रेलवे भर्ती बोर्ड / **RAILWAY RECRUITMENT BOARDS**

सीईएन - 05/25 - जेई, डीएमएस, सीएमए - CEN - 05/25 - JE, DMS, CMA

| Test Date | 20/02/2026 |
| Test Time | 4:30 PM - 6:00 PM |
| Subject | RRB JE DMS CMA |

**\* 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 JE DMS CMA**

**Q.1 The sum of the squares of two consecutive even natural numbers is 3700. The sum of the numbers is:**

Ans ✗ 1. 80

✗ 2. 72

✓ 3. 86

✗ 4. 96

**Q.2 What was a consequence of the economic structure in India between 1947 and 1991?**

Ans ✗ 1. High levels of foreign direct investment

✓ 2. Slow industrial growth due to heavy regulation and protectionism

✗ 3. Full privatization of the public sector

✗ 4. Rapid technological advancement in all sectors

**Q.3**

The value of $\sqrt{\left(90 + \sqrt{\left(97 + \sqrt{\left(4 + \sqrt{\left(19 + \sqrt{(36)}\right)}\right)}\right)}\right)}$ is:

Ans ✓ 1. 10

✗ 2. 9

✗ 3. 7

✗ 4. 12

**Q.4 A passenger in a moving car feels a jerk backward when the car suddenly starts. How does the first law of motion explain this experience?**

Ans ✓ 1. The passenger tends to remain at rest while the car moves forward, showing inertia.

✗ 2. Friction from the seat creates the backward jerk.

✗ 3. The passenger is pushed backward by the air inside the car.

✗ 4. The seat pushes the passenger forward, causing the sensation.

**Q.5** P gives Q a head-start of 10 seconds in a 600 m race, but both finish the race at the same time. Find the time taken by P to finish the race if the speed of Q is 4 m/sec.

**Ans** ✔ 1. 140 Seconds

✘ 2. 142 Seconds

✘ 3. 146 Seconds

✘ 4. 144 Seconds

**Q.6** Refer to the two statements given below and choose the CORRECT option.
Statement A: While writing the chemical formula of a compound, the total positive and negative charges must balance each other.
Statement B: Balancing valencies ensures that the compound formed is electrically neutral.

**Ans** ✘ 1. Statement A is incorrect but B is correct.

✔ 2. Both statements A and B are correct.

✘ 3. Both statements A and B are incorrect.

✘ 4. Statement A is correct but B is incorrect.

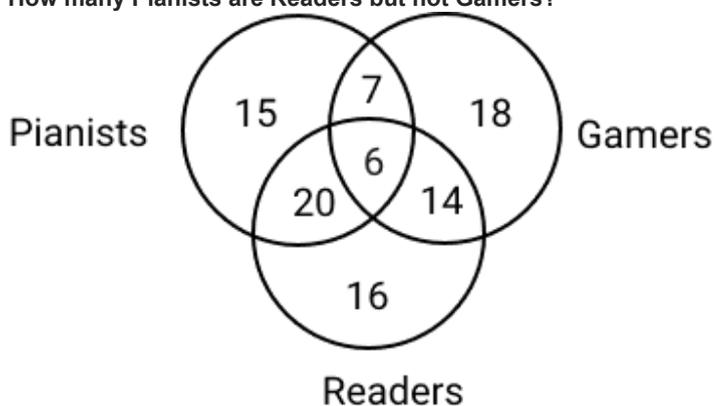**Q.7** What should come in place of the '?' in the given series, based on the English alphabetical order?

DIB FKD HMF JOH ?

**Ans** ✔ 1. LQJ

✘ 2. LRI

✘ 3. LQI

✘ 4. LRJ

**Q.8** An electric refrigerator has a power rating of 500 W and is used for 6 hours each day. If the cost of electrical energy is ₹4.00 per kilowatt-hour, what will be the total cost of operating the refrigerator for 30 days?

**Ans** ✔ 1. ₹360

✘ 2. ₹240

✘ 3. ₹180

✘ 4. ₹300

**Q.9** Study the given Venn diagram carefully and answer the question. The numbers in different sections indicate the number of persons. (NOTE: You have to take the given data to be true even if they seem to be at variance from commonly known facts.)
How many Pianists are Readers but not Gamers?



**Ans** ✘ 1. 14

✘ 2. 15

✘ 3. 18

✔ 4. 20

**Q.10**  In a certain code,
'boy likes games' is coded as 'tu vw xy'
'girl likes music' is coded as 'za vw rs'
'music games hobby' is coded as 'rs xy pq'

**Q.** What is the code for **hobby** ?

Ans    ✗ 1. vw

       ✗ 2. rs

       ✓ 3. pq

       ✗ 4. xy

**Q.11**  Why is alcohol considered a cleaner fuel than petrol?

Ans    ✓ 1. It produces less smoke

       ✗ 2. It burns at low temperature

       ✗ 3. It burns without oxygen

       ✗ 4. It gives higher energy

**Q.12**  A and B can complete a work in 15 days and 10 days, respectively. They started doing the work together but after 2 days, B had to leave, and A completed the remaining work alone. The whole work was completed in _____ days.

Ans    ✗ 1. 10

       ✗ 2. 13

       ✓ 3. 12

       ✗ 4. 11

**Q.13**  Which Fundamental Duty was added by the 86th Constitutional Amendment in 2002?

Ans    ✓ 1. To provide opportunities for education to children aged 6–14 years

       ✗ 2. To promote harmony among all people of India

       ✗ 3. To safeguard public property

       ✗ 4. To uphold and protect the sovereignty of India

**Q.14**  Seven people, A, L, M, I, R, H and S, are sitting in a row, facing north.
Only A sits to the left of S. Only four people sit between A and H. Only I sits between L and R and L is not an immediate neighbor of H.
Who sits at the extreme right of the line?

Ans    ✗ 1. A

       ✗ 2. H

       ✓ 3. M

       ✗ 4. R

**Q.15**  Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the one that does not belong to that group?
(NOTE: The odd man out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans    ✓ 1. LN - CE

       ✗ 2. QS - IK

       ✗ 3. XZ - PR

       ✗ 4. SU - KM

**Q.16** Who is the chairperson of the RBI's committee formed to develop the Framework for Responsible and Ethical AI (FREE-AI) in the financial sector as of December 2024?

**Ans** ✔ 1. Professor Pushpak Bhattacharyya from IIT Bombay

✘ 2. Dr. Rajeev Chandrasekhar from Ministry of Electronics

✘ 3. Dr. Krishnamurthy Subramanian from IMF Board

✘ 4. Professor K. VijayRaghavan from Office of PSA

**Q.17** Which material can be magnetised using the strong magnetic field inside a solenoid?

**Ans** ✔ 1. Soft iron

✘ 2. Aluminum

✘ 3. Plastic

✘ 4. Copper

**Q.18** Consider the reaction:

$$CH_3CH_2OH + \text{Alkaline } KMnO_4 \xrightarrow{\text{Heat}} CH_3COOH$$

Which of the following statements is / are correct?

(A) The reaction represents the oxidation of a primary alcohol to a carboxylic acid.

(B) Alkaline $KMnO_4$ acts as an oxidising agent.

(C) Alkaline $KMnO_4$ acts as a reducing agent.

**Ans** ✘ 1. Only B

✘ 2. A, B and C

✘ 3. Only A and C

✔ 4. Only A and B

**Q.19** A trader gives 8% discount on the marked price of an article and gives 3 articles free for buying 18 articles and gains 38% in the entire transaction. Assuming a customer pays for 18 articles, the marked price of an article is what percent more than its cost price?

**Ans** ✘ 1. 70%

✔ 2. 75%

✘ 3. 85%

✘ 4. 79%

**Q.20** In an election between two candidates, 86% of the registered voters cast their votes and 6% of the votes polled were found invalid. The winning candidate got 58% of the valid votes and won the election by a margin of 202100 votes. How many voters were registered?

**Ans** ✘ 1. 1562400

✔ 2. 1562500

✘ 3. 1562800

✘ 4. 1562200

**Q.21** Why is intracellular digestion suitable for unicellular organisms?

**Ans** ✘ 1. They lack digestive enzymes.

✔ 2. They lack specialized digestive organs.

✘ 3. They depend on external digestion.

✘ 4. They have large body cavities.

**Q.22** U, V, W, X, Y, and Z live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2, and so on, till the topmost floor is numbered 6. Only two people live between W and Z. Only X lives above V. Y lives on an even-numbered floor. W lives on the lowermost floor.
How many people live between U and X?

Ans    ✗ 1. Three

     ✗ 2. Four

     ✗ 3. One

     ✓ 4. Two

**Q.23** In a pond ecosystem, removal of phytoplankton would most directly affect
_____.

Ans    ✗ 1. Decomposers only

     ✗ 2. Abiotic components

     ✓ 3. Primary consumers like zooplankton

     ✗ 4. Secondary consumers like fish-eating birds

**Q.24** Which of the following Acts in India specifically deals with controlling air pollution?

Ans    ✓ 1. Air (Prevention and Control of Pollution) Act, 1981

     ✗ 2. Air (Prevention and Control of Pollution) Act, 1988

     ✗ 3. Air (Prevention and Control of Pollution) Act, 1984

     ✗ 4. Air (Prevention and Control of Pollution) Act, 1990

**Q.25** Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

**NQ-KO-IL**
**FI-CG-AD**

Ans    ✗ 1. IM-GK-FH

     ✓ 2. JM-GK-EH

     ✗ 3. IM-GL-FH

     ✗ 4. JM-GK-FH

**Q.26** If $m + n + o = 15$ and $mn + no + om = 75$, then determine the value of $m^3 + n^3 + o^3 - 3mno$.

Ans    ✗ 1. $3$

     ✗ 2. $1$

     ✗ 3. $5$

     ✓ 4. $0$

**Q.27** 18 is related to 270 following a certain logic. Following the same logic, 21 is related to 315. To which of the following is 24 related, following the same logic?
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying 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.)

Ans    ✗ 1. 370

     ✓ 2. 360

     ✗ 3. 390

     ✗ 4. 375

**Q.28** If the bicuspid (mitral) valve fails to close properly, which immediate effect is most likely during ventricular contraction?

Ans    ✓ 1. Backflow of blood from the left ventricle to the left atrium

     ✗ 2. Backflow of blood from the right ventricle to the right atrium

     ✗ 3. Mixing of oxygenated and deoxygenated blood in the ventricles

     ✗ 4. Reduced flow of blood to the lungs

**Q.29** If 2 : 4 :: 4.6 : x and 4 : 16 :: 2 : y, what is the ratio of x to y?

**Ans**   ✗ 1. 24 : 18

   ✗ 2. 27 : 30

   ✔ 3. 23 : 20

   ✗ 4. 21 : 21

**Q.30** A wire of a given material has length l and cross-sectional area A , and its resistance is 9 Ω. Another wire of the same material has length l/3 and cross-sectional area 3A. What will be the resistance of the second wire?

**Ans**   ✗ 1. 0.5 Ω

   ✗ 2. 6 Ω

   ✗ 3. 2 Ω

   ✔ 4. 1 Ω

**Q.31** In a certain code language,
'A + B' means 'A is the son of B',
'A – B' means 'A is the sister of B',
'A x B' means 'A is the wife of B' and
'A ÷ B' means 'A is the father of B.

How is Q related to D if 'Q + E ÷ R – C x D'?

**Ans**   ✗ 1. Father

   ✗ 2. Wife's father

   ✔ 3. Wife's brother

   ✗ 4. Brother

**Q.32** 24 is related to 270 following a certain logic. Following the same logic, 31 is related to 340. To which of the following is 43 related, following the same logic?
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding /subtracting /multiplying 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.)

**Ans**   ✗ 1. 430

   ✔ 2. 460

   ✗ 3. 450

   ✗ 4. 420

**Q.33** If the cost price of 24 articles is equal to the selling price of 15 articles, then find the percentage of profit.

**Ans**   ✔ 1. 60%

   ✗ 2. 40%

   ✗ 3. 55%

   ✗ 4. 71%

**Q.34** In a certain code,
'big grand wedding' is coded as 'rc af bg'
'grand birthday celebration' is coded as 'kp vg rc'
'enjoy big celebration' is coded as 'af zd vg'
(all the codes are two letter coded only)
What is the possible code for 'birthday bash'?

**Ans**   ✗ 1. kp rc

   ✗ 2. bg vg

   ✗ 3. rc zd

   ✔ 4. kp tn

**Q.35** Which statement accurately describes how energy transforms during the free fall of an object under gravity?

**Ans** ✗ 1. Both potential and kinetic energies remain constant.

✗ 2. Potential energy and kinetic energy both decrease.

✗ 3. Potential energy is converted into heat energy during the fall.

✓ 4. Potential energy decreases while kinetic energy increases, maintaining constant total mechanical energy.

**Q.36** Gopal has borrowed an amount of ₹420000 from a bank to start a business. How much simple interest (in ₹) will he pay at a rate of 5% per annum after 4 years?

**Ans** ✗ 1. 85000

✗ 2. 82000

✗ 3. 83000

✓ 4. 84000

**Q.37** If atmospheric refraction did not occur, which change would be most noticeable during the observation of stars from Earth?

**Ans** ✗ 1. Stars would change color rapidly.

✗ 2. Stars would disappear from the night sky.

✗ 3. Planets would twinkle like stars.

✓ 4. Stars would not twinkle; their light would remain steady.

**Q.38** Refer to the following letter, symbol series and answer the question
(Left) H F % G R @ # S $ M * % & N E Q Z U L @ T W (Right)
If all the symbols are dropped from the series, which of the following will be fourth from the right?

**Ans** ✗ 1. Q

✗ 2. L

✓ 3. U

✗ 4. Z

**Q.39** The average of the first 18 positive multiples of 7 is:

**Ans** ✗ 1. 18

✗ 2. 63

✓ 3. 66.5

✗ 4. 7

**Q.40** The mean marks of the following distribution is:

| Marks Obtained | No. of Students |
|---|---|
| 36 | 12 |
| 35 | 11 |
| 93 | 18 |
| 17 | 5 |

**Ans** ✓ 1. 56

✗ 2. 75

✗ 3. 60

✗ 4. 72

**Q.41** In 1964, who chaired the Committee on Prevention of Corruption and suggested the Central Vigilance Commission be established?

Ans ✅ 1. K. Santhanam

❌ 2. G V Ramakrishna

❌ 3. P K Mohanty

❌ 4. G K Pillai

**Q.42** Why are crops with different nutrient requirements chosen for inter-cropping?

Ans ✅ 1. To ensure maximum utilisation of nutrients supplied to the field

❌ 2. To increase the duration of crop growth

❌ 3. To prevent all pests and diseases completely

❌ 4. To allow for crop rotation in succession

**Q.43** If $5\sin Y + \cos Y = \sqrt{2}\sin Y$, then find the value of $\tan Y$.

Ans ❌ 1. $\dfrac{-5 - \sqrt{2}}{28}$

❌ 2. $\dfrac{-6 - \sqrt{2}}{23}$

❌ 3. $\dfrac{-5 - \sqrt{2}}{33}$

✅ 4. $\dfrac{-5 - \sqrt{2}}{23}$

**Q.44** Two trains having lengths of 430 m and 120 m are running at speeds of 70 km/h and 100 km/h, respectively, in the same direction. The time taken (in minutes) by the faster train, coming from behind, to completely cross the other train is:

Ans ❌ 1. 3.2

❌ 2. 4.1

❌ 3. 1.6

✅ 4. 1.1

**Q.45** RD 15 is related to UI -1 in a certain way. In the same way, WG 13 is related to ZL -3. To which of the following is OG 1 related, following the same logic?

Ans ❌ 1. KO -16

❌ 2. HU -10

❌ 3. JK -12

✅ 4. RL -15

**Q.46** The total surface area (in m²) of a cube, each of whose edges measures 285 m, is:

Ans ✅ 1. 487350

❌ 2. 487344

❌ 3. 487308

❌ 4. 487362

**Q.47**

$$If \ \frac{x}{y} = \frac{11}{5}, then \ find \ \frac{x^2 + y^2}{x^2 - y^2}$$

**Ans**

✗ 1. $\frac{67}{48}$

✗ 2. $\frac{71}{48}$

✓ 3. $\frac{73}{48}$

✗ 4. $\frac{79}{48}$

**Q.48** Which of the following is an advantage of paper cups over plastic cups?

**Ans**

✗ 1. They are stronger

✓ 2. They are biodegradable

✗ 3. They are reusable

✗ 4. They are cheaper

**Q.49** A question is given followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements carefully and decide the appropriate answer.

5 people - P, Q, X, Y and Z, have an exam on different days of the same week between Monday and Friday. Who has an exam on Thursday?
I. Q has an exam on Tuesday. No one has an exam between P and Q. Z has an exam immediately after X.
II. X has an exam on one of the days after Q. Only three people have an exam between P and Y

**Ans**

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

✗ 2. Data in statements I and II together is NOT sufficient to answer the question

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

✓ 4. Data in statements I and II together (and not statement I alone or statement II alone) is sufficient to answer the question

**Q.50** Prafulla Chaki and Khudiram Bose are known for their attempt to assassinate which British official?

**Ans**

✗ 1. Lord Curzon

✗ 2. Lord Minto

✗ 3. John Morley

✓ 4. Douglas Kingsford

**Q.51** The ratio of the cost prices of articles X and Y is 3 : 7. A man earns a profit of 49% by selling X and loses 16% by selling Y. What is his gain/loss percentage in the entire transaction?

**Ans**

✗ 1. Gain, 3%

✗ 2. Loss, 3.5%

✗ 3. Loss, 5%

✓ 4. Gain, 3.5%

**Q.52** H is the brother of A. R is the sister of K. P is the son of K. K is the wife of A. How is H related to R?

**Ans**

✗ 1. Husband's father

✓ 2. Sister's husband's brother

✗ 3. Sister's husband's father

✗ 4. Husband's brother

**Q.53** A grocer wishes to sell a mixture of two varieties of rice worth ₹56 per kg. In what ratio must he mix the rice to reach this selling price, when cost of one variety of rice is ₹54 per kg and the other is ₹64 per kg?

**Ans** ✅ 1. 4 : 1

❌ 2. 3 : 1

❌ 3. 3 : 2

❌ 4. 2 : 3

**Q.54** Which of the following is/are correct about C. Vijayaraghavachariar?
I. He was called 'The Hero of Salem'.
II. He was known as the 'Lion of North India'.

**Ans** ❌ 1. Only II

❌ 2. Both I and II

✅ 3. Only I

❌ 4. Neither I nor II

**Q.55** The height of a tree varies as the square root of its age. When the age of the tree is 324 years, its height is 19 feet. What will be the height of the tree (in feet) at the age of 81 years?

**Ans** ❌ 1. 9.01

❌ 2. 8.39

✅ 3. 9.5

❌ 4. 9.14

**Q.56** What is the reason why electrons move in a conducting wire when connected to a battery, but not when the wire is left untouched?

**Ans** ✅ 1. A battery creates a potential difference that sets electrons in motion

❌ 2. Gravity acts on electrons in the wire

❌ 3. Wire is made of copper

❌ 4. Electrons have intrinsic energy for movement

**Q.57** Simplify: $88 - 1 \times (5 + 12) - 19$

**Ans** ✅ 1. 52

❌ 2. 60

❌ 3. 62

❌ 4. 54

**Q.58** A student scored 60, 70, and 80 in three subjects with weights 2, 3, and 5, respectively. What is the weighted mean score?

**Ans** ✅ 1. 73

❌ 2. 77

❌ 3. 75

❌ 4. 71

**Q.59** What is the theme of the STREE Summit 2025, as inferred from its description?

**Ans** ❌ 1. "Empowering Women, Empowering Society"

✅ 2. "She Triumphs Through Respect, Equality, and Empowerment"

❌ 3. "Gender Equality: A Path to Progress"

❌ 4. "Women's Rights are Human Rights"

**Q.60** **Which Indian player was appointed as the co-chair of the International Hockey Federation's new FIH Athletes Committee in 2024?**

**Ans** ✗ 1. Amit Rohidas

✗ 2. Harmanpreet Singh

✓ 3. PR Sreejesh

✗ 4. Raj Kumar Pal

**Q.61** **A student adds lead (II) nitrate ($Pb(NO_3)_2$) to an unknown solution. A yellow precipitate forms. What could the unknown solution be?**

**Ans** ✓ 1. Potassium iodide (KI)

✗ 2. Copper sulphate (CuSO4)

✗ 3. Sodium chloride (NaCl)

✗ 4. Barium sulphate (BaSO4)

**Q.62** **Washing soda is commonly used to:**

**Ans** ✓ 1. Remove grease and soften water

✗ 2. Neutralise acids in human blood

✗ 3. Increase acidity in baked foods

✗ 4. Preserve meat for long periods

**Q.63** The HCF and the LCM of two numbers are 15 and 300, respectively. If one of the numbers is $\frac{5}{4}$ times of the other, what is the larger number?

**Ans** ✗ 1. 110

✗ 2. 84

✗ 3. 88

✓ 4. 75

**Q.64** **In December 2024, Masli, a village in which state, became the first border solar village in India?**

**Ans** ✗ 1. Odisha

✓ 2. Gujarat

✗ 3. Karnataka

✗ 4. Madhya Pradesh

**Q.65** Two inlet pipes A and B and one outlet pipe O are attached to a cistern. Pipe A fills the cistern in 8 hours, pipe B in 12 hours, and the outlet O can empty a full cistern in 24 hours. If all three pipes are opened simultaneously, how long will it take to fill the cistern?

**Ans** ✓ 1. 6 hours

✗ 2. 5.5 hours

✗ 3. 6.8 hours

✗ 4. 6.5 hours

**Q.66** **If + means - , - means x , x means ÷ , ÷ means +, then what will come in place of the question mark (?) in the following equation?**

**7-24×6÷18+7=?**

**Ans** ✗ 1. 40

✗ 2. 45

✗ 3. 48

✓ 4. 39

**Q.67** **What is the origin of the material that makes up the Bhabar belt?**

**Ans** ✓ 1. Debris washed down from high ranges

✗ 2. Weathering of local rocks

✗ 3. Aeolian deposits

✗ 4. Glacial deposits

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**Q.68** **This question is based on the five, three-digit numbers given below.**

**(Left) 453 914 527 658 715 (Right)**

**(Example- 697 – First digit = 6, second digit = 9 and third digit = 7)**
**NOTE - All operations to be done from left to right.**

**What will be the resultant if the third digit of the highest number is multiplied with the second digit of the lowest number?**

**Ans** ✗ 1. 19

✗ 2. 17

✗ 3. 18

✓ 4. 20

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**Q.69** **M, A, T, H and S, each have different ages and all ages are integers. M is younger than only two persons. H is 88 years old, which is the second highest age. S is younger than M but older than A. Who is the eldest?**

**Ans** ✗ 1. H

✓ 2. T

✗ 3. S

✗ 4. A

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**Q.70** **Rupesh's salary was first reduced by 44% and subsequently raised by 15%. How much percentage was his final salary lower compared to his initial salary?**

**Ans** ✓ 1. 35.6%

✗ 2. 6.6%

✗ 3. 29%

✗ 4. 15%

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**Q.71** **Ajay starts from Point A and drives 6 km towards north. He then takes a left turn, drives 5 km, turns left and drives 15 km. He then takes a left turn and drives 12 km. He takes a final left turn, drives 9 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)**

**Ans** ✗ 1. 6 km to the east

✗ 2. 6 km to the west

✗ 3. 7 km to the east

✓ 4. 7 km to the west

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**Q.72** **A gardener notices fallen leaves under a tree. Which strategy of plant excretion does this illustrate, and what type of waste handling is involved?**

**Ans** ✗ 1. Excreting waste through roots only.

✗ 2. Releasing waste as oxygen only.

✓ 3. Storing waste in leaves that fall off.

✗ 4. Converting waste into fruits.

**Q.73** A designer wants to create a device that spreads light from a small bulb to illuminate a wide area uniformly. Which lens should be used and why?

**Ans** ✗ 1. A plane glass, because it transmits light without bending

✗ 2. A prism, because it bends light at an angle

✗ 3. A convex lens, because it converges light rays

✓ 4. A concave lens, because it diverges light rays outward

**Q.74** Which of the following is a biotic factor causing storage losses in grains?

**Ans** ✗ 1. Sunlight

✗ 2. Temperature

✗ 3. Moisture

✓ 4. Insects

**Q.75** The Alapana in Carnatic music is equivalent to which part in Hindustani music?

**Ans** ✗ 1. Taan

✗ 2. Bandish

✓ 3. Alap

✗ 4. Sargam

**Q.76** Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.
**Statements:**
All cups are glasses.
All glasses are bottles.
All bottles are jars.
**Conclusions:**
(I): All cups are bottles.
(II): All glasses are jars.

**Ans** ✗ 1. Only conclusion (I) follows.

✗ 2. Only conclusion (II) follows.

✓ 3. Both conclusions (I) and (II) follow.

✗ 4. Neither conclusion (I) nor (II) follows.

**Q.77** Garima bought an original hardbound book for ₹56,000. Its value depreciates by 5% per year. What will be the price (in ₹) of the book after 3 years?

**Ans** ✗ 1. 47,052

✓ 2. 48,013

✗ 3. 48,512

✗ 4. 48,713

**Q.78** What should come in place of the question mark (?) in the given series?

**6 10 38 106 326 ?**

**Ans** ✗ 1. 923

✗ 2. 980

✓ 3. 970

✗ 4. 958

**Q.79** A town replaces all plastic bags with cloth bags. Which chain reaction is expected in the ecosystem?

**Ans** ✗ 1. Cloth bags cause soil toxicity

✗ 2. Plastic still enters the food chain

✗ 3. More plastic accumulates in water bodies

✓ 4. Reduced pollution and decreased biological magnification

**Q.80** **Identify the CORRECT statement about the chlor-alkali process:**

Ans ✗ 1. It is used for the preparation of Na2CO3 solution by electrolysis of brine.

✓ 2. Hydrogen gas is formed at the cathode and chlorine gas at the anode.

✗ 3. Sodium hydroxide is generated near the anode during electrolysis.

✗ 4. NaOH is formed at the anode and chlorine gas at the cathode.

**Q.81** **Which element exists as a monoatomic molecule?**

Ans ✗ 1. Oxygen

✗ 2. Chlorine

✗ 3. Nitrogen

✓ 4. Argon

**Q.82** **According to the Global Firepower Index 2025, what is India's global rank in terms of conventional military strength?**

Ans ✗ 1. 2nd

✗ 2. 5th

✓ 3. 4th

✗ 4. 3rd

**Q.83** **What should come in place of '?' in the given series?**

**2 7 22 67 ?**

Ans ✓ 1. 202

✗ 2. 204

✗ 3. 203

✗ 4. 201

**Q.84** **What happens to insoluble impurities during electrolytic refining?**

Ans ✗ 1. They deposit on cathode

✗ 2. They dissolve completely

✓ 3. They settle as anode mud

✗ 4. They evaporate

**Q.85** **The radius of a solid right circular cone is 24 cm and its height is 32 cm. The total surface area of the cone is:**

Ans ✗ 1. 576π cm2

✗ 2. 1536π cm2

✓ 3. 960π cm2

✗ 4. 1728π cm2

**Q.86** **Six friends, O, P, Q, G, H and I, live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on, till the topmost floor, which is numbered 6.**
**Only two people live between O and H. O lives above P. Only two people live between Q and P. Only one person lives between G and P. G lives on floor numbered 1.**
**How many people live above I?**

Ans ✗ 1. One

✗ 2. Three

✓ 3. Two

✗ 4. None

**Q.87** Which of the following islands is the southernmost point of India?

Ans
- ✗ 1. Kavaratti
- ✗ 2. Little Andaman
- ✓ 3. Indira Point
- ✗ 4. Car Nicobar

**Q.88** The equations $x^2 - 5x + 6 = 0$ and $x^2 + ax + b = 0$, have exactly one common root, and the other root of the second equation is –4. Among the following, which are the possible values of a and b?

Ans
- ✗ 1. a=3, b=−6
- ✗ 2. a=1, b=12
- ✗ 3. a=5, b=−20
- ✓ 4. a=2, b=−8

**Q.89** A farmer wants to improve both the quantity and taste of honey produced on his bee farm. Which of the following strategies should he adopt?

Ans
- ✗ 1. Reduce the number of beehives and increase the number of bees.
- ✗ 2. Move the apiary to an area with fewer flowers.
- ✗ 3. Use only local bee varieties for honey production.
- ✓ 4. Increase the variety and quantity of flowering plants near the beehives.

**Q.90** The lengths of the three sides of a triangle are 13 cm, 14 cm and 15 cm, respectively. Find the area (in $cm^2$) of the incircle of this triangle. [Use π = 3.14]

Ans
- ✗ 1. 56.52
- ✗ 2. 47.10
- ✓ 3. 50.24
- ✗ 4. 53.38

**Q.91** A micelle has its hydrophobic ends directed:

Ans
- ✗ 1. Towards water molecules directly
- ✗ 2. Randomly in all possible directions
- ✗ 3. Outside forming hydrogen bonds
- ✓ 4. Towards the center away from water

**Q.92** Which pair of olfactory indicators loses its smell in a basic solution?

Ans
- ✓ 1. Vanilla essence and clove oil
- ✗ 2. Onion and blue litmus
- ✗ 3. Turmeric and onion
- ✗ 4. Phenolphthalein and onion

**Q.93** A train moves 120 km at 60 km/h and then another 60 km at 30 km/h. What is the average speed for the entire journey?

Ans
- ✗ 1. 40 km/h
- ✓ 2. 45 km/h
- ✗ 3. 50 km/h
- ✗ 4. 30 km/h

**Q.94** Which of the following numbers is divisible by both 9 and 43?

Ans
- ✗ 1. 10710
- ✓ 2. 8901
- ✗ 3. 7230
- ✗ 4. 7095

**Q.95** Open Market Operations (OMOs) are conducted by RBI to control _____.

**Ans** ✅ 1. Money supply

❌ 2. State budgets

❌ 3. Corporate profits

❌ 4. Foreign trade

**Q.96** 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.)

**(136, 220, 84)**
**(144, 240, 96)**

**Ans** ❌ 1. (156, 210, 56)

❌ 2. (164, 254, 92)

✅ 3. (140, 238, 98)

❌ 4. (152, 260, 88)

**Q.97** What happens to the potential energy of an object if its mass is halved while its height above the ground remains constant?

**Ans** ❌ 1. The potential energy becomes zero

❌ 2. The potential energy is doubled

❌ 3. The potential energy remains unchanged

✅ 4. The potential energy is halved

**Q.98** This question is based on the words given below.

**IRE AWE DAY FUR**

In each of the words, each vowel is changed to the second letter preceding it in the English alphabetical order, and each consonant is changed to the letter immediately following it in the English alphabetical order. In how many letter-clusters thus formed will no vowel appear?

**Ans** ✅ 1. Three

❌ 2. Four

❌ 3. Two

❌ 4. One

**Q.99** Which of the following types of connective tissue is present in the larynx of a human body?

**Ans** ❌ 1. Areolar

❌ 2. Adipose

❌ 3. Ligament

✅ 4. Cartilage

**Q.100** If $x^2 - kx - 49 = 0$ and $x^2 - 5kx + 11 = 0$ $(k > 0)$ have a common root, then the value of k is:

**Ans**

✗ 1. $\dfrac{15}{4}$

✗ 2. $\dfrac{15}{7}$

✗ 3. $\dfrac{15}{2}$

✓ 4. $\dfrac{15}{8}$