means -, C means ×, D means ÷, then what will come in place of the question mark (?) in the following equation?

$$18 \text{ D } 2 \text{ A } 4 \text{ C } 5 \text{ B } 15 = ?$$

- Ans
- ☐ 1. 18
 - ☐ 2. 12
 - ☐ 3. 16
 - ☒ 4. 14

Q.71 The diagonal and one side of a rectangular plot are 65 m and 63 m, respectively. What is the perimeter of the rectangular plot?

- Ans
- ☐ 1. 164 m
 - ☒ 2. 158 m
 - ☐ 3. 156 m
 - ☐ 4. 166 m

Q.72 Seven people, A, B, C, D, E, F and G are sitting in a row, facing north. Only five people sit between F and D. G sits third to the right of F. E is the immediate neighbour of C and D. B is not the immediate neighbour of G.

How many people sit between A and F?

- Ans
- ☐ 1. Four
 - ☐ 2. Two
 - ☒ 3. One
 - ☐ 4. Three

Q.73 The Central Universities (Amendment) Bill, 2023 was passed for the establishment of Sammakka Sarakka Central Tribal University in which state?

- Ans
- ☐ 1. Odisha
 - ☐ 2. Manipur
 - ☒ 3. Telangana
 - ☐ 4. Jharkhand

Q.74 If $8:4::3.2:x$, what is the value of x ?

Ans ☐ 1. 2.4

☒ 2. 1.6

☐ 3. 3.2

☐ 4. 1.2

Q.75 A car decreases its speed from 40 m/s to 20 m/s in 5 s. Find the acceleration of the car.

Ans ☐ 1. 12 m/s^2

☐ 2. 2 m/s^2

☒ 3. -4 m/s^2

☐ 4. 4 m/s^2

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