



रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS
सी ई एन आर आर बी - ०२/२०२४ - CEN RRB - 02/2024



Test Date	26/12/2024
Test Time	12:45 PM - 2:15 PM
Subject	RRB Technicians 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 : RRB Technicians Grade III

Q.1 A pea plant climbs on other plants or fences with the help of:

- Ans ☒ 1. sepals
☒ 2. prickles
☒ 3. tendrils
☒ 4. roots

Q.2 A pair of parallel lines is intersected by a transversal such that $\angle 1$ and $\angle 2$ form a pair of interior angles on the same side of the transversal. If $m\angle 1 = 125^\circ$, what is the measure of $\angle 2$?

- Ans ☒ 1. 45°
☒ 2. 55°
☒ 3. 145°
☒ 4. 115°

Q.3 If the selling price of an almirah is doubled, then the profit is tripled. Find the initial profit percentage.

- Ans ☒ 1. 25%
☒ 2. 50%
☒ 3. 10%
☒ 4. 100%

Q.4 Pranit starts from Point A and drives 27 km towards West. He then takes a left turn, drives 17 km, turns left and drives 14 km. He then takes a left turn and drives 10 km. He takes a final right turn, drives 13 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 otherwise specified.)

- Ans ☒ 1. 7 km towards South
☒ 2. 7 km towards North
☒ 3. 5 km towards North
☒ 4. 5 km towards South

Q.5 A tank is filled by three pipes with uniform flow. The first two pipes operating simultaneously fill the tank in the same time during which the tank is filled by the third pipe alone. The second pipe fills the tank 5 hours faster than the first pipe and 4 hours slower than the third pipe. The time required by the first pipe is:

- Ans**
- ☒ 1. 30 hours
 - ☒ 2. 6 hours
 - ☒ 3. 15 hours
 - ☒ 4. 10 hours

Q.6 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some lakes are rivers.

Some rivers are ponds.

Conclusions:

(I) Some lakes are ponds.

(II) Some ponds are not rivers.

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

Q.7 Which of the following observable changes indicate that a chemical reaction has occurred?

- (a) Formation of gas
- (b) Formation of precipitates
- (c) Change in physical state
- (d) Colour change

- Ans**
- ☒ 1. All (a), (b), (c) and (d)
 - ☒ 2. Only (a) and (b)
 - ☒ 3. Only (a), (b) and (c)
 - ☒ 4. Only (c) and (d)

Q.8 In this question, a statement is followed by two courses of action, numbered I and II. You must assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the courses of action logically follow(s) for pursuing.

Statement:

The literacy rate in Country X is significantly lower than the global average due to a lack of access to quality education, especially in rural areas.

Courses of Action:

I. Construct more schools and educational facilities in rural areas of Country X to improve accessibility.

II. Develop a digital education platform to provide online learning resources to students in both urban and rural areas of the country.

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

Q.9 Which hormone regulates carbohydrate, protein and fat metabolism in the body and iodine is essential for the synthesis of it?

- Ans**
- ☐ 1. Adrenaline hormone
 - ☐ 2. Testosterone hormone
 - ☐ 3. Insulin hormone
 - ☒ 4. Thyroxin hormone

Q.10 Which of the following correctly describes the sum of kinetic energy and potential energy of an object?

- Ans**
- ☒ 1. Total mechanical energy
 - ☐ 2. Total thermal energy
 - ☐ 3. Total chemical energy
 - ☐ 4. Total electrical energy

Q.11 Which of the following is NOT a phase transition between the states of matter?

- Ans**
- ☐ 1. Sublimation
 - ☒ 2. Emission
 - ☐ 3. Vaporization
 - ☐ 4. Condensation

Q.12 Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and decide which conclusion(s) logically follow(s) from the given statements.

Statements:

Some tomatoes are apples.

All apples are mushrooms.

Conclusions:

(I) Some mushrooms are tomatoes

(II) All apples are tomatoes

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

Q.13 The magnetic field lines inside a current carrying solenoid are in the form of:

- Ans**
- ☐ 1. perpendicular straight lines
 - ☐ 2. concentric circles
 - ☒ 3. parallel straight lines
 - ☐ 4. curved lines

Q.14 Which of the following changes take place in plants by environmental triggers such as light, or gravity?

- Ans**
- ☐ 1. Change in the size of ovary and anther of the flower they produce
 - ☒ 2. Change in the directions that plant parts grow in
 - ☐ 3. Change in the shape of the leaves and fruits they provide
 - ☐ 4. Change in the branching pattern of their roots



Q.15 In July 2024, which organisation published the SDG India Index 2023-24 report?

- Ans**
- ✓ 1. NITI Aayog
 - ✗ 2. Tropical Forest Research Institute
 - ✗ 3. Greenpeace India
 - ✗ 4. The Energy and Resources Institute

Q.16 If 400 J of heat is produced each second in a $4\ \Omega$ resistance, then the current flowing across the resistor is:

- Ans**
- ✗ 1. 40 A
 - ✗ 2. 20 A
 - ✗ 3. 30 A
 - ✓ 4. 10 A

Q.17 If $\tan \theta + \cot \theta = 21$, then find the value of $6\tan^2 \theta + 6\cot^2 \theta$.

- Ans**
- ✗ 1. 2636
 - ✗ 2. 439
 - ✓ 3. 2634
 - ✗ 4. 441

Q.18 As the temperature increases, the kinetic energy of particles of matter _____.

- Ans**
- ✗ 1. remains the same
 - ✗ 2. becomes zero
 - ✗ 3. decreases
 - ✓ 4. increases

Q.19 An HR Company employs 4800 people, out of which 45% are males and 60% of the males are either 25 years of age or older. How many males employed in that HR Company are less than 25 years of age?

- Ans**
- ✓ 1. 864
 - ✗ 2. 1296
 - ✗ 3. 2640
 - ✗ 4. 2160

Q.20 In which of the following types of reaction is there an exchange of ions between the reactants?

- Ans**
- ✓ 1. Double displacement reaction
 - ✗ 2. Disproportion reaction
 - ✗ 3. Decomposition
 - ✗ 4. Addition reaction

Q.21	Select the set in which the numbers are related in the same way as are the numbers of the following sets. (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.) (23, 47, 85) (11, 20, 46)
Ans	✗ 1. (9, 16, 42) ✓ 2. (17, 6, 38) ✗ 3. (8, 7, 35) ✗ 4. (21, 15, 50)
Q.22	For a given colour and given pair of media, and light is going from rarer to denser media, the ratio of sine of the angle of incidence to the sine of angle of refraction is:
Ans	✗ 1. always zero ✓ 2. a constant greater than 1 ✗ 3. a constant less than 1 ✗ 4. always 1
Q.23	Sporangia blobs contain cells or spores that can eventually develop into new Rhizopus individuals. Such asexual reproduction is known as:
Ans	✗ 1. budding ✗ 2. vegetative propagation ✓ 3. spore formation ✗ 4. regeneration
Q.24	The sum of two positive numbers is 45 and their difference is 19. What are the numbers?
Ans	✗ 1. 25, 20 ✓ 2. 32, 13 ✗ 3. 31, 15 ✗ 4. 30, 15
Q.25	The Waqf (Amendment) Bill, 2024, introduced in the Indian Lok Sabha on 8 August 2024, aims to repeal which of the following Acts?
Ans	✗ 1. Mussalman Wakf Act, 1924 ✓ 2. Mussalman Wakf Act, 1923 ✗ 3. Mussalman Wakf Act, 1926 ✗ 4. Mussalman Wakf Act, 1925

Q.26 Study the given table and answer the question that follows.

The table depicts the number of cars sold by Dealer A and Dealer B in the years 2021 and 2022.

Dealers	Number of cars sold in	Number of cars sold in
	2021	2022
A	45	65
B	35	75

What is the absolute difference between the number of cars sold by Dealer A in 2021 and Dealer B in 2022?

Ans ☐ 1. 35

☐ 2. 40

☒ 3. 30

☐ 4. 20

Q.27 The rate of diffusion of liquids is higher than that of solids because:

Ans ☐ 1.

in the liquid state, particles do not move freely, but have greater space between each other

☒ 2. in the liquid state, particles move freely and have greater space between each other

☐ 3.

in the liquid state, particles only move freely and do not have greater space between each other

☐ 4.

in the liquid state, particles do not move freely and do not have greater space between each other

Q.28 In August 2024, which state became the first in India to provide a Unified Pension Scheme to its employees?

Ans ☐ 1. Odisha

☐ 2. Uttar Pradesh

☒ 3. Maharashtra

☐ 4. Himachal Pradesh

Q.29 Which of the following molecules is diatomic in nature?

Ans ☐ 1. Argon

☒ 2. Oxygen

☐ 3. Phosphorus

☐ 4. Helium

Q.30 A sum of money is to be distributed among four members A, B, C, and D in the ratio 4 : 7 : 9 : 3. If C gets ₹720 more than D, find A's share.

Ans ☐ 1. ₹160

☒ 2. ₹480

☐ 3. ₹240

☐ 4. ₹360

Q.31 Gitika borrowed a sum of ₹20,000 at a certain rate of simple interest for 2 years. If she paid an interest of ₹4,000 at the end of the period, then find the rate of interest per annum.

- Ans**
- ✓ 1. 10%
 - ✗ 2. 20%
 - ✗ 3. 15%
 - ✗ 4. 25%

Q.32 If 63 chocolates are to be divided between A and B in the ratio 4 : 5, then how many chocolates will B get?

- Ans**
- ✗ 1. 28
 - ✗ 2. 49
 - ✓ 3. 35
 - ✗ 4. 27

Q.33 The acceleration due to gravity on an object of mass m placed near the surface of the earth is:

- Ans**
- ✓ 1. independent of m
 - ✗ 2. linearly proportional to m
 - ✗ 3. linearly proportional to m^2
 - ✗ 4. inversely proportional to m

Q.34 Select the correct pairs from the following options.

- Ans**
- ✗ 1. (a) Resistance - volt/ampere
(b) Resistivity - ohm
 - ✗ 2. (a) Resistance - ampere metre
(b) Resistivity - volt/metre
 - ✗ 3. (a) Resistance - ohm
(b) Resistivity - volt/metre
 - ✓ 4. (a) Resistance - ohm
(b) Resistivity - ohm metre

Q.35 During meiosis, a cell divides to create _____ new cells.

- Ans**
- ✓ 1. Four
 - ✗ 2. Twenty-four
 - ✗ 3. Sixteen
 - ✗ 4. Eight

Q.36 The 25th edition of the Hornbill Festival was held in which state?

- Ans**
- ✗ 1. Manipur
 - ✗ 2. Assam
 - ✗ 3. Meghalaya
 - ✓ 4. Nagaland



Q.37 During the decomposition reaction of lead nitrate, the observed brown colour fumes are of which gas?

- Ans**
- ☐ 1. Hydrogen gas
 - ☐ 2. Nitrogen gas
 - ☒ 3. Nitrogen dioxide gas
 - ☐ 4. Ozone gas

Q.38 A woman is 4 times as old as her daughter. After 6 years, the woman's age will be three times that of her daughter. The sum of their present ages is:

- Ans**
- ☒ 1. 60 years
 - ☐ 2. 90 years
 - ☐ 3. 80 years
 - ☐ 4. 70 years

Q.39 Simplify the given expression.

$$(6 + 4) \div 2 - 2 + 6 \times 4$$

- Ans**
- ☒ 1. 27
 - ☐ 2. 44
 - ☐ 3. 21
 - ☐ 4. 36

Q.40 In a certain code language, 'green leaves rustling' is coded as 'sa ka ta', and 'leaves are fresh' is coded as 'ka da na'. What is the code for 'leaves' in the given code language?

- Ans**
- ☒ 1. ka
 - ☐ 2. na
 - ☐ 3. sa
 - ☐ 4. da

Q.41 Select the correct pair from the following options based on the refractive defects of vision.

- Ans**
- ☐ 1. (a) Presbyopia - near-sightedness
 - ☐ (b) Myopia - far-sightedness
 - ☒ 2. (a) Myopia - near-sightedness
 - ☐ (b) Hypermetropia - far-sightedness
 - ☐ 3. (a) Hypermetropia - near-sightedness
 - ☐ (b) Presbyopia - far-sightedness
 - ☐ 4. (a) Presbyopia - near-sightedness
 - ☐ (b) Hypermetropia - far-sightedness

Q.42 Which of the following is equal to the value of 1 Volt? (assume J-joule, C-coulomb, s-second)

- Ans**
- ☐ 1. 1 Cs
 - ☒ 2. 1 J/1C
 - ☐ 3. 1 Js
 - ☐ 4. 1 C/s



Q.43 The diameter of the reflecting surface of a spherical mirror is same as its:

- Ans**
- ☒ 1. focal length
 - ☒ 2. radius of curvature
 - ☒ 3. inverse of the power
 - ☒ 4. aperture

Q.44 If 'K' stands for '×', 'L' stands for '−', 'M' stands for '÷' and 'N' stands for '+', what will come in place of the question mark '?' in the following equation?

$$9 \text{ M } 3 \text{ K } 13 \text{ N } 3 \text{ L } 23 = ?$$

- Ans**
- ☒ 1. 19
 - ☒ 2. 24
 - ☒ 3. 14
 - ☒ 4. 29

Q.45 Identify the correct match of plant hormones with their functions.

- Ans**
- Gibberellins : Promote cell division
- ☒ 1. Cytokinins : Help in the growth of the stem
 - Abscisic acid : Inhibits growth
 - Gibberellins : Help in the growth of the stem
 - ☒ 2. Cytokinins : Inhibits growth
 - Abscisic acid : Promote cell division
 - Gibberellins : Help in the growth of the stem
 - ☒ 3. Cytokinins : Promote cell division
 - Abscisic acid : Inhibits growth
 - Gibberellins : Inhibits growth
 - ☒ 4. Cytokinins : Promote cell division
 - Abscisic acid : Help in the growth of the stem

Q.46 Spirogyra a multi-cellular organism simply breaks up into smaller pieces upon maturation and these pieces or fragments grow into new individuals. Such a mode of reproduction is known as:

- Ans**
- ☒ 1. budding
 - ☒ 2. regeneration
 - ☒ 3. binary fission
 - ☒ 4. fragmentation



Q.47 Which metal pair starts to melt at room temperature?

- Ans**
- ☐ 1. Iron and nickel
 - ☐ 2. Zinc and copper
 - ☐ 3. Copper and cobalt
 - ☒ 4. Gallium and cesium

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 pair does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- Ans**
- ☒ 1. OQ - NS
 - ☐ 2. GI - FJ
 - ☐ 3. TV - SW
 - ☐ 4. MO - LP

Q.49 What is the calculated molecular mass of oxygen?

- Ans**
- ☐ 1. 26
 - ☐ 2. 28
 - ☐ 3. 30
 - ☒ 4. 32

Q.50 Refer to the given series and answer the question that follows (all numbers are single-digit numbers only, and all counting is to be done from left to right).

(Left) 5 9 8 9 7 2 3 9 8 7 2 1 5 5 8 7 9 3 5 3 1 4 6 4 4 9 7 4 7 (Right)

How many such even digits are there, each of which is immediately preceded by a perfect square and immediately followed by an even digit? (Note: 1 will be considered as a perfect square.)

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

Q.51 The average of ten numbers is 7. If each number is multiplied by 12, then the average of the new set of numbers will be:

- Ans**
- ☐ 1. 82
 - ☒ 2. 84
 - ☐ 3. 7
 - ☐ 4. 19

Q.52 A, B, E, G, P, L and M are sitting around a circular table facing the centre. Only three people sit between P and E when counted from the left of P. Only three people sit between M and A when counted from the right of A. L sits to the immediate right of M. G is an immediate neighbour of A as well as E. Who sits to the second to the left of B?

- Ans**
- ☐ 1. P
 - ☒ 2. G
 - ☐ 3. A
 - ☐ 4. L

Q.53 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

691, 635, 714, 658, 737, ?

- Ans**
- ☒ 1. 701
 - ☒ 2. 628
 - ☒ 3. 696
 - ☒ 4. 681

Q.54 Tap S alone fills a cistern in 2 hours; while tap T alone fills the same cistern in 3 hours. A new tap U is attached to the bottom of the cistern which can empty the completely filled cistern in 6 hours. Sunny started all three taps together at 9 a.m. When will the tank be full?

- Ans**
- ☒ 1. 10:30 a.m.
 - ☒ 2. 12 p.m.
 - ☒ 3. 11:15 a.m.
 - ☒ 4. 9:45 a.m.

Q.55 The Indian National Trust for Art and Cultural Heritage (INTACH) Research Programme for 2025 is divided into how many categories?

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

Q.56 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

GFC, KJE, ONG, SRI, ?

- Ans**
- ☒ 1. WXM
 - ☒ 2. WXL
 - ☒ 3. WVK
 - ☒ 4. XYK

Q.57 Identify the best method to prepare washing soda from sodium bicarbonate.

- Ans**
- ☒ 1. By adding sodium bicarbonate to vinegar
 - ☒ 2. By freezing sodium bicarbonate
 - ☒ 3. By heating sodium bicarbonate
 - ☒ 4. By mixing sodium bicarbonate with water

Q.58 If u, g, and h are the initial velocity, gravitational acceleration, and height, respectively, of an object falling under gravitational force, then its final velocity v can be obtained from:

- Ans**
- ☒ 1. $v^2/u^2 = 2gh$
 - ☒ 2. $v^2u^2 = 2gh$
 - ☒ 3. $v^2 + u^2 = 2gh$
 - ☒ 4. $v^2 - u^2 = 2gh$

Q.59 A shopkeeper provides successive discounts of 7% and 2%, which are equivalent to a single discount of ____.

- Ans**
- ☒ 1. 9%
 - ☒ 2. 9.14%
 - ☒ 3. 8%
 - ☒ 4. 8.86%

Q.60 Rodney has invested ₹15,000 at a rate of 8% p.a. for 1 year on compound interest, compounded half-yearly. The amount received by him will be:

- Ans**
- ☒ 1. ₹16,224
 - ☒ 2. ₹15,840
 - ☒ 3. ₹16,354
 - ☒ 4. ₹15,960

Q.61 If $\frac{3}{7} = \frac{x}{-35}$, then x is:

- Ans**
- ☒ 1. -5
 - ☒ 2. 5
 - ☒ 3. 15
 - ☒ 4. -15

Q.62 Name the mode of reproduction in Spirogyra.

- Ans**
- ☒ 1. Multiple fission
 - ☒ 2. Budding
 - ☒ 3. Binary fission
 - ☒ 4. Fragmentation

Q.63 If $a + \frac{1}{a} = 4$, then $a^2 + \frac{1}{a^2} = ?$

- Ans**
- ☒ 1. 16
 - ☒ 2. 12
 - ☒ 3. 18
 - ☒ 4. 14

Q.64 Which of the following would increase the resistance of a metallic conductor?

- Ans**
- ☒ 1. Using a material with higher conductivity.
 - ☒ 2. Decreasing its length.
 - ☒ 3. Decreasing the current flowing through the conductor.
 - ☒ 4. Decreasing its area of cross-section.



Q.65 Buds produced in the notches along the leaf margin of Bryophyllum fall on the soil and develop into new plants. Such a mode of reproduction is known as:

- Ans**
- ☒ 1. fragmentation
 - ☒ 2. vegetative propagation
 - ☒ 3. regeneration
 - ☒ 4. budding

Q.66 Seven people, A, B, D, L, X, Y and Z, are sitting in a row, facing north. No one sits to the left of B. Only four people sit between B and Y. Only three people sit to the right of Z. A sits to the immediate left of L. D is not an immediate neighbour of Z. Who sits at the rightmost end of the line?

- Ans**
- ☒ 1. X
 - ☒ 2. D
 - ☒ 3. L
 - ☒ 4. Y

Q.67 Which of the following statements is/are INCORRECT related to excretion in human being?

- (i) In human beings, kidney is located in the thoracic region.
- (ii) Urine is stored in the urinary bladder.
- (iii) CO₂ is removed from the blood into the lungs.

- Ans**
- ☒ 1. Only (i) and (ii)
 - ☒ 2. Only (i)
 - ☒ 3. Only (i) and (iii)
 - ☒ 4. (i), (ii) and (iii)

Q.68 What will come in the place of '?' in the following equation, if '×' and '−' are interchanged and '÷' and '+' are interchanged?

$$55 \times 45 + 5 - 8 \div 4 = ?$$

- Ans**
- ☒ 1. 77
 - ☒ 2. 17
 - ☒ 3. −13
 - ☒ 4. 47

Q.69 Which of the following energies reflect mechanical energy when combined?

- Ans**
- ☒ 1. Chemical energy and electrical energy
 - ☒ 2. Heat energy and light energy
 - ☒ 3. Potential energy and kinetic energy
 - ☒ 4. Light energy and chemical energy

Q.70 What is the sum of the first 10 prime numbers?

- Ans**
- ☒ 1. 131
 - ☒ 2. 129
 - ☒ 3. 111
 - ☒ 4. 101



Q.71 Which state was crowned the team champion at the 4th National Finswimming Championship, 2024?

- Ans** ☒ 1. West Bengal
 ☐ 2. Maharashtra
 ☐ 3. Karnataka
 ☐ 4. Tamil Nadu

Q.72 The body of a squirrel has to prepare for either fighting or running away by using which of the following hormones?

- Ans** ☐ 1. Oestrogen
 ☐ 2. Testosterone
 ☒ 3. Adrenaline
 ☐ 4. Thyroxin

Q.73 Refer to the given series and answer the question that follows (all numbers are single-digit numbers only, and all counting is to be done from left to right).

(Left) 6 8 9 4 4 8 6 5 3 5 1 7 5 8 6 5 8 9 7 3 4 7 0 1 6 8 7 4 5 4 (Right)

How many such even digits are there, each of which is immediately preceded by an odd digit and also immediately followed by an even digit?

- Ans** ☐ 1. 6
 ☐ 2. 0
 ☐ 3. 4
 ☒ 4. 3

Q.74 The HCF of 1248 and 2456 is:

- Ans** ☒ 1. 8
 ☐ 2. 16
 ☐ 3. 12
 ☐ 4. 14

Q.75 25% of 30% of 45% of 1 is equal to:

- Ans** ☐ 1. 0.3375
 ☐ 2. 33.75
 ☒ 3. 0.03375
 ☐ 4. 3.375

Q.76 Simplify the given expression.

$$5 - [4 - \{3 - (3 - 3 - 6)\}]$$

- Ans** ☒ 1. 10
 ☐ 2. 0
 ☐ 3. 6
 ☐ 4. 4

Q.77 Find the volume of a sphere whose diameter is 6 cm.

- Ans**
- ☒ 1. $42\pi \text{ cm}^3$
 - ☒ 2. $36\pi \text{ cm}^3$
 - ☒ 3. $28\pi \text{ cm}^3$
 - ☒ 4. $48\pi \text{ cm}^3$

Q.78 Refer to the given series and answer the question that follows (all numbers are single-digit numbers only, and all counting is to be done from left to right).

(Left) 1 8 4 5 9 6 5 2 4 8 0 9 5 9 5 7 9 5 3 3 5 1 5 1 4 7 6 6 4 9 (Right)

How many such odd digits are there, each of which is immediately preceded by an odd digit and also immediately followed by an even digit?

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

Q.79 Six boxes G, H, I, J, K and L are kept one over the other but not necessarily in the same order. G is kept third from the bottom. Only two boxes are kept between G and H. Only three boxes are kept between H and I. J is kept immediately above G. K is kept immediately below I.

Q. How many boxes are kept between H and L?

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

Q.80 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

RM-HL-OQ

NI-DH-KM

- Ans**
- ☒ 1. PK-FI-MN
 - ☒ 2. PK-FJ-MO
 - ☒ 3. QK-FI-MO
 - ☒ 4. QK-FJ-MN

Q.81 OTRP is related to UZXV in a certain way based on the English alphabetical order. In the same way, HMKI is related to NSQO. To which of the following options is MRPN related, following the same logic?

- Ans**
- ☒ 1. SXTV
 - ☒ 2. XSVT
 - ☒ 3. SXVT
 - ☒ 4. XSTV

Q.82 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster does not belong to that group?

(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

- Ans**
- ☒ 1. QWC
 - ☒ 2. GMS
 - ☒ 3. IOU
 - ☒ 4. SDF

Q.83 In August 2024, the Government of India established how many Zonal Cultural Centres (ZCCs) to promote cultural traditions and conduct research on folk arts and songs from rural and tribal areas?

- Ans**
- ☒ 1. Five
 - ☒ 2. Four
 - ☒ 3. Six
 - ☒ 4. Seven

Q.84 The growth of plants occurs only in certain specific regions because:

- Ans**
- ☒ 1. the simple permanent tissue is located only at these regions
 - ☒ 2. the dividing tissue, also known as meristematic tissue, is located only at these regions
 - ☒ 3. the connective tissue is located only at these regions
 - ☒ 4. the complex permanent tissue is located only at these regions

Q.85 First find the median of 46, 64, 87, 41, 58, 77, 35, 90, 55, 92, and 33. If 92 is replaced with 99 and 41 is replaced with 43 in the data, then find the new median. What is the difference between the old median and the new median?

- Ans**
- ☒ 1. 2
 - ☒ 2. 3
 - ☒ 3. 6
 - ☒ 4. 0

Q.86 In a certain code language,

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

'A – B' means 'A is the son of B',

'A x B' means 'A is the husband of B'

and 'A ÷ B' means 'A is the brother of B'.

How is O related to Q if 'M + N ÷ O x P + Q'?

- Ans**
- ☒ 1. Father
 - ☒ 2. Son
 - ☒ 3. Father's brother
 - ☒ 4. Brother

Q.87 Select the set in which the numbers are related in the same way as are the numbers of the following sets.

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

(8, 4, 12)

(18, 9, 27)

- Ans**
- ☐ 1. (20, 12, 36)
 - ☐ 2. (24, 12, 34)
 - ☒ 3. (24, 12, 36)
 - ☐ 4. (24, 14, 36)

Q.88 Which of the following metal catches fire if kept in open?

- Ans**
- ☐ 1. Copper
 - ☐ 2. Zinc
 - ☒ 3. Sodium
 - ☐ 4. Magnesium

Q.89 In a certain code language, 'Come Back Home' is written as 'Tu Ru Qu' and 'She Went Back' is written as 'Du Su Ru' and 'He Went Home' is written as 'Pu Tu Du'. How is 'She' written in the given language?

- Ans**
- ☐ 1. Tu
 - ☒ 2. Su
 - ☐ 3. Du
 - ☐ 4. Ru

Q.90 A solid rubber sphere weighs 6 kg when its diameter is 6 cm. Using the same material, a hollow sphere is made with outer diameter 18 cm and inner diameter 12 cm. What is its weight?

- Ans**
- ☐ 1. 64.64 kg
 - ☐ 2. 72.64 kg
 - ☐ 3. 96 kg
 - ☒ 4. 114 kg

Q.91 In which of the following conditions is the work done considered negative?

- Ans**
- ☐ 1. When the displacement is zero.
 - ☐ 2. When the force is perpendicular to the direction of displacement.
 - ☐ 3. When the force is in the direction of displacement.
 - ☒ 4. When the force is opposite to the direction of displacement.

Q.92 On 3rd October 2024, the Union Cabinet decided to merge all Central schemes in the agriculture sector into how many new schemes?

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

Q.93 National Rifle Association of India (NRAI) approved amendments to the NRAI Match Book and other technical rules for domestic competitions in _____.

- Ans**
- ☐ 1. August 2024
 - ☒ 2. March 2024
 - ☐ 3. February 2024
 - ☐ 4. April 2024

Q.94 Select the correct option related to the function of auxin in plants.

- Ans**
- ☐ 1. Increases stem width
 - ☐ 2. Induce flowering
 - ☐ 3. Make plants insect resistant
 - ☒ 4. Helps the cells to grow longer

Q.95 Compounds of carbon, which are linked by only single bonds between the carbon atoms are called _____.

- Ans**
- ☒ 1. Saturated compounds
 - ☐ 2. Ionic compounds
 - ☐ 3. Both ionic and saturated compounds
 - ☐ 4. Unsaturated compounds

Q.96 The GSAT-N2 (GSAT-20) is a Ka-band high throughput communication satellite launched by which organisation?

- Ans**
- ☐ 1. National Remote Sensing Centre (NRSC)
 - ☐ 2. Department of Space (DoS)
 - ☒ 3. NewSpace India Limited (NSIL)
 - ☐ 4. Antrix Corporation

Q.97 The central nervous system that receives information from all parts of the body and integrates it is constituted by:

- Ans**
- ☐ 1. only the brain
 - ☒ 2. the brain and the spinal cord
 - ☐ 3. only the heart
 - ☐ 4. only the spinal cord

Q.98 Which of the following is an isobar of argon?

- Ans**
- ☒ 1. Calcium
 - ☐ 2. Chlorine
 - ☐ 3. Sodium
 - ☐ 4. Potassium

Q.99 How much time will a train of length 200 m, moving at a speed of 72 km/h take to cross another train of length 300 m completely, moving at 36 km/h in the same direction?

- Ans**
- ☐ 1. 25 sec
 - ☐ 2. 100 sec
 - ☒ 3. 50 sec
 - ☐ 4. 55 sec

Q.100 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

- IUF, LVJ, OWN, RXR, ?
- Ans**
- ☒ 1. USV
 - ☒ 2. VYU
 - ☒ 3. VYX
 - ☒ 4. UYV

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