



रेलवे भर्ती बोर्ड / RAILWAY RECRUITMENT BOARD
सीईएन ०२/२०२६ - तकनीशियन ग्रेड I सिगनल और तकनीशियन ग्रेड III
CEN 02/2026 - Technician Grade I Signal and Technician Grade III



Test Date	06/10/2026
Test Time	12:45 PM - 2:15 PM
Subject	RRB Technician Grade III

* 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 : Mathematics

Q.1	The 7-digit number A67856B is divisible by 3. Find the least possible value of (A + B).
Ans	☒ A. 0 ☒ B. 3 ☒ C. 1 ☒ D. 4
Q.2	A group of 6 identical workers can finish a task in 9 days. How many days will it take if only 3 of them work together to complete the same task?
Ans	☒ A. 27 days ☒ B. 15 days ☒ C. 12 days ☒ D. 18 days
Q.3	The average sale of cars by a dealer per day in the month of March, other than on Saturdays and Sundays, is 191. The average sale of cars per day on Sundays is 160. What is the average sale of cars per day on Saturdays, if the first Saturday is on the 3rd of March and average sale of cars per day for the whole month is 187?
Ans	☒ A. 196 ☒ B. 191 ☒ C. 186 ☒ D. 193
Q.4	The sides of a triangle are in the ratio 13 : 14 : 15 and its perimeter is 84 cm. What is the area of the triangle?
Ans	☒ A. 342 cm² ☒ B. 336 cm² ☒ C. 330 cm² ☒ D. 312 cm²
Q.5	The fourth proportional to three numbers a, b and c is 84. The ratio of a to b is 5 : 6 and the ratio of b to c is 3 : 5. What is the value of a?
Ans	☒ A. 30 ☒ B. 35 ☒ C. 45 ☒ D. 40

Q.6 What is the measure of each interior angle of a regular 96-gon?

- Ans**
- ☒ A. 176.75°
 - ☒ B. 176.25°
 - ☒ C. 176°
 - ☒ D. 176.5°

Q.7 Anand sells an article which costs him ₹600 to Charan at a profit of 25%. Charan then sells it to Rakesh, making a profit of 20% on the price he paid to Anand. How much does Rakesh pay Charan?

- Ans**
- ☒ A. ₹800
 - ☒ B. ₹900
 - ☒ C. ₹910
 - ☒ D. ₹850

Q.8 The compound interest on ₹2,70,000 at 8% per annum, compounded annually, is ₹70,122.24. The period (in years) is:

- Ans**
- ☒ A. 4
 - ☒ B. 5
 - ☒ C. 2
 - ☒ D. 3

Q.9 Simplify: $\frac{x^4 + x^2 + 1}{x^2 + x + 1}$

- Ans**
- ☒ A. $x^2 - x + 1$
 - ☒ B. $x^2 - x - 1$
 - ☒ C. $x^2 + x - 1$
 - ☒ D. $-x^2 - x + 1$

Q.10 Ankit, Brijesh and Charu are employed to do a piece of work for ₹2209. Ankit and Brijesh together are supposed to do $\frac{31}{47}$ of the work and Brijesh and Charu together $\frac{21}{47}$ of the work. What amount should Ankit be paid?

- Ans**
- ☒ A. ₹1316
 - ☒ B. ₹282
 - ☒ C. ₹1222
 - ☒ D. ₹1692

Q.11 A 60 cm diameter cylinder that is rolling without sliding at a rate of 7 rounds per second. How much distance will the cylinder roll in 15 seconds? $\left(\text{Use } \pi = \frac{22}{7} \right)$

- Ans**
- ☒ A. 198 m
 - ☒ B. 180 m
 - ☒ C. 105 m
 - ☒ D. 63 m

Q.12 A man has invested ₹58000 at a rate of 6% per annum simple interest for 2 years. Find the amount (in ₹) that he will receive after 2 years.

- Ans**
- ☒ A. 7960
 - ☒ B. 65960
 - ☒ C. 6960
 - ☒ D. 64960

Q.13 In a "Buy y, Get (y - 3) Free" scheme, the effective discount offered to customers is 40%. What is the value of y?

- Ans**
- ☐ A. 7
 - ☐ B. 10
 - ☐ C. 8
 - ☒ D. 9

Q.14 A man sold a sweater for ₹900, at a loss of 4%. He also sold a trouser for ₹860, at a profit of 25%. Find his net profit.

- Ans**
- ☒ A. ₹134.50
 - ☐ B. ₹139.50
 - ☐ C. ₹129.50
 - ☐ D. ₹149.50

Q.15 If 20% of k is 10 less than 2400% of 20, then k is:

- Ans**
- ☐ A. 2330
 - ☐ B. 2390
 - ☐ C. 2310
 - ☒ D. 2350

Q.16 A boat running upstream takes 12 hours 36 minutes to cover a certain distance, while it takes 4 hours 12 minutes to cover the same distance running downstream. What is the ratio between the speed of the boat in still water and speed of the current, respectively?

- Ans**
- ☐ A. 3 : 1
 - ☒ B. 2 : 1
 - ☐ C. 5 : 2
 - ☐ D. 7 : 3

Q.17 Find the value of $\frac{3.6 \times 0.48 \times 2.50}{0.09 \times 0.24 \times 0.5}$.

- Ans**
- ☐ A. 4000
 - ☐ B. 40
 - ☒ C. 400
 - ☐ D. 440

Q.18 In a 2214 m circular race, Sushant finishes one round in 54 seconds and Varun finishes one round in 82 seconds. How many different meeting points are there on the circumference if they are running in a same direction?

- Ans**
- ☐ A. 5
 - ☐ B. 18
 - ☒ C. 14
 - ☐ D. 6

Q.19 Find the weighted mean of 15, 20 and 25 with weights 2, 3 and 5, respectively.

- Ans**
- ☐ A. 21
 - ☐ B. 22.5
 - ☒ C. 21.5
 - ☐ D. 22

Q.20 If ₹5,000 is invested at an annual interest rate of 8% per annum, compounded annually for 2 years, what will be the compound interest earned?

- Ans**
- ☒ A. ₹832
 - ☐ B. ₹837
 - ☐ C. ₹780
 - ☐ D. ₹924

Q.21	Seven years ago from now, Aman was 5 times as old as Chaman. After 7 years from now, he will be 3 times as old as Chaman will then be. The present age of Aman (in years) is:
Ans	☒ A. 79 ☒ B. 77 ☒ C. 81 ☒ D. 78
Q.22	The ratio of the ages of Rohan and Mohit is 4 : 5. If Mohit is 5 years older than Rohan, what is the age of Mohit?
Ans	☒ A. 30 years ☒ B. 24 years ☒ C. 20 years ☒ D. 25 years
Q.23	In $\triangle ABC$, $DE \parallel AC$, where D and E are the points on sides AB and BC, respectively. If $BD = 15$ cm and $AD = 4$ cm, then what is the ratio of the area of $\triangle BDE$ to the trapezium ADEC?
Ans	☒ A. 225 : 136 ☒ B. 136 : 225 ☒ C. 226 : 137 ☒ D. 137 : 226
Q.24	The mean, median, and mode satisfy the empirical relation, $\text{Mode} = 3 \times \text{Median} - 2 \times \text{Mean}$. If the mean is increased by 5 while the median remains unchanged, then the new mode, will:
Ans	☒ A. Increase by 5 ☒ B. Decrease by 5 ☒ C. Increase by 10 ☒ D. Decrease by 10
Q.25	Find the value of $\sqrt{\frac{\sec^2 \theta + \operatorname{cosec}^2 \theta}{\tan^2 \theta - \sin^2 \theta}}$.
Ans	☒ A. $\cot^2 \theta \operatorname{cosec} \theta$ ☒ B. $\operatorname{cosec}^3 \theta$ ☒ C. $\cos \theta \operatorname{cosec}^2 \theta$ ☒ D. $\tan^2 \theta \sec \theta$

Section : **General Intelligence and Reasoning**

Q.26	Refer to the following letter series and answer the question. Counting to be done from left to right only. (Left) P E R G T F V N J I O K U Y H K Y T B H R D T V W (Right) How many such consonants are there each of which is immediately preceded by a vowel and also immediately followed by a consonant?
Ans	☒ A. One ☒ B. Two ☒ C. Three ☒ D. None

Q.27 Refer to the following letter, symbol series and answer the question. Counting to be done from left to right only.
(Left) F & I Y @ J Y C * A # & K S P \$ B M (Right)
How many such symbols are there each of which are immediately preceded by a consonant and also immediately followed by a symbol?

- Ans

A. One

B. Two

C. Three

D. None
- Q.28 In a certain code language, 'trust the process' is written as 'zb ac tm' and 'I trust you' is coded as 'jk zb mb '. How is 'trust ' coded in the given language?
- Ans

A. mb

B. zb

C. tm

D. jk

Q.29 Seven people, L, M, N, O, P, Q, and R are sitting in a row facing north. Only one person sits between M and O. Q sits to the immediate right of R. P sits third to the left of L. Only two people sit between M and P. N sits to the immediate left of O. If the person sitting exactly in the middle of the row swaps his position with the person at the extreme right end, who will now sit at the extreme right end?

Ans

A. P

B. O

C. L

D. N

Q.30 If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 6238571, how many digits will appear more than once in the new number thus formed?

Ans

A. 2

B. 1

C. 3

D. 0

Q.31 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

LNI MOJ NPK OQL ?

Ans

A. PSN

B. PRN

C. PSM

D. PRM

Q.32 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?
17 C 35 A 6 B 18 D 4 = ?

Ans

A. 119

B. 118

C. 120

D. 117

Q.33 In this question, a group of number/symbol is coded using letter codes as per the codes given below and the conditions which follow. The correct combination of codes following the conditions is your answer. If none of the conditions follow, then codes for the respective Number/Symbol to be followed directly as given in the table.

Number/Symbol % 6 1 + 8 \$ ^ 3 = 5

Code MPSVYADFI L

- Conditions –
- (i) If the first element is a symbol and the last a number, the codes for these two (the first and the last elements) are to be interchanged.
 - (ii) If the first element is an odd number and the last an even number, the first and last elements are to be coded as ©.
 - (iii) If both second and third elements are perfect squares, the third element is to be coded as the code for the second element.

What is the code for the following group of number-symbols?
\$ 3 1 ^ 5

- Ans
- ☒ A. A F F D L
 - ☒ B. L S S D A
 - ☒ C. L F S D A
 - ☒ D. A F S D L

Q.34 The position(s) of how many letters will remain unchanged if each letter in the word BURDENS is arranged in the English alphabetical order?

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

Q.35 What should come in place of ‘?’ in the given series?
5 16 22 33 39 50 56 ?

- Ans
- ☒ A. 62
 - ☒ B. 67
 - ☒ C. 68
 - ☒ D. 64

Q.36 A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. B lives on an odd numbered floor but not 3. The sum of floors on which B and F live is 7.C lives immediately below E. A lives on the top floor. How many people live between B and D?

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

Q.37 In this question, a question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and decide the appropriate answer.

Among 5 poles, G, H, I, S and W each having a different height, which pole is the tallest?

- (I) G is taller than only two poles. H is taller than W and no pole has height between H and W.
(II) S is taller than W.

- Ans
- ☒ A. Both statements I and II together (and not statement I alone or statement II alone) are sufficient to answer the question
 - ☒ B. Data in Statement II alone is sufficient to answer the question while data in statement I is not
 - ☒ C. Both statements I and II together are NOT sufficient to answer the question
 - ☒ D. Data in Statement I alone is sufficient to answer the question while data in statement II is not

Q.38 21 is related to 64 following a certain logic. Following the same logic, 24 is related to 73. To which of the following is 34 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 to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

- Ans**
- ☒ A. 103
 - ☐ B. 123
 - ☐ C. 92
 - ☐ D. 112

Q.39 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**
- ☐ A. LOT
 - ☒ B. MPT
 - ☐ C. FIN
 - ☐ D. TWB

Q.40 Based on the alphabetical order, three of the following four are alike in a certain way and thus form a group. Which is the one that does not belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter cluster)

- Ans**
- ☐ A. KQV
 - ☐ B. EKP
 - ☐ C. QWB
 - ☒ D. MSZ

Q.41 GJFC is related to YBXU in a certain way based on the English alphabetical order. In the same way, VYUR is related to NQMJ. To which of the following is BEAX related, following the same logic?

- Ans**
- ☐ A. TWRP
 - ☐ B. TXRZ
 - ☒ C. TWSP
 - ☐ D. TVRP

Q.42 Vikas starts from Point A and drives 11 km towards north. He then takes a right turn, drives 13 km, turns right and drives 12 km. He then takes a right turn and drives 17 km. He takes a final right turn, drives 1 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90-degree turns only unless specified.)

- Ans**
- ☐ A. 4 km to the west
 - ☐ B. 7 km to the east
 - ☐ C. 7 km to the west
 - ☒ D. 4 km to the east

Q.43 Select the pair that follows the same pattern as that followed by the two pairs given below. Both pairs follow the same pattern.

EFG–IJK
BCD–FGH

- Ans**
- ☐ A. JKL–MOO
 - ☐ B. JJJ–MNO
 - ☐ C. JJJ–NOP
 - ☒ D. JKL–NOP

- Q.44

Each vowel in the word PLUMBER is changed to the letter immediately following it in the English alphabetical order and each consonant is changed to the letter immediately preceding it in the English alphabetical order. How many vowels are there in the group of letters thus formed?

Ans

☐ A. 0

☒ B. 2

☐ C. 3

☐ D. 1
- Q.45

In a certain code language, 'JOIN' is coded as '4978' and 'COIN' is coded as '2879'. What is the code for 'C' in the given code language?

Ans

☒ A. 2

☐ B. 8

☐ C. 4

☐ D. 9
- Q.46

Karan is the brother of Nisha. Nisha is the son of Rakesh. Rakesh is the father of Vikram. Vikram is the wife of Pooja. How is Karan related to Pooja? (Names are gender neutral)

Ans

☐ A. Brother

☒ B. Wife's brother

☐ C. Father

☐ D. Wife's father
- Q.47

Seven boxes M, N, O, P, Q, R and S are kept one over the other but not necessarily in the same order. Only Q is kept above O. Only S is kept between O and P. Only M is kept below R. How many boxes are kept between N and M?

Ans

☐ A. Four

☒ B. One

☐ C. Three

☐ D. Two
- Q.48

What should come in place of '?' in the given series?

1 8 17 28 41 ?

Ans

☐ A. 80

☒ B. 56

☐ C. 120

☐ D. 52
- Q.49

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

Question:

Among 5 poles, W, O, K, G and Y each having a different height, which pole is the shortest?

Statements:

I. G is taller than only one pole. W is taller than O.

II. G is taller than Y.

Ans

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

☐ B. Both statements I and II together are NOT sufficient to answer the question

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

☒ D. Both statements I and II together (and not statement I alone or statement II alone) are sufficient to answer the question.

Q.50 If 'A' stands for '÷', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-', what will come in place of the question mark '?' in the following equation?
279 B 52 A 468 C 624 D 438=?

- Ans
- ☒ A. 232
 - ☒ B. 161
 - ☒ C. 217
 - ☒ D. 323

Section : **General Science**

Q.51 Which process explains the movement of water molecules through a selectively permeable membrane from an area of high concentration to low concentration?

- Ans
- ☒ A. Filtration
 - ☒ B. Diffusion
 - ☒ C. Osmosis
 - ☒ D. Active transport

Q.52 Which of the following is an example of a suspension?

- Ans
- ☒ A. Saltwater
 - ☒ B. Muddy water
 - ☒ C. Air
 - ☒ D. Lemonade

Q.53 Which branch of chemistry focuses primarily on the study of carbon-containing compounds?

- Ans
- ☒ A. Organic Chemistry
 - ☒ B. Analytical Chemistry
 - ☒ C. Inorganic Chemistry
 - ☒ D. Physical Chemistry

Q.54 A patient is unable to move their arm voluntarily, but the arm still shows rhythmic contractions during sleep. Based on your understanding of muscular tissue, which tissue types are most likely involved in this phenomenon?

- Ans
- ☒ A. Both smooth and cardiac muscle are impaired, but skeletal muscle is functioning normally.
 - ☒ B. Only smooth muscle is functioning normally, but both skeletal and cardiac muscle are impaired.
 - ☒ C. All muscle types are functioning normally.
 - ☒ D. Skeletal muscle is impaired, but smooth muscle is functioning normally.

Q.55 Which human activity most significantly increases the risk of ground-level smog formation in large cities?

- Ans
- ☒ A. Recycling household waste regularly
 - ☒ B. Installing solar panels on rooftops
 - ☒ C. Operating gasoline-powered vehicles
 - ☒ D. Planting more trees along roads

Q.56 Which of the following best describes the type of bond formed when a metal reacts with a non-metal?

- Ans
- ☒ A. Covalent bond
 - ☒ B. Ionic bond
 - ☒ C. Hydrogen bond
 - ☒ D. Metallic bond

Q.57 A train moves with a constant acceleration and its velocity-time graph is a straight line. If the graph passes through the points (0 s, 5 m/s) and (8 s, 21 m/s), what is the total displacement of the train in 8 seconds?

- Ans
- ☒ A. 112 m
 - ☒ B. 128 m
 - ☒ C. 104 m
 - ☒ D. 168 m

Q.58 Which of the following options explains why menstruation does not occur if fertilization takes place during the menstrual cycle?

- Ans**
- ☒ A. The lining of the uterus is shed immediately after fertilization.
 - ☒ B. The lining of the uterus is kept intact to support the developing embryo.
 - ☒ C. The ovary permanently stops producing and releasing egg cells.
 - ☒ D. The uterus develops directly into the placenta after fertilization.

Q.59 Which of the following is NOT a part of Xylem tissue?

- Ans**
- ☒ A. Vessels
 - ☒ B. Tracheids
 - ☒ C. Sieve tube
 - ☒ D. Xylem fibres

Q.60 An object is placed at a distance of 10 cm from a convex lens. The lens produces a real and magnified image with a magnification -3 . What is the position of the image?

- Ans**
- ☒ A. -5.0 cm
 - ☒ B. -30.0 cm
 - ☒ C. $+30.0$ cm
 - ☒ D. $+5.0$ cm

Q.61 A household uses an electric iron, a refrigerator, and an LED television simultaneously. What key factor must be considered to ensure safe operation without overloading the electrical circuit?

- Ans**
- ☒ A. The thickness of the connecting wire should be increased for each additional appliance.
 - ☒ B. The sequence in which appliances are switched on must be regulated.
 - ☒ C. The total current drawn by all appliances must not exceed the circuit's rated capacity.
 - ☒ D. The voltage supplied to each appliance should be identical.

Q.62 A student is given four samples: muddy water, air, milk, and salt dissolved in water. The task is to select the one that best represents a heterogeneous mixture. Which sample should the student choose?

- Ans**
- ☒ A. Air
 - ☒ B. Milk
 - ☒ C. Muddy water
 - ☒ D. Salt water

Q.63 What will be the power delivered by a lamp that uses 120 joules of energy in 2 minutes?

- Ans**
- ☒ A. 60 watt
 - ☒ B. 14400 watt
 - ☒ C. 240 watt
 - ☒ D. 1 watt

Q.64 What does the presence of parallel straight magnetic field lines inside a solenoid indicate?

- Ans**
- ☒ A. The magnetic field is uniform throughout the solenoid
 - ☒ B. There is no magnetic field inside the solenoid
 - ☒ C. The magnetic field is strongest near the ends of the solenoid
 - ☒ D. The magnetic field varies from point to point inside the solenoid

Q.65 Muscle cramps during vigorous exercise occur due to accumulation of _____.

- Ans**
- ☒ A. Lactic acid
 - ☒ B. Oxygen
 - ☒ C. Carbon dioxide
 - ☒ D. Ethanol

Q.66 When a ball rolls down a hill and comes to rest, how is the total energy of the ball-earth system maintained?

- Ans**
- ☐ A. The total energy is destroyed as the ball stops
 - ☐ B. All the energy remains as potential energy
 - ☒ C. The initial potential energy becomes heat and sound energy
 - ☐ D. All the energy remains as kinetic energy

Q.67 Formation of slaked lime is an example of:

- Ans**
- ☐ A. displacement reaction
 - ☒ B. combination reaction
 - ☐ C. decomposition reaction
 - ☐ D. double decomposition reaction

Q.68 Two resistors of $3\ \Omega$ and $X\ \Omega$ are connected in parallel such that the effective resistance is $2\ \Omega$. What is the value of X (in Ω)?

- Ans**
- ☐ A. $1/6$
 - ☐ B. $1/3$
 - ☐ C. 3
 - ☒ D. 6

Q.69 Which of the following molecules contains atoms of only one element?

- Ans**
- ☐ A. CO_2
 - ☐ B. HCl
 - ☐ C. NH_3
 - ☒ D. N_2

Q.70 What is the charge of a proton?

- Ans**
- ☒ A. Positive
 - ☐ B. Neutral
 - ☐ C. Negative
 - ☐ D. No charge

Q.71 Which of the following quantities is needed to calculate the work done by a constant force?

- Ans**
- ☒ A. Magnitude of force and displacement
 - ☐ B. Only distance moved
 - ☐ C. Time taken for movement
 - ☐ D. Only magnitude of force

Q.72 Which branch of chemistry primarily focuses on the study of carbon-containing compounds, and is essential for understanding the structure of medicines and plastics?

- Ans**
- ☐ A. Physical chemistry
 - ☒ B. Organic chemistry
 - ☐ C. Inorganic chemistry
 - ☐ D. Analytical chemistry

Q.73 A student incorrectly calculates a positive object distance while using the lens formula for a real object. Based on the sign convention, what is the conceptual error in this calculation?

- Ans**
- ☐ A. The sign of object distance depends on the focal length.
 - ☐ B. Object distance should always be positive for a real object.
 - ☒ C. Object distance should be negative for a real object as it is placed to the left of the lens.
 - ☐ D. The sign of object distance depends on the object height.

Q.74 Why is the reaction between hydrochloric acid and sodium hydroxide important in industry?

- Ans ☒ A. It helps in making table salt and water
☐ B. It is used to generate electricity
☐ C. It is required for ammonia manufacture
☐ D. It directly produces soap

Q.75 If a molecule contains a central atom bonded to four other atoms and all bonds are single covalent, what is the most likely shape of this molecule?

- Ans ☐ A. The molecule is trigonal pyramidal in shape.
☐ B. The molecule is linear in shape.
☒ C. The molecule is tetrahedral in shape.
☐ D. The molecule is trigonal planar in shape.

Q.76 How is oxygen transported from the lungs to body tissues in humans?

- Ans ☐ A. Dissolved entirely within the blood plasma
☒ B. Bound to haemoglobin in red blood cells
☐ C. As free gas bubbles in the bloodstream
☐ D. Converted chemically into carbon dioxide

Q.77 A student adds phenolphthalein and methyl orange separately to three different solutions P, Q, and R. The observations are:

Solution	Phenolphthalein	Methyl Orange
P	Colourless	Red
Q	Pink	Yellow
R	Colourless	orange

- Ans ☐ A. P – Acidic, Q – Neutral, R – Basic
☐ B. P – Neutral, Q – Acidic, R – Basic
☒ C. P – Acidic, Q – Basic, R – Neutral
☐ D. P – Basic, Q – Acidic, R – Neutral

Q.78 When a compass is placed near the loop of a current-carrying circular coil, what does the compass needle's alignment reveal about the field lines produced by the coil?

- Ans ☐ A. The compass needle aligns at right angles to the field lines, indicating the perpendicular nature of the field.
☐ B. The compass needle moves randomly without a fixed direction, showing fluctuating field lines.
☒ C. The compass needle aligns tangentially to the circular field lines at that point, indicating the direction of the magnetic field.
☐ D. The compass needle always points directly toward the center of the coil, reflecting the field's inward direction.

Q.79 How does the spherical shape of Earth affect the distribution of solar energy?

- Ans ☐ A. It causes more sunlight to hit the poles than other latitudes
☐ B. It results in identical day lengths at all latitudes year around
☐ C. All areas are equally warm by even spread of solar energy
☒ D. Uneven spread of solar energy across different latitudes

Q.80 Which of the following describes the function of the scrotum that houses the testes?

- Ans ☐ A. To allow sperm to travel a shorter distance
☐ B. To produce testosterone hormones
☐ C. To store semen before ejaculation
☒ D. To keep the testes cool for sperm production

Q.81 If the atomic masses are: potassium 39 u, nitrogen 14 u, and oxygen 16 u, what is the formula unit mass of potassium nitrate (KNO_3)?

- Ans ☐ A. 68 u
☐ B. 69 u
☒ C. 101 u
☐ D. 70 u

Q.82 An eye lens forms a real, inverted image 2 cm behind the retina for a distant object. What error in the eye's structure could cause this situation?

- Ans
- ☐ A. Lens more curved than normal
 - ☒ B. Eyeball shorter than normal
 - ☐ C. Eyeball longer than normal
 - ☐ D. Thickening of the retina

Q.83 Which of the following characteristics helps gymnosperms survive in cold and dry regions?

- Ans
- ☐ A. They reproduce only in aquatic habitats.
 - ☐ B. They produce bright, colorful flowers to attract insects.
 - ☒ C. They have needle-like or scale-like leaves that reduce water loss.
 - ☐ D. They have large, broad leaves that increase water loss.

Q.84 Which condition is most favorable for the growth of fungi?

- Ans
- ☐ A. Hot desert conditions with very low humidity
 - ☐ B. Cold and dry environment with intense sunlight
 - ☒ C. Warm and moist environment with abundant organic matter
 - ☐ D. Extremely cold environment with frozen soil throughout the year

Q.85 Which of the following processes is responsible for producing gametes with half the number of chromosomes found in body cells?

- Ans
- ☐ A. Fertilization
 - ☒ B. Meiosis
 - ☐ C. Mitosis
 - ☐ D. Differentiation

Q.86 A beam of white light passes through a glass prism and forms a spectrum on a screen. If you place a second identical prism after the first, inverted with respect to it, what will happen to the spectrum?

- Ans
- ☐ A. The spectrum will spread further apart
 - ☐ B. The colors will remain separated but in reverse order
 - ☒ C. The spectrum will recombine into white light
 - ☐ D. Two separate spectra will form

Q.87 Which equation correctly represents aerobic respiration?

- Ans
- ☐ A. $\text{Glucose} + \text{CO}_2 \rightarrow \text{O}_2 + \text{H}_2\text{O} + \text{Energy}$
 - ☐ B. $\text{Glucose} \rightarrow \text{Alcohol} + \text{CO}_2 + \text{Energy}$
 - ☐ C. $\text{Glucose} \rightarrow \text{Lactic acid} + \text{Energy}$
 - ☒ D. $\text{Glucose} + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{Energy}$

Q.88 A student observes two different musical notes from two sources. Note X has a greater number of compressions passing a fixed point per second than Note Y, but both have the same loudness. Based on the characteristics of sound, what can be concluded about Note X compared to Note Y?

- Ans
- ☐ A. Note X has higher amplitude but equal frequency compared to Note Y.
 - ☐ B. Note X has lower frequency but higher amplitude than Note Y.
 - ☐ C. Note X travels faster than Note Y in air.
 - ☒ D. Note X has a higher frequency than Note Y but equal amplitude.

Q.89 What happens when more solute is added to a fixed amount of solvent in a solution?

- Ans
- ☒ A. The concentration of the solution increases as more solute is added.
 - ☐ B. The solution turns into a pure solvent when more solute is added.
 - ☐ C. The concentration of the solution remains unchanged when solute is added.
 - ☐ D. The solution becomes less concentrated as more solute is added.

Q.90 If c is the speed of light in air and v is the speed of light in a medium, how is the refractive index n_m of that medium defined?

- Ans
- ☒

 A. $n_m = c \times v$
- ☒

 B. $n_m = c/v$
- ☒

 C. $n_m = v/c$
- ☒

 D. $n_m = c - v$

Section : **General Awareness**

Q.91 According to Provisional Estimates (PE) of Annual Gross Domestic Product (GDP) for the Financial Year (FY) (2025-26) and Quarterly Estimates of GDP for the Fourth Quarter (Q4, January-March) of FY 2025-26, released in June 2026, what was the estimated growth rate of India's Real GDP for FY 2025-26?

- Ans
- ☒

 A. 7.4%
- ☒

 B. 6.9%
- ☒

 C. 7.1%
- ☒

 D. 7.7%

Q.92 In July 2026, the official opening of the International Center for Civilizational Studies “Manas and Mahabharata” and the presentation of the first-ever Hindi translation of “Manas” marked a significant milestone in cultural cooperation between India and which country?

- Ans
- ☒

 A. Georgia
- ☒

 B. Armenia
- ☒

 C. Kazakhstan
- ☒

 D. Kyrgyzstan

Q.93 In its Monetary Policy Committee (MPC) meeting held in February 2026, the RBI kept the repo rate unchanged and retained its policy stance as which of the following, despite one member dissenting in favour of a more accommodative approach?

- Ans
- ☒

 A. Neutral
- ☒

 B. Accommodative
- ☒

 C. Restrictive
- ☒

 D. Calibrated Tightening

Q.94 Who among the following defeated Sheetal Devi to win the gold medal in the compound women's final at the World Archery Para Series event in Bangkok in April 2026?

- Ans
- ☒

 A. Pooja Jatyan
- ☒

 B. Payal Nag
- ☒

 C. Bhawna Sharma
- ☒

 D. Harvinder Kaur

Q.95 Who took oath as the Chief Minister of Manipur in February 2026?

- Ans
- ☒

 A. Konthoujam Govindas Singh
- ☒

 B. N. Biren Singh
- ☒

 C. Yumnam Khemchand Singh
- ☒

 D. Nemcha Kipgen

Q.96 According to late 2025 news, what government initiative which provides oxo-biodegradable sanitary napkins at ₹1 per pad, has made cumulative sales of ₹ 96.30 crore as of Dec 2025?

- Ans
- ☒

 A. Suvidha Napkins via Menstrual Hygiene scheme (MH)
- ☒

 B. Suvidha Napkins via Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)
- ☒

 C. Suvidha Napkins via Rashtriya Kishor Swasthya Karyakram (RKSK)
- ☒

 D. Suvidha Napkins via Beti Bachao Beti Padhao (BBBP)

Q.97 What was the Unemployment Rate (UR) for persons aged 15 years and above, according to the Periodic Labour Force Survey (PLFS) data released in November 2025?

- Ans**
- ☐ A. 5.2%
 - ☐ B. 3.5%
 - ☐ C. 6.0%
 - ☒ D. 4.7%

Q.98 At its August 2026 meeting, the Monetary Policy Committee (MPC) decided to keep the policy repo rate under the liquidity adjustment facility (LAF) unchanged at what percentage?

- Ans**
- ☐ A. 2.12%
 - ☐ B. 7.26%
 - ☒ C. 5.25%
 - ☐ D. 9.88%

Q.99 The Corporate Laws (Amendment) Bill, 2026, introduced in March 2026, seeks to amend which two Acts?

- Ans**
- ☒ A. Companies Act, 2013, and Limited Liability Partnership Act, 2008
 - ☐ B. Companies Act, 2013, and Securities Contracts (Regulation) Act, 1956
 - ☐ C. Limited Liability Partnership Act, 2008, and Competition Act, 2002
 - ☐ D. Companies Act, 2013, and Insolvency and Bankruptcy Code, 2016

Q.100 In July 2026, with which base year was the trial version of the Index of Services Production (ISP) launched?

- Ans**
- ☐ A. 2023–24
 - ☐ B. 2021–22
 - ☒ C. 2024–25
 - ☐ D. 2022–23