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

Test Date	07/10/2026
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 **In a college, the students in Science and Commerce faculties were in the ratio of 9 : 7, respectively. If 9 more students joined the Science faculty and 6 students left the Commerce faculty, the ratio of students in the Science and Commerce faculties becomes 12 : 5, respectively. How many students were there in both faculties together initially?**

Ans A). 144 B). 80 C). 112 D). 48

Correct Answer: D

Q.2 **Two persons X and Y deposited the same amount ₹P for the same the rate of interest compounded yearly and half yearly for two years and one year, respectively. If the difference of their interests is ₹0.1075P, then find the rate of interest.**

Ans A). 12.5% B). 8% C). 10% D). 12%

Correct Answer: C

Q.3 **The mean proportion of 5 and 20 is:**

Ans A). 15 B). 20 C). 5 D). 10

Correct Answer: D

Q.4 **The volume of a cone is 1540 cm^3 and radius is 7 cm. What is the height of the cone?**

Ans A). 30 cm B). 38 cm C). 34 cm D). 40 cm

Correct Answer: A

Q.5 **The 7-digit number 6A9317B is divisible by 3. Find the least possible value of (A + B).**

Ans A). 1 B). 4 C). 0 D). 3

Correct Answer: A

Q.6 If $\frac{3}{(4x+3)}+\frac{8}{(9y+8)}+\frac{2305}{(11z+2305)}=7$, what is the value of $\frac{4x}{(4x+3)}+\frac{9y}{(9y+8)}+\frac{11z}{(11z+2305)}$?

Ans A). 4 B). 3 C). −3 D). −4

Correct Answer: D

Q.7 Find the value of $\frac{\sin\theta-\cos\theta+1}{\sin\theta+\cos\theta-1}$.

Ans A). tan θ + cosec θ B). tan θ + sec θ C). cot θ + cosec θ D). cosec θ + sec θ

Correct Answer: B

Q.8 Two trains are moving in the same direction at 100 km/hr and 60 km/hr, respectively. The faster train crosses a man in the slower train in 9 seconds. What is the length of the faster train?

Ans A). 100 m B). 80 m C). 50 m D). 120 m

Correct Answer: A

Q.9 Ragini had to make a model of a cylindrical kaleidoscope for her science project. She wanted to use chart paper to make the curved surface of the kaleidoscope. What would be the area of chart paper required by her, if she wanted to make a kaleidoscope of length 55 cm with a 14 cm radius? $\left(\text{Use } \pi = \frac{22}{7}\right)$

Ans A). 4887 cm^2 B). 4856 cm^2 C). 4840 cm^2 D). 4884 cm^2

Correct Answer: C

Q.10 A trader marks an article 40% above cost price and allows a 10% discount on the marked price. Find the percentage profit or loss.

Ans A). loss by 26% B). profit by 13% C). loss by 13% D). profit by 26%

Correct Answer: D

Q.11 If 20% of k is 10 less than 2400% of 25, then k is:

Ans A). 2910 B). 2930 C). 2950 D). 2990

Correct Answer: C

Q.12 A man has invested ₹57500 at a rate of 8% per annum simple interest for 2 years. Find the amount (in ₹) that he will receive after 2 years.

Ans A). 66700 B). 9200 C). 10200 D). 67700

Correct Answer: A

Q.13 A data set has a mean of 15 and a mode of 20. Each value is changed by multiplying it by 3 and then adding 5. Assuming the empirical relation between the mean, median, and mode holds, what is the median of the new data set?

Ans A). 60 B). 50 C). 55 D). 45

Correct Answer: C

Q.14 What will be the difference between the compound interest (when interest is compounded annually) and the simple interest if ₹52,400 is deposited at 8% rate of interest per annum for 2 years?

Ans A). ₹330.86 B). ₹329.25 C). ₹335.36 D). ₹344.55

Correct Answer: C

Q.15 Which of the following values of *x* satisfies the equation $\frac{(128 \div 16) \times x - (7 \times 2)}{7^2 - (8 \times 6) + x^2} = 1$?

Ans A). 0 B). 2 C). 1 D). 3

Correct Answer: D

Q.16 A shop runs a "Buy 4, Get b Free" scheme and also gives a trade discount of 20%. If the overall effective discount to the customer is 46 2/3%, what is the value of b?

Ans A). 1 B). 4 C). 3 D). 2

Correct Answer: D

Q.17 The sides of similar triangles ΔABC and ΔPQR are in the ratio 6 : 5. If area of ΔABC is equal to 72 cm^2, what is the area of ΔPQR?

Ans A). 45 cm^2 B). 65 cm^2 C). 60 cm^2 D). 50 cm^2

Correct Answer: D

Q.18 A smart water tank system has two automated pipes. Pipe U1 fills the tank in 5 hours and pipe V1 can drain the tank in 10 hours. Pipe U1 is operated alone for 2 hours, after which V1 is also activated. How much of the tank will be filled after total 5 hours?

Ans A). $\frac{7}{10}$ B). $\frac{3}{5}$ C). $\frac{2}{5}$ D). $\frac{1}{2}$

Correct Answer: A

Q.19 Two people of equal efficiency working together can complete a task in 6 hours. How long would it take one person alone to complete the same task?

Ans A). 6 hours B). 9 hours C). 3 hours D). 12 hours

Correct Answer: D

Q.20 The ratio of the areas of two similar triangles is 81 : 121. The ratio of their corresponding heights is:

Ans A). 18 : 23 B). 3 : 2 C). 9 : 11 D). 81 : 121

Correct Answer: C

Q.21 Five years ago from now, Akash was 5 times as old as Prakash. After 5 years from now, he will be 3 times as old as Prakash will then be. The present age of Akash (in years) is:

Ans A). 55 B). 60 C). 56 D). 51

Correct Answer: A

Q.22 Nitin sells two articles for ₹6,314 each with no profit, no loss in the entire transaction. If one article was sold at a gain of 75%, then the other article is sold at a loss of:

Ans A). 29% B). 27% C). 32% D). 30%

Correct Answer: D

Q.23 A car travels from city A to city B covering a total distance of 360 km under the following conditions, first 100 km covered at a speed of 50 km/h, next 80 km is covered at a speed of 40 km/h, then the car stops for 30 minutes. After that it covers 90 km distance at a speed of 60 km/h and the remaining distance it covers at a speed of 75 km/h. What is the average speed of the car for the entire journey including stoppage time?

Ans A). 50 km/h B). 58 km/h C). 56 km/h D). 53 km/h

Correct Answer: A

Q.24 The mean of 12 numbers is 18. If one number 30 is replaced by 6, find the new mean.

Ans A). 18 B). 16 C). 17 D). 19

Correct Answer: B

Q.25 The average sale of cars by a dealer per day in the month of March, other than on Saturdays and Sundays, is 184. The average sale of cars per day on Sundays is 200. 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 193?

Ans A). 227 B). 224 C). 222 D). 223

Correct Answer: A

Section : **General Intelligence and Reasoning**

Q.26 Seven people, P, Q, R, S, T, U, and V, are sitting in a row facing north. Only one person sits to the left of P. S sits to the immediate right of P. Only two people sit between S and Q. R sits to the immediate left of V. Only Q sits between U and V. Who sits at the extreme right end of the row?

Ans A). V B). R C). Q D). U

Correct Answer: D

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 vowel?

Ans A). None B). Three C). One D). Two

Correct Answer: D

Q.28 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 one out is not based on the number of consonants/vowels or their position in the letter cluster)

Ans A). SU-XF B). AC-FN C). IL – OW D). NP-SA

Correct Answer: C

Q.29 Sunita is the wife of Mohan. Mohan is the son of Rajesh. Rajesh is the father of Karan. Karan is the brother of Neha. How is Sunita related to Neha?

Ans A). Brother's wife B). Daughter C). Brother's daughter D). Wife

Correct Answer: A

Q.30 **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 # @ 2 ? 4 ! 9 8 & 7

Code O R U X Z C E H K N

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?
7 @ ? 9 2

Ans A). N R X E © B). © R X E © C). N R E X U D). © R E X U

Correct Answer: B

Q.31 **In a certain code language, 'day bush week' is coded as ' xb yz pp' and 'angle poem day' is coded as 'yz lg el'. How is 'day' coded in the given language?**

Ans A). yz B). lg C). xb D). pp

Correct Answer: A

Q.32 **XTPS is related to OKGJ in a certain way based on the English alphabetical order. In the same way, EAWZ is related to VRNQ. To which of the following is YUQT related, following the same logic?**

Ans A). PLGK B). PMGJ C). PKGK D). PLHK

Correct Answer: D

Q.33 **Each vowel in the word SHIFTER 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 letters appear twice in the group of letters thus formed?**

Ans A). 0 B). 3 C). 2 D). 1

Correct Answer: A

Q.34 **AEGJ is related to FJLO in a certain way based on the English alphabetical order. In the same way, MQSV is related to RVXA. To which of the following is OSUX related, following the same logic?**

Ans A). TXZC B). TYYF C). TXYC D). TWYC

Correct Answer: A

Q.35 **What should come in place of the '?' in the given series?**

2 10 43 176 709 ?

Ans A). 2842 B). 4202 C). 2990 D). 4112

Correct Answer: A

Q.36 **What should come in place of the question mark (?) in the given series?**

90 106 74 122 ? 138

Ans A). 60 B). 57 C). 56 D). 58

Correct Answer: D

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.**

Question:
Five people – Abeer, Charita, Dhruv, Eshika and Faris – are sitting in a straight line facing north. Who is sitting at the extreme left end?

Statements:
(I) Abeer sits immediately to the left of Charita, and Dhruv sits immediately to the left of Eshika.
(II) Faris sits immediately to the right of Eshika.

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

Correct Answer: A

Q.38 What will come in the place of '?' in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?
18 ÷ 72 × 9 + 72 – 16 = ?

Ans A). 80 B). 81 C). 88 D). 83

Correct Answer: C

Q.39 The position(s) of how many letters will remain unchanged if each letter in the word BRINJAL is arranged in the English alphabetical order?

Ans A). 3 B). 1 C). 4 D). 2

Correct Answer: B

Q.40 26 is related to 130 following a certain logic. Following the same logic, 32 is related to 160. To which of the following is 62 related, following the same logic?
(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)

Ans A). 330 B). 340 C). 320 D). 310

Correct Answer: D

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 letter-cluster pair DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster pair.)

Ans A). MK−LJ B). JH−HI C). HF−GE D). NL−MK

Correct Answer: B

Q.42 A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. E lives on an even numbered floor but not 4. The sum of floors on which E and F live is 9. Only 3 people live between A and D. The sum of floors on which C and D live is 3. How many people live between D and E?

Ans A). 2 B). 4 C). 3 D). 1

Correct Answer: B

Q.43 Refer to the following letter series and answer the question. Counting to be done from left to right only.
(Left) X H M F T C A Z F V N J R D T V W I O K U Y H (Right)
How many such consonants are there each of which is immediately preceded by a vowel and also immediately followed by a vowel?

Ans A). One B). Three C). None D). Two

Correct Answer: A

Q.44 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?

846 D 651 C 297 B 54 A 486=?

Ans A). 162 B). 118 C). 228 D). 126

Correct Answer: C

Q.45 Seven boxes M, N, O, P, Q, R and S are kept one over the other but not necessarily in the same order.
Only R is kept above M. Only two boxes are kept between M and P. Only N is kept below S. O is not kept immediately above P.
How many boxes are kept between Q and N?

Ans A). Four B). Three C). One D). Two

Correct Answer: B

Q.46 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

BUN VOH PIB JCV ?

Ans A). DPW B). DEW C). DWP D). DWE

Correct Answer: C

Q.47 **Nitin starts from Point A and drives 12 km towards south. He then takes a left turn, drives 15 km, turns left and drives 14 km. He then takes a left turn and drives 19 km. He takes a final left turn, drives 2 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90-degree turns only unless specified.)**

Ans A). 6 km to the west B). 4 km to the west C). 6 km to the east D). 4 km to the east

Correct Answer: D

Q.48 **If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 7421836, what will be the difference of the digits which are second from the left and second from the right in the new number thus formed?**

Ans A). 0 B). 2 C). 1 D). 3

Correct Answer: B

Q.49 **In a certain code language, 'JARS' is coded as '4763' and 'ARMS' is coded as '3657'. What is the code for 'M' in the given code language?**

Ans A). 4 B). 3 C). 5 D). 7

Correct Answer: C

Q.50 **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. Y is taller than K.
II. G is taller than Y. W is only shorter than one pole.

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

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

C). Both statements I and II together are NOT sufficient to answer the question

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

Correct Answer: C

Section : **General Science**

Q.51 **Which of the following is the best example of a heterogeneous mixture?**

Ans A). Salt water B). Vinegar C). Sand and iron filings D). Air

Correct Answer: C

Q.52 **A chemist wants to separate a mixture of sand and muddy water. She uses a filter paper and a funnel to accomplish this. Based on the properties of suspensions, which statement is correct why this method is effective?**

Ans A). Suspensions cannot be separated by filtration and require evaporation.

B). The particles in a suspension dissolve completely in the water.

C). The particles in a suspension are large enough to be trapped by filter paper. D). All mixtures can be separated using only a magnet.

Correct Answer: C

Q.53 **An object is placed 10 cm from a diverging lens with a focal length of 15 cm. What is the position of the image formed?**

Ans A). 30 cm from the lens on the other side B). 8.6 cm from the lens on the other side C). 15 cm from the lens on the other side

D). 6 cm from the lens on the same side as the object

Correct Answer: D

Q.54 **What is the main function of the pollen tube after pollination?**

Ans A). To protect the flower from insects B). To develop into the fruit wall C). To carry the male gametes to the ovule

D). To produce nectar for pollinators

Correct Answer: C

Q.55 **Which type of blood vessel is primarily responsible for exchanging nutrients and waste between blood and tissues?**

Ans A). Lymphatic vessels B). Veins C). Capillaries D). Arteries

Correct Answer: C

Q.56 **Which carbon compound is least likely to undergo an addition reaction?**

Ans A). Pentene B). Pentane C). Pentadiene D). Pentyne

Correct Answer: B

Q.57 **A city plans to build a landfill which is near a river and farmland to manage growing waste. Which strategy best protects the ecosystem while supporting urban development?**

Ans A). Build the landfill with protective liners and fund community recycling programs.
B). Build incinerators near the river to reduce landfill waste. C). Relocate the landfill to a distant rural area without extra measures.
D). Dispose city waste directly into the river and farmland as a last resort.

Correct Answer: A

Q.58 **Which strategy will promote maximum vertical growth of bean plants in a hydroponic system with light coming from one side?**

Ans A). Add extra nutrients to accelerate overall growth B). Use only artificial wind to support stem strength
C). Keep plants stationary under the single light D). Rotate the plants regularly for even light exposure

Correct Answer: D

Q.59 **In the reaction where copper(II) oxide reacts with hydrogen gas to form copper and water, which substance undergoes reduction?**

Ans A). Hydrogen B). Water C). Copper(II) oxide D). Copper

Correct Answer: C

Q.60 **If an atom of magnesium loses a proton, what happens to its atomic number and identity?**

Ans A). The atomic number increases by one and it becomes an isotope B). The atomic number remains unchanged but it becomes an ion
C). The atomic number decreases by one and it becomes a new element D). The atomic number increases by one but it stays magnesium

Correct Answer: C

Q.61 **Which property is most commonly associated with ionic compounds?**

Ans A). Poor electrical conductivity in molten state B). Soft and brittle in solid state C). High melting and boiling points
D). Low solubility in water

Correct Answer: C

Q.62 **In a classroom experiment, a student tightly holds the prongs of a tuning fork after striking it and listens carefully. No sound is heard. Which explanation best fits this observation?**

Ans A). The surrounding air blocks the sound B). It was struck too lightly to produce sound C). The tuning fork is made of metal
D). The vibrations are absorbed by the hand

Correct Answer: D

Q.63 **Which method is commonly used to separate a mixture of two miscible liquids with different boiling points?**

Ans A). Chromatography B). Filtration C). Sedimentation D). Distillation

Correct Answer: D

Q.64 **Which of the following pairs of articles does NOT represent nonbiodegradable substances?**

Ans A). Polythene bag and synthetic fertiliser chemical B). Plastic jar and polythene C). Wooden bottle and wooden plate
D). Wrapper and plastic bottle

Correct Answer: C

Q.65 **What is the main purpose of anodising aluminium during its surface treatment process?**

Ans A). To increase electrical conductivity of aluminium B). To convert aluminium into an alloy
C). To remove oxide layer completely from surface D). To form thicker oxide layer preventing corrosion

Correct Answer: D

Q.66 **A student records the total distance covered as 200 meters and the displacement as 120 meters in 50 seconds during a straight-line walk. Which statement best characterizes the relationship between average speed and average velocity in this situation?**

Ans A). Average velocity is greater than average speed as displacement is less than distance
B). Average speed equals average velocity since both are calculated over the same time
C). Average speed is greater than average velocity because total distance exceeds displacement
D). Average speed is less than average velocity because displacement is less than distance

Correct Answer: C

Q.67 **A student observes two invertebrates—one has a muscular foot, while the other has a chitinous exoskeleton. To which phyla do these organisms belong?**

Ans A). Echinodermata and Mollusca B). Annelida and Echinodermata C). Annelida and Arthropoda D). Mollusca and Arthropoda

Correct Answer: D

Q.68 How do plants help maintain the carbon cycle by absorbing carbon dioxide from the atmosphere?

Ans A). Plants releases carbon dioxide unchanged. B). Plants convert carbon into sugar molecules.
C). Plants convert carbon dioxide into urea. D). Plants store carbon dioxide as gas in the cells.

Correct Answer: B

Q.69 For an object moving with uniform retardation, the velocity–time graph is _____.

Ans A). A straight line parallel to the time axis B). A curved line C). A straight line sloping downward D). A straight line sloping upward

Correct Answer: C

Q.70 Which process results in the formation of a molecule of a compound?

Ans A). Separation of atoms from a molecule B). Physical mixing of different atoms C). Chemical bonding between atoms of different elements
D). Chemical bonding between atoms of the same element

Correct Answer: D

Q.71 Which of the following is a balanced chemical equation for the reaction of sodium hydrogencarbonate with hydrochloric acid?

Ans A). $NaHCO_3 + HCl \rightarrow NaCl + HCl + CO_2$ B). $NaHCO_3 + HCl \rightarrow NaCl + H_2O + CO$
C). $NaHCO_3 + H_2SO_4 \rightarrow NaSO_4 + H_2O$ D). $NaHCO_3 + HCl \rightarrow NaCl + H_2O + CO_2$

Correct Answer: D

Q.72 Which of the following methods is used to prevent unwanted pregnancies in human beings?

Ans A). Use of contraceptives B). Vaccination C). Regular exercise D). Good nutrition

Correct Answer: A

Q.73 Which statement accurately compares the carbon content of the oceans to that of the atmosphere?

Ans A). The oceans act as a much larger reservoir of carbon than the atmosphere.
B). Oceans store only a minor percentage out of total quantity of global carbon.
C). The atmosphere and oceans store equal amounts of carbon. D). The atmosphere is the largest carbon reservoir than the oceans on Earth.

Correct Answer: A

Q.74 During a 60-minute walk, a hiker moves 2 km north, then 2 km east, and finally 2 km south. Evaluating the hiker's average velocity compared to average speed for the entire walk, which observation is most accurate?

Ans A). The average velocity is greater than the average speed because the motion is in straight lines.
B). The average velocity is less than the average speed due to the difference between displacement and total distance.
C). The average velocity equals the average speed since all segments are the same length.
D). The average velocity is zero because the hiker's path forms a triangle.

Correct Answer: B

Q.75 The kinetic energy of a body of mass 'X' kg is 200 J when it is moving with a velocity of 2 m/s. What will be the value of X?

Ans A). 400 kg B). 200 kg C). 50 kg D). 100 kg

Correct Answer: D

Q.76 A runner moves along a straight track. For the first 4 seconds, she runs at a constant velocity of 5 m/s. For the next 4 seconds, she decelerates uniformly and comes to rest. What is the total distance she covers in 8 seconds?

Ans A). 36 meters B). 28 meters C). 32 meters D). 30 meters

Correct Answer: D

Q.77 A ray of light passes through the center of curvature of a concave mirror after reflection. Which path will it follow and why?

Ans A). It will converge at the principal focus because rays passing through the center of curvature always meet at the focus after reflection.
B). It will diverge after reflection because the concave mirror causes rays to spread out from the surface.
C). It will emerge parallel to the principal axis because rays incident through the center of curvature become parallel after reflection.
D). It will retrace its path because it strikes the mirror at a right angle to the surface.

Correct Answer: D

Q.78 A current carrying conductor is placed in a magnetic field which is vertically downward. The conductor is oriented horizontally from west to east. The conductor experienced a force _____.

Ans A). towards the south. B). towards the north. C). towards the east. D). towards the west.

Correct Answer: B

Q.79 **Identify the statement(s) that accurately describe situations involving refraction.**
(i) The apparent depth of a swimming pool is less than its actual depth due to refraction.
(ii) We are able to see our image in a plane mirror due to refraction.
(iii) A pencil partially dipped in water appears bent at the water surface due to refraction.
(iv) Refraction makes a white wall appear colored at night.

Ans A). Both (ii) and (iv) B). Both (ii) and (iii) C). Both (i) and (iii) D). Both (i) and (iv)

Correct Answer: C

Q.80 **In a velocity-time graph for uniform motion, what does the area under the line represent?**

Ans A). Acceleration of the object B). Mass of object C). Force applied on the body D). Displacement of the object

Correct Answer: D

Q.81 **Which statement correctly describes an addition reaction?**

Ans A). One atom replaces another in a compound B). Two substances combine to form one product C). A compound splits into two products D). A solid forms from two solutions

Correct Answer: B

Q.82 **Soft sounds are produced when the amplitude of vibration is _____.**

Ans A). Small B). Large C). Zero D). Infinite

Correct Answer: A

Q.83 **Consider the following statements regarding Thomson's model of an atom.**

Statement I: The atom is a sphere of positive charge with electrons scattered inside it.
Statement II: Thomson's model could explain the presence of the nucleus in an atom.

Which of the following is TRUE?

Ans A). Only statement I is true B). Both statements I and II are true C). Only statement II is true D). Both statements I and II are false

Correct Answer: A

Q.84 **Which of the following cells regulates the cellular function of sieve tube cells?**

Ans A). Xylem vessels B). Companion cells C). Phloem fibre D). Phloem paranchyma

Correct Answer: B

Q.85 **A student observes an aquatic plant with an undifferentiated body exchanging substances directly with the surrounding water. To which plant group does it most likely belong?**

Ans A). Bryophyta B). Lichen C). Thallophyta D). Pteridophyta

Correct Answer: C

Q.86 **Which sequence describes effects of deforestation (biosphere) leading to consequent changes in the atmosphere, hydrosphere, and geosphere?**

Ans A). Deforestation makes fertile land barren and does not affect atmosphere and hydrosphere.
B). Deforestation only reduces animal habitats and reduces availability of food resources.
C). Deforestation increases carbon dioxide, causes soil erosion, and changes water flow patterns.
D). Deforestation causes soil erosion which only affects the land and leaves water and air unchanged.

Correct Answer: C

Q.87 **Which statement best describes the function of micelles formed by soaps in water?**

Ans A). Micelles change the pH of water to dissolve dirt. B). Micelles break down water molecules into ions for cleaning.
C). Micelles only form in the absence of water. D). Micelles trap oily dirt inside their non-polar centers and disperse in water.

Correct Answer: D

Q.88 **Which of these statements is a key idea of the cell theory?**

Ans A). Cells can only be seen with a microscope. B). Cells do not carry out life processes. C). Cells are only found in animals.
D). All living organisms are made up of cells.

Correct Answer: D

Q.89 **When is the work done by a constant force on an object zero?**

Ans A). When mass remains unchanged B). When force is applied continuously C). When there is no displacement
D). When speed is constant

Correct Answer: C

Q.90 **If a device operates at constant power, what happens to the total work done if the device runs for a longer duration?**

Ans A). The total work done increases with more time. B). The total work done decreases as time increases.
C). The total work done remains the same regardless of time. D). Work and time are unrelated at constant power.

Correct Answer: A

Section : **General Awareness**

Q.91 **According to the Union Budget of India 2026–27, which new fund has been proposed to strengthen the confidence of private developers during the infrastructure development and construction phase?**

Ans A). National Infrastructure Investment Fund B). Infrastructure Risk Guarantee Fund C). Public Infrastructure Support Fund
D). Infrastructure Development Finance Fund

Correct Answer: B

Q.92 **Under the Transgender Persons (Protection of Rights) Amendment Act, 2026, which of the following categories has been newly included?**

Ans A). Trans-woman B). Genderqueer C). Trans-man D). Eunuch

Correct Answer: D

Q.93 **The Indian Institute of Science (IISc) launched the Moonshot project in March 2026 with the objective of developing what?**

Ans A). Brain co-processors B). AI-powered humanoid robots C). Quantum communication satellites D). Reusable launch vehicles

Correct Answer: A

Q.94 **Which government initiative in 2025 established a unified emergency number (112) operational across all States and Union Territories, integrated with women's helplines to enhance safety and timely response for women in distress in Indian cities?**

Ans A). National Urban Emergency Transport Policy B). Pradhan Mantri Emergency Suraksha Abhiyan
C). Emergency Response Support System D). Safe Cities & Emergency Public Transit Scheme

Correct Answer: C

Q.95 **Under the Padma Awards 2026, Shatavadhani R. Ganesh was conferred the Padma Bhushan in the field of Art. He belonged to which state?**

Ans A). Kerala B). Andhra Pradesh C). Tamil Nadu D). Karnataka

Correct Answer: D

Q.96 **In July 2026, on which railway section did India's first hydrogen fuel cell-powered train begin operations?**

Ans A). Rohtak–Hisar section B). Ambala–Ludhiana section C). Jind–Sonipat section D). Delhi–Panipat section

Correct Answer: C

Q.97 **Which film won the Best Children's and Family Film at the 79th British Academy Film Awards (BAFTAs) in 2026?**

Ans A). Rohan Sharma's The Adventure B). Anil Kumar's Journey C). Meera Patel's Dreamland D). Lakshmipriya Devi's Boong

Correct Answer: D

Q.98 **According to the Provisional Estimates (PE) of Annual Gross Domestic Product (GDP) for the Financial Year (2025-26) and Quarterly Estimates of GDP for the Fourth Quarter (Q4, January-March) of FY 2025-26, what was the estimated real GDP growth rate of India for the Financial Year 2025–26, based on the new GDP series with the base year 2022–23?**

Ans A). 5.1% B). 4.2% C). 6.5% D). 7.7%

Correct Answer: D

Q.99 **In the Investment Friendliness Index released by NITI Aayog in July 2026, which state emerged as the highest-ranked among the Hilly and North-Eastern States?**

Ans A). Assam B). Sikkim C). Uttarakhand D). Himachal Pradesh

Correct Answer: C

Q.100 **Which key government body released the 'Strategic Roadmap for Making Ayurveda Global' in July 2026?**

Ans A). Ministry of External Affairs B). Ministry of Ayush C). Prime Minister's Office D). NITI Aayog

Correct Answer: D

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