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

सत्यमेव जयते

Test Date	06/10/2026
Test Time	9:00 AM - 10:30 AM
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 mean proportional between 16 and 12.25 is:**

Ans A). 14.5 B). 14.75 C). 13.5 D). 14

Correct Answer: D

Q.2 **In an exam, marks scored by 16 students of section A (out of 50) are 33, 41, 56, 51, 53, 46, 49, 41, 45, 56, 51, 49, 46, 41, 53, 33 and marks scored by 13 students of section B (out of 50) are 47, 54, 42, 50, 47, 39, 42, 52, 56, 49, 54, 39, 47. Calculate the difference between the mode of section B and section A.**

Ans A). 7 B). 10 C). 5 D). 6

Correct Answer: D

Q.3 **G and H started a business with investments of ₹7000 and ₹9000. After 4 months, G withdrew ₹2000 and H withdrew ₹3000. If the profit at the end of the year is ₹3800, how much does G receive?**

Ans A). ₹1678 B). ₹1700 C). ₹1980 D). ₹1900

Correct Answer: B

Q.4 **Nine years ago from now, Akash was 9 times as old as Prakash. After 9 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). 63 B). 64 C). 66 D). 62

Correct Answer: A

Q.5 **Three friends, Arjun, Kabir, and Neha, can paint a fence in 12 hours, 6 hours, and 4 hours, respectively. If they work together, how long will they take to paint the fence?**

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

Correct Answer: D

Q.6 Find the value of $\frac{2 + \tan^2\theta + \cot^2\theta}{\sec\theta \operatorname{cosec}\theta}$.

Ans A). sec θ + cosec θ B). sin θ cos θ C). sec θ cosec θ D). sin θ + cos θ

Correct Answer: C

Q.7 **The marked price of an item is ₹5,000. A shopkeeper offers two successive discounts of 10% and x% on the marked price. If the ratio of the marked price to the final selling price is 25 : 19, what is the value of x? (Rounded off to the nearest integer)**

Ans A). 14 B). 12 C). 18 D). 16

Correct Answer: D

Q.8 If a square has a side of (10x - 6) cm, then the area of the square (in cm^2) is:

Ans A). $100x^2 - 120x + 36$ B). $100x^2 - 120x - 36$ C). $100x^2 + 60x - 36$ D). $100x^2 + 60x + 36$

Correct Answer: A

Q.9 Seema goes to her office by scooter at a speed of $\frac{25}{3}$ m/s and reaches 0.1 hour earlier. If she goes at a speed of 24 km/hr, she reaches office 5 minutes late. The distance (in km) of her office is:

Ans A). 22 B). 20 C). 24 D). 26

Correct Answer: A

Q.10 If θ lies in the first quadrant and $\sec^2\theta + \cos^2\theta = 2$, then the value of $\frac{14\cos\theta}{5\cos^2\theta - 3\cos\theta + 5}$ is:

Ans A). 0 B). 2 C). 8 D). −1

Correct Answer: B

Q.11 In a rectangle, one diagonal is inclined to one of its sides at 35°. Find the measure of the acute angle between its two diagonals.

Ans A). 70° B). 35° C). 55° D). 63°

Correct Answer: A

Q.12 Two inlet pipes A and B can fill a cistern in 20 hours and 15 hours, respectively. A third pipe C, acting as an outlet, can empty the completely filled cistern in 30 hours. All three pipes are opened simultaneously in the empty cistern. After 4 hours, pipe B is closed. After a further 2 hours, pipe A is also closed, while pipe C continues to operate by itself until the cistern is emptied. Find the duration for which pipe C worked alone.

Ans A). 10 hours B). 11 hours C). 13 hours D). 12 hours

Correct Answer: B

Q.13 The cost price of an article increases by 10%, and the shopkeeper then sells it at a 15% profit on this increased cost price. If the original cost price was ₹400, what is the new selling price (in ₹)?

Ans A). 512 B). 482 C). 506 D). 498

Correct Answer: C

Q.14 A man has invested ₹57500 at a rate of 6% per annum simple interest for 4 years. Find the amount (in ₹) that he will receive after 4 years.

Ans A). 14800 B). 72300 C). 71300 D). 13800

Correct Answer: C

Q.15 Suppose C and D are centres of two circles of radii 16 cm and 9 cm respectively, and distance between the centres is 25 cm. Find the length of direct common tangent.

Ans A). 24 cm B). 26 cm C). 23 cm D). 25 cm

Correct Answer: A

Q.16 In a 1152 m circular race, Amit finishes one round in 36 seconds and Sumit finishes one round in 72 seconds. How many different meeting points are there on the circumference if they are running in a same direction?

Ans A). 8 B). 2 C). 11 D). 1

Correct Answer: D

Q.17 Ram purchased a watch for ₹2,850 and sold it at a profit of 5%. Find the selling price of the watch.

Ans A). ₹2,938.80 B). ₹2,992.50 C). ₹2,924.60 D). ₹2,982.70

Correct Answer: B

Q.18 A solid sphere is recast into 343 identical smaller spheres each of radius 1 cm. What is the radius of the original sphere?

Ans A). 9 cm B). 6 cm C). 8 cm D). 7 cm

Correct Answer: D

Q.19 The 7-digit number 5A931B6 is divisible by 3. Find the least possible value of (A + B).

Ans A). 0 B). 5 C). 2 D). 3

Correct Answer: A

Q.20 For a distribution, the empirical relation is, Mode = 3×Median − 2×Mean. If the Mean and Median satisfy, 20 ≤ Mean ≤ 25 and 20 ≤ Median ≤ 25, what is the possible range of the Mode?

Ans A). $10 \leq \text{Mode} \leq 30$ B). $20 \leq \text{Mode} \leq 30$ C). $25 \leq \text{Mode} \leq 40$ D). $10 \leq \text{Mode} \leq 35$

Correct Answer: D

Q.21 How many numbers from 1 to 30 are coprime with 30?

Ans A). 10 B). 6 C). 8 D). 12

Correct Answer: C

Q.22 **If 20% of k is 10 less than 3000% of 10, then k is:**

Ans A). 1410 B). 1490 C). 1450 D). 1430

Correct Answer: C

Q.23 **A sum is invested at 20% per annum, compounded half-yearly, for 2 years. If the interest earned during the last half-year alone is ₹5,324, what was the principal amount?**

Ans A). ₹45,000 B). ₹55,000 C). ₹50,000 D). ₹40,000

Correct Answer: D

Q.24 **The amount on a sum of ₹6300 at 20% per annum compound interest, compounded annually, in 2 years will be:**

Ans A). ₹9072 B). ₹8769 C). ₹8564 D). ₹8675

Correct Answer: A

Q.25 **The average sale of cars by a dealer per day in the month of March, other than on Saturdays and Sundays, is 125. The average sale of cars per day on Sundays is 100. 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 175?**

Ans A). 451 B). 457 C). 455 D). 456

Correct Answer: C

Section : **General Intelligence and Reasoning**

Q.26 **Seven people, C, F, G, M, N, Q and X, are sitting in a row, facing north. No one sits to the left of F. Only four people sit between F and C. Only three people sit to the right of N. X sits to the immediate left of M. G is not an immediate neighbour of N. How many people sit to the right of N?**

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

Correct Answer: C

Q.27 **What should come in place of ? in the given series based on the English alphabetical order?**
BDF, EGI, HJL, KMO, ?

Ans A). NQS B). MQO C). NPR D). OPS

Correct Answer: C

Q.28 **18 is related to 112 following a certain logic. Following the same logic, 13 is related to 82. To which of the following is 16 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). 74 B). 125 C). 100 D). 172

Correct Answer: C

Q.29 **What should come in place of '?' in the given series?**

15 24 31 40 47 56 ?

Ans A). 75 B). 65 C). 63 D). 73

Correct Answer: C

Q.30 **Manoj starts from Point A and drives 14 km towards East. He then takes a right turn, drives 12 km, turns right and drives 17 km. He then takes a right turn and drives 21 km. He takes a final right turn, drives 3 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90-degree turns only unless specified.)**

Ans A). 10 km to the South B). 10 km to the North C). 9 km to the South D). 9 km to the North

Correct Answer: C

Q.31 **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). BZV B). WVQ C). ZXT D). NLH

Correct Answer: B

Q.32 **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 is immediately preceded by a symbol and immediately followed by a consonant?

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

Correct Answer: D

Q.33 In a certain code language, ‘drum soup tap’ is coded as ' yw dd xx' and ‘soup chin visit’ is coded as ‘yg xy dd’. How is ‘soup’ coded in the given language?

Ans A). yw B). yg C). dd D). xx

Correct Answer: C

Q.34 Seven boxes M, N, O, P, S, T and U are kept one over the other but not necessarily in the same order.
Only two boxes are kept below U. Only one box is kept above M. Only one box is kept between M and N. S is kept immediately above P. T is kept at some place below O.
How many boxes are kept between O and S?

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

Correct Answer: A

Q.35 If 1 is added to each even digit and 1 is subtracted from each odd digit in the number 9236478, then which of the following digits will be third from the left in the new number thus formed?

Ans A). 7 B). 3 C). 8 D). 2

Correct Answer: D

Q.36 Each letter in the word KNIFERS is arranged in alphabetical order. How many letters are there in the English alphabetical order between the letter which is second from the left and the one which is third from the right in the new letter cluster thus formed?

Ans A). 7 B). 8 C). 6 D). 10

Correct Answer: A

Q.37 What will come in the place of ‘?’ in the following equation if ‘+’ and ‘−‘ are interchanged and ‘×’ and ‘÷’ are interchanged?

2 ÷ 3 + 15 × 5 − 19 = ?

Ans A). 25 B). 22 C). 23 D). 27

Correct Answer: B

Q.38 Seven boxes, A, B, C, D, E, F and G, are kept one over the other but not necessarily in the same order. Only three boxes are kept below F. Only two boxes are kept between F and D. Only A is kept above B. E is kept at some place below G and at some place above C. How many boxes are kept above E?

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

Correct Answer: B

Q.39 If ‘A’ stands for ‘÷’ , ‘B’ stands for ‘×’, ‘C’ stands for ‘+’ and ‘D’ stands for ‘-‘ , what will come in place of question mark ‘?’ in the following equation?
14 B 2 D 10 A 5 C 12 = ?

Ans A). 36 B). 39 C). 38 D). 40

Correct Answer: C

Q.40 If you arrange the letters in the word GARDEN in reverse alphabetical order, how many letters occupy the same positions as in the original word?

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

Correct Answer: C

Q.41 What should come in place of ‘?’ in the given series?

3 14 59 240 965 ?

Ans A). 3866 B). 3444 C). 3976 D). 4110

Correct Answer: A

Q.42 In a certain code language, ‘BOTH’ is coded as ‘9754’ and ‘OATH’ is coded as ‘7294’.What is the code for ‘A’ in the given code language?

Ans A). 5 B). 9 C). 4 D). 2

Correct Answer: D

Q.43 **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 friends – Gautam, Hiral, Ivaan, Jivika and Keshav – are of different ages. Who is the youngest?

Statements:
(I) Gautam is older than Hiral but younger than Jivika.
(II) Hiral is older than Ivaan, and Keshav is older than Gautam.

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 (and not statement I alone or statement II alone) are sufficient to answer the question

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

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

Correct Answer: B

Q.44 **Select the pair which follows the same pattern as that followed by the two pairs given below. Both pairs follow the same pattern.**
LOR−QTW
ORU−TWZ

Ans A). NQT−SVY B). NPR−SVY C). NQT−RVX D). NPR−RUX

Correct Answer: A

Q.45 **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	$	5	@	8	+	3	%	1	^	6
Code	F	I	L	O	R	U	X	Z	C	E

Conditions –
(i) If the first element is a number and the last a symbol, 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 A.
(iii) If both second and third elements are odd numbers, 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?
5 % ^ 6 8

Ans A). A X C E A B). O X C E I C). I X X E O D). A X C A E

Correct Answer: A

Q.46 **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 only two poles. G is taller than Y but shorter than K.
II. W is taller than O.

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

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

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

Correct Answer: B

Q.47 **IEDZ is related to VRQM in a certain way based on the English alphabetical order. In the same way, ZVUQ is related to MIHD. To which of the following is OKJF related, following the same logic?**

Ans A). BXWS B). BXVS C). BYVC D). BWVS

Correct Answer: A

Q.48 **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). MN - QR B). ST - WX C). KL - OP D). WX - YZ

Correct Answer: D

Q.49 **Refer to the following letter series and answer the question**
(Left) V W I O K U Y H B R F V D X W Z L O Y N K H V N (Right)
How many such vowels are there each of which is immediately preceded by a vowel and also immediately followed by a consonant?

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

Correct Answer: C

Q.50 **C is the father of T. T is the brother of N. M is the father of X. X is the son of N. How is M related to C?**

Ans A). Daughter's husband B). Sister's husband C). Wife's brother D). Husband

Correct Answer: A

Section : **General Science**

Q.51 Two resistors with resistance of 2 Ω and 8 Ω are connected in parallel. What is the equivalent resistance (R_{eq}) of the combination?

Ans A). 5.0 Ω B). 10.0 Ω C). 16.0 Ω D). 1.6 Ω

Correct Answer: D

Q.52 **A patient has damaged the tissues that support and bind the body, but his muscles and nerves are not affected. Which type of tissue needs to be repaired to restore structural support?**

Ans A). Connective tissue B). Nervous tissue C). Muscle tissue D). Epithelial tissue

Correct Answer: A

Q.53 **A speed - time graph for a car shows a straight line rising from 0 m/s at 0 s to 20 m/s at 5 s, then staying constant at 20 m/s until 10 s, and finally dropping to 0 m/s at 15 s. What is the total distance travelled by the car?**

Ans A). 100 m B). 150 m C). 75 m D). 200 m

Correct Answer: D

Q.54 **Which molecule contains a triple covalent bond?**

Ans A). Carbon dioxide (CO2) B). Nitrogen gas (N2) C). Oxygen gas (O2) D). Water (H2O)

Correct Answer: B

Q.55 **Which hormone is mainly responsible for regulating blood sugar levels in humans?**

Ans A). Adrenaline B). Growth hormone C). Thyroxine D). Insulin

Correct Answer: D

Q.56 **How do bases affect the concentration of ions in an aqueous solution?**

Ans A). They decrease hydroxide ion concentration B). They increase hydroxide ion concentration C). They decrease sodium ion concentration D). They increase hydronium ion concentration

Correct Answer: B

Q.57 **A student claims that if a sound wave has a time period of 0.01 s, its frequency must be lower than that of a wave with a time period of 0.005 s. Is this statement correct based on the relation between frequency and time period?**

Ans A). No, there is no relation between frequency and time period B). Yes, because frequency decreases as time period increases C). No, frequency remains the same D). No, because frequency increases as time period increases

Correct Answer: B

Q.58 **Which of the following conditions would prevent seed formation in a flowering plant even after pollination has occurred?**

Ans A). Lack of chlorophyll production in leaf cell. B). Absence of pigment formation in petals. C). Failure of gamete fusion during fertilisation. D). Excessive production of nectar by the flower.

Correct Answer: C

Q.59 **Which of the following observations best confirms that carbon dioxide is produced when hydrochloric acid reacts with calcium carbonate?**

Ans A). A colorless gas is released rapidly B). A rise in temperature is felt during reaction C). Bubbling of gas is observed in solution D). A gas that turns limewater milky is released

Correct Answer: D

Q.60 **A new isotope has 20 protons, 22 neutrons, and 20 electrons. How does its mass number affect its chemical behavior compared to other isotopes of the same element?**

Ans A). The mass number does not affect chemical behavior because chemical properties depend mainly on the number of electrons.
B). A higher mass number always makes the isotope more reactive than others of the same element.
C). A different mass number changes the arrangement of electrons, altering chemical behavior.
D). The mass number determines the number of electrons, so isotopes behave differently chemically.

Correct Answer: A

Q.61 Which of the following statements best describes the Law of Conservation of Mass?

Ans A). The mass of substances always increases during a chemical reaction.
B). The mass of substances always decreases during a chemical reaction.
C). The total mass of substances remains unchanged during a chemical reaction.
D). The mass of substances depends on the temperature during a chemical reaction.

Correct Answer: C

Q.62 How does the rate of cooling on mountain slopes influence the formation of local winds at night?

Ans A). Rapid cooling on slopes creates dense air that flows into the valley B). Rapid cooling causes air to move upward from the valley
C). Slow cooling on slopes keeps air stationary over the mountain D). Slow cooling causes warm air to rise up the mountain slopes

Correct Answer: A

Q.63 A plant grows mainly in water and has a body that is not differentiated into true roots, stems, and leaves. To which group does it belong?

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

Correct Answer: A

Q.64 Which part of the neuron receives signals from the other neuron?

Ans A). Cell Body B). Axon C). Dendrite D). Cyton

Correct Answer: C

Q.65 What is a key difference between aerobic and anaerobic respiration in animals?

Ans A). Anaerobic respiration occurs without oxygen B). Anaerobic respiration releases more energy
C). Aerobic respiration occurs without glucose D). Aerobic respiration forms lactic acid in animals

Correct Answer: A

Q.66 A swimmer pushes water backward with her hands during a stroke and moves forward. If the swimmer applies a force of 60 N on the water, what is the force exerted by the water on the swimmer?

Ans A). 30 N forward B). 60 N forward C). 120 N backward D). 60 N backward

Correct Answer: B

Q.67 A stretched rubber band possesses which form of energy due to its changed shape?

Ans A). Sound energy B). Gravitational potential energy C). Thermal energy D). Elastic potential energy

Correct Answer: D

Q.68 Which method is commonly used to separate a mixture of two miscible liquids with different boiling points?

Ans A). Decantation B). Magnetic separation C). Filtration D). Fractional distillation

Correct Answer: D

Q.69 Which allotrope of carbon conducts electricity due to its structure?

Ans A). Graphite B). Charcoal C). Fullerene D). Diamond

Correct Answer: A

Q.70 A cyclist starts from rest and pedals with constant force, causing her velocity to increase at a steady rate. After 5 seconds, which feature best describes the corresponding velocity-time graph for this motion?

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

Correct Answer: B

Q.71 Which of the following changes is observed when adding a neutron to the nucleus of an atom?

Ans A). Adding a neutron increases the mass number but not the atomic number.
B). Adding a neutron changes the atom into a different element. C). Adding a neutron increases the atomic number but not the mass number.
D). Adding a neutron changes the atom's charge.

Correct Answer: A

Q.72 A concave mirror forms a real image of an object which is placed at a distance of 30 cm from the mirror. The center of curvature of the mirror is at 40 cm from the pole. Where will the image be formed?

Ans A). + 60 cm B). - 60 cm C). - 12 cm D). + 12 cm

Correct Answer: B

Q.73 Which situation involves an increase in potential energy?

Ans A). Placing a book in water B). Dropping a book to the floor C). Sliding a book across a table D). Lifting a book to a higher shelf

Correct Answer: D

Q.74 Which of the following is the main function of the vas deferens in the male reproductive system?

Ans A). Produces sperm B). Provides nutrients to sperm C). Secretes testosterone D). Transports sperms

Correct Answer: D

Q.75 Which process in the oxygen cycle directly adds oxygen to the atmosphere?

Ans A). Decomposition B). Photosynthesis C). Respiration D). Combustion

Correct Answer: B

Q.76 What would happen if washing soda is left open in a humid environment?

Ans A). Washing soda would remain unchanged in the air. B). Washing soda would release a pungent gas.

C). Washing soda would absorb moisture and become a sticky mass. D). Washing soda would turn into a fine dry powder.

Correct Answer: C

Q.77 Which natural phenomenon demonstrates the dispersion of sunlight into its component colours, similar to the effect produced by a glass prism?

Ans A). Twinkling of stars B). Halo C). Rainbow D). Mirage

Correct Answer: C

Q.78 A block P is placed on a larger block Q, which is initially at rest on a smooth horizontal surface. Block Q is suddenly pulled horizontally, causing P to slip backward relative to Q. Which of the following statements best explains this observation?

Ans A). Block P experiences a backward force that pushes it away from block Q.

B). Block P tends to remain at rest due to inertia while block Q moves forward.

C). Block P gains additional inertia because block Q accelerates forward.

D). Block P slides backward because gravity acts opposite to the motion.

Correct Answer: B

Q.79 A train starts from rest and attains a velocity of 40 m/s in 10 s with uniform acceleration. What distance does it cover in this time?

Ans A). 250 m B). 100 m C). 200 m D). 400 m

Correct Answer: C

Q.80 A biologist discovers a vertebrate that has gills, fins, scales, and reproduces in water. To which vertebrate group does it belong?

Ans A). Amphibian B). Reptile C). Mammal D). Fish

Correct Answer: D

Q.81 A patient has a lung disorder that reduces oxygen uptake in the alveoli. What is the most likely effect on blood transport in the lungs?

Ans A). More carbon dioxide accumulates in pulmonary veins B). Less oxygen enters blood in pulmonary veins

C). Pulmonary artery will carry more oxygen than usual. D). Blood flows faster to increase oxygen uptake

Correct Answer: B

Q.82 Which quantity is directly proportional to the speed of sound, if the frequency is kept constant?

Ans A). Frequency B). Amplitude C). Wavelength D). Loudness

Correct Answer: C

Q.83 Planetary winds form distinct wind belts around Earth between equator and poles, primarily due to:

Ans A). Frequent volcanic eruptions altering air movement B). Changes in the daily temperature of cities mainly

C). Ocean currents without influence from the atmosphere. D). Uneven solar heating and the rotation of Earth

Correct Answer: D

Q.84 How does the concentration of a solution changes when more solute is added to a fixed amount of solvent?

Ans A). The concentration increases because more solute is present in the same volume of solvent.

B). The concentration remains the same because the solvent does not change.

C). The concentration decreases because the solvent amount stays constant.

D). The solution becomes less saturated as more solute is added.

Correct Answer: A

Q.85 Which of the following best describes the molecular structure of benzene?

Ans A). An unsystematic carbon chain showing irregular covalent bonding B). A linear hydrocarbon chain composed of three carbon atoms only

C). A hexagonal ring containing alternating carbon double bonds D). A saturated open-chain compound with four carbon atoms in a row

Correct Answer: C

Q.86 **A non-metal is found to be solid at room temperature, lustrous, and sublimes on heating. Which non-metal shows this unusual combination of physical properties?**

Ans A). Iodine B). Sulphur C). Carbon D). Phosphorus

Correct Answer: A

Q.87 **A cart of mass 20 kg starts from rest and accelerates uniformly along a straight horizontal track. If it reaches a speed of 6 m/s in 3 seconds, what is the work done on the cart during this time interval?**

Ans A). 720 J B). 180 J C). 120 J D). 360 J

Correct Answer: D

Q.88 **Which of these explanations best describes why 'Sn' is correct symbol of tin?**

Ans A). It is the same as the symbol for titanium B). It is randomly assigned to avoid repetition C). It is derived from the Latin name 'Stannum' D). It is chosen based on the English spelling of tin

Correct Answer: C

Q.89 **How does nutrition occur in Amoeba?**

Ans A). Engulfs food and forms a food vacuole B). Absorbs food through membrane pores C). Digests food outside the body D). Produces food by photosynthesis

Correct Answer: A

Q.90 **A teacher plays two musical notes: Note X has a frequency of 400 Hz, and Note Y has a frequency of 800 Hz. Which statement about their pitches is correct?**

Ans A). Note Y has a higher pitch than Note X B). Both notes have the same pitch C). Pitch is not related to frequency D). Note X has a higher pitch than Note Y

Correct Answer: A

Section : **General Awareness**

Q.91 **Which organization received an enhanced budget allocation of ₹29,100.25 crore in the Union Budget 2026–27 to strengthen defence research and innovation?**

Ans A). Hindustan Aeronautics Limited (HAL) B). Defence Research and Development Organisation (DRDO) C). Indian Space Research Organisation (ISRO) D). Bharat Electronics Limited (BEL)

Correct Answer: B

Q.92 **Which book, released in New Delhi in June 2026, systematically traces the historical evolution of Bhawaiya and presents a fresh perspective on its origin and development?**

Ans A). Sanskritir Ratna Bhandar: Bhaowaiyar Itibritto B). Songs of Bengal: Folk Traditions Unveiled C). Echoes of Assam: Musical Heritage D). Festivals and Folkways of India

Correct Answer: A

Q.93 **The 2025 National Health Policy update included a new initiative requiring all government schools to implement which of the following by December 2025?**

Ans A). Compulsory sports programs B). School Health & Wellness Program (SHWP) including regular health screening and health education C). Mandatory AI curriculum on health sciences D). Digital health cards linked with national health database

Correct Answer: B

Q.94 **The Jan Vishwas (Amendment of Provisions) Bill, 2026, passed in April 2026, primarily seeks to promote which of the following?**

Ans A). Ease of Doing Business and Ease of Living B). Financial Inclusion and Rural Development C). Ease of Tax Compliance and Digital Governance D). Judicial Reforms and Administrative Efficiency

Correct Answer: A

Q.95 **The Defence Research & Development Organisation (DRDO) successfully conducted the flight-test of the Pinaka Long Range Guided Rocket (LRGR) at the Integrated Test Range (ITR), Chandipur on 8 July 2026. The rocket was successfully tested for a user-defined minimum range of:**

Ans A). 20 km B). 300 km C). 250 km D). 60 km

Correct Answer: D

Q.96 **What is the official theme of International Women's Day 2026, observed on 8 March?**

Ans A). Gender Equality Through Digital Inclusion B). Women in Leadership: Breaking Barriers C). Invest in Women: Accelerate Progress D). Rights. Justice. Action. For ALL Women and Girls

Correct Answer: D

Q.97 **The Prime Minister of India undertook an official visit to Indonesia in 2026 to strengthen bilateral relations between the two countries. Who among the following was the President of Indonesia during the visit?**

Ans A). Anwar Ibrahim B). Prabowo Subianto C). Ferdinand Marcos Jr. D). Joko Widodo

Correct Answer: B

Q.98 **In 2026, when was the National Panchayati Raj Day observed in India?**

Ans A). 24 April B). 23 June C). 22 May D). 25 March

Correct Answer: A

Q.99 **In March 2026, which senior official was appointed as the Director General of the National Testing Agency (NTA) amid the body's focus on examination integrity?**

Ans A). Sanjay Jaju B). Nagaraju Maddirala C). Abhishek Singh D). Chanchal Kumar

Correct Answer: C

Q.100 **Which former WHO Chief Scientist was elected as a Fellow of the Royal Society in May 2026?**

Ans A). Gagandeep Kang B). Soumya Swaminathan C). Indira Hinduja D). Tessy Thomas

Correct Answer: B

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