



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



Test Date	20/12/2024
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 Justice Sanjiv Khanna sworn in as the _____ Chief Justice of India on 11 November 2024.

- Ans ☒ 1. 51st
☐ 2. 49th
☐ 3. 52nd
☐ 4. 50th

Q.2 Starting from rest, a car is moving with a uniform acceleration of 0.5 m/s^2 . The velocity of the car after 20 s is:

- Ans ☐ 1. 15 m/s
☐ 2. 0 m/s
☐ 3. 5 m/s
☒ 4. 10 m/s

Q.3 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 117 :: 15 : Y

- Ans ☐ 1. X = 7, Y = 193
☒ 2. X = 9, Y = 195
☐ 3. X = 9, Y = 193
☐ 4. X = 7, Y = 195

Q.4 Which of the following events is a consequence of atmospheric refraction?

- Ans ☐ 1. Image formation by plain mirrors
☐ 2. Rainbow formation
☒ 3. Advance sunrise and delayed sunset
☐ 4. Curved mirrors to form enlarged image of an object

Q.5 Which of the following is an example of a sol?

- Ans**
- ☒ 1. Foam
 - ☒ 2. Milk of magnesia
 - ☒ 3. Rubber
 - ☒ 4. Face cream

Q.6 In a certain code language, 'Pay The Tax' is written as 'Gi Si Di', 'File Tax Return' is written as 'Ri Zi Si' and 'Keep The Tax File' is written as 'Qi Si Gi Zi'. How is 'File' coded in the given language?

- Ans**
- ☒ 1. Gi
 - ☒ 2. Si
 - ☒ 3. Zi
 - ☒ 4. Qi

Q.7 Which functions both as a passageway for intracellular transport and as a manufacturing surface?

- Ans**
- ☒ 1. Endoplasmic reticulum
 - ☒ 2. Ribosome
 - ☒ 3. Plastids
 - ☒ 4. Mitochondria

Q.8 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 cushions are bells.

All cushions are machines.

Conclusions:

(I) All machines are cushions.

(II) Some bells are machines.

- 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.9 Nayan can do a piece of work in 25 days. Tarun is 25% more efficient than Nayan. The number of days taken by Tarun to do the same piece of work is:

- Ans**
- ☒ 1. 16
 - ☒ 2. 25
 - ☒ 3. 15
 - ☒ 4. 20

Q.10 Select the correct option related to the function regulated by ovaries.

- Ans**
- ☒ 1. Stimulates pituitary glands
 - ☒ 2. Stimulates growth in all organs
 - ☒ 3. Regulates metabolism
 - ☒ 4. Menstrual cycle



Q.11 Seven people, A, B, D, L, X, Y and Z, are sitting in a row, facing north. Only Z sits to the right of D. Only three people sit to the left of A. Only three people sit between D and L. Y sits at some place to the left of X but at some place to the right of B. How many people sit between B and X?

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

Q.12 What is the function of growth hormones?

- Ans**
- ☐ 1. It regulates metabolism for body growth.
 - ☐ 2. It stimulates development of female sex organs.
 - ☐ 3. It regulates blood sugar level.
 - ☒ 4. It stimulates growth in all organs.

Q.13 Which school in Kerala in 2024 made history by introducing India's first AI-powered teacher, 'Iris'?

- Ans**
- ☐ 1. Sacred Heart School
 - ☒ 2. KTCT Higher Secondary School
 - ☐ 3. Loyola School
 - ☐ 4. Chinmaya Vidyalaya

Q.14 Find the number of sides in a regular polygon if its each interior angle is 165° .

- Ans**
- ☒ 1. 24
 - ☐ 2. 18
 - ☐ 3. 25
 - ☐ 4. 20

Q.15 In electrolytic refining process, on passing the current impurities settle down, those impurities are known as _____.

- Ans**
- ☐ 1. electrolytic mud
 - ☐ 2. gangue
 - ☐ 3. cathode mud
 - ☒ 4. anode mud

Q.16 A sum of money is distributed among four people A, B, C and D in the ratio 4 : 7 : 9 : 3. If C gets ₹800 more than B, then find the amount that D gets.

- Ans**
- ☐ 1. ₹1,000
 - ☐ 2. ₹1,400
 - ☒ 3. ₹1,200
 - ☐ 4. ₹1,500

Q.17 With which of the following does the hydrophilic end of soaps react?

- Ans**
- ☐ 1. Both water and oil
 - ☐ 2. Hydrocarbon
 - ☒ 3. Water
 - ☐ 4. Oil



Q.18 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:

All shirts are pants.

All pants are ties.

No ties are jeans.

Conclusions:

(I) No jeans are pants.

(II) All pants are shirts.

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

Q.19 According to Rutherford's model of an atom, where is most of the mass of the atom located?

- Ans**
- ☐ 1. In the shells of electrons
 - ☒ 2. In the nucleus
 - ☐ 3. It is equally distributed throughout
 - ☐ 4. In the electron cloud

Q.20 Doubly-charged helium ions are also known as which of the following?

- Ans**
- ☐ 1. X-rays
 - ☐ 2. Gamma particles
 - ☒ 3. Alpha particles
 - ☐ 4. Beta particles

Q.21 If a man bought 6 pencils for ₹5, and sold them at 5 pencils for ₹6, then the gain percentage is _____.

- Ans**
- ☐ 1. 42%
 - ☐ 2. 41%
 - ☐ 3. 43%
 - ☒ 4. 44%

Q.22 Which of the following is the correct order of movement of food in the digestive tract?

- Ans**
- ☐ 1. Mouth - Stomach - Oesophagus
 - ☒ 2. Mouth - Oesophagus - Stomach
 - ☐ 3. Oesophagus - Stomach - Mouth
 - ☐ 4. Oesophagus - Mouth - Stomach



Q.23 Two pipes X and Y can fill a cistern in 21 hours and 24 hours, respectively. The pipes are opened simultaneously, and it is found that due to a leakage in the bottom it takes 48 minutes more to fill the cistern. When the cistern is full, in how much time will the leak empty it if no pipe is open during that time?

- Ans**
- ☐ 1. 120 hours
 - ☐ 2. 130 hours
 - ☒ 3. 168 hours
 - ☐ 4. 144 hours

Q.24 Rambabu is under uniform motion, and he has covered 25 m in 5 s. How much distance can he cover in 3 s?

- Ans**
- ☐ 1. 20 m
 - ☐ 2. 5 m
 - ☒ 3. 15 m
 - ☐ 4. 10 m

Q.25 Who is the author of 'A Game of Two Halves: The Story of the Golden Era of Indian Club Football'?

- Ans**
- ☒ 1. Rishav Ray
 - ☐ 2. Anand Patel
 - ☐ 3. Sunil Chetri
 - ☐ 4. Krishna Rao

Q.26 Consider the magnetic field produced by a current carrying solenoid. Which of the following statements is INCORRECT?

- Ans**
- ☐ 1. The strength of the magnetic field increases if we increase the number of turns.
 - ☐ 2. The solenoid in a way acts similar to the bar magnet.
 - ☐ 3. The magnetic field near the centre of long solenoid is nearly constant.
 - ☒ 4.

The magnitude of the magnetic field outside but close to the solenoid is extremely large.

Q.27 The pair of equations $3x - 5y = 7$ and $-6x + 10y = 7$ have:

- Ans**
- ☐ 1. a unique solution
 - ☐ 2. infinitely many solutions
 - ☒ 3. no solution
 - ☐ 4. two solutions

Q.28 A rectangle with perimeter 50 cm has its sides in the ratio 1 : 4. What is the perimeter of a square whose area is the same as that of the rectangle ?

- Ans**
- ☐ 1. 45 cm
 - ☒ 2. 40 cm
 - ☐ 3. 50 cm
 - ☐ 4. 36 cm

Q.29 Which of the following is a prime number?

- Ans**
- ☐ 1. 437
 - ☐ 2. 161
 - ☐ 3. 221
 - ☒ 4. 373



Q.30 The value of $\frac{9}{10} \div \left(\frac{4}{5} + \frac{1}{10}\right)$ is:

- Ans ☒ 1. 1
☒ 2. $\frac{81}{100}$
☒ 3. $\frac{1}{10}$
☒ 4. 0

Q.31 _____ won the 42nd Ranji Trophy title, by defeating Vidarbha, in the 2023-2024 season.

- Ans ☒ 1. Delhi
☒ 2. Mumbai
☒ 3. Gujarat
☒ 4. Karnataka

Q.32 The reaction given below is an example which of the following types of reaction?

Potassium bromide(aq) + Barium iodide(aq) → Potassium iodide(aq) + Barium bromide(s)

- Ans ☒ 1. Displacement reaction
☒ 2. Combination reaction
☒ 3. Double displacement reaction
☒ 4. Decomposition reaction

Q.33 The splitting of the two cells during division can take place in any plane. Such patterns of fission have been observed in which protozoan?

- Ans ☒ 1. Leishmania
☒ 2. Amoeba
☒ 3. Hydra
☒ 4. Plasmodium

Q.34 Which of the following options should come in place of the question mark (?) in the given series to make it logically complete?

433, 414, 376, 319, 243, ?

- Ans ☒ 1. 148
☒ 2. 162
☒ 3. 124
☒ 4. 136

Q.35 Which of the following is correct about trophic levels in a food chain?

- Ans ☒ 1. The heterotrophs fix up the solar energy and make it available for herbivores or other consumers.
☒ 2. The Larger carnivores or the tertiary consumers form the third trophic level.
☒ 3. The autotrophs or the producers are at the first trophic level.
☒ 4. The herbivores or the secondary consumers come at the second level.

Q.36 Subtracting 90% of X from X is equivalent to multiplying X by:

- Ans**
- ☐ 1. 0.8
 - ☐ 2. 0.5
 - ☒ 3. 0.1
 - ☐ 4. 0.9

Q.37 What does the subscript in a chemical formula represent?

- Ans**
- ☐ 1. The mass of the compound
 - ☐ 2. The charge of the ion
 - ☐ 3. The oxidation state of the element
 - ☒ 4. The number of atoms of each element in a molecule

Q.38 What price should a shopkeeper mark on an article, which costs him ₹153, to gain 20% after allowing a discount of 15%?

- Ans**
- ☐ 1. ₹184
 - ☐ 2. ₹162
 - ☐ 3. ₹224
 - ☒ 4. ₹216

Q.39 A woman has invested ₹85,000 at a rate of $7\frac{1}{2}\%$ per annum simple interest for 4 years. Find the amount that she will receive after 4 years.

- Ans**
- ☐ 1. ₹69,600
 - ☐ 2. ₹75,000
 - ☐ 3. ₹1,08,750
 - ☒ 4. ₹1,10,500

Q.40 If a train travelling at a speed of 90 km/h crosses a pole in 5 sec, then the length of train is:

- Ans**
- ☐ 1. 140 m
 - ☐ 2. 152 m
 - ☐ 3. 104 m
 - ☒ 4. 125 m

Q.41 Where was the maiden flight-test of the Long Range Land Attack Cruise Missile (LRLACM) conducted by DRDO?

- Ans**
- ☐ 1. Missile Test Facility, Bengaluru
 - ☐ 2. Defence Research Facility, Hyderabad
 - ☐ 3. Indian Space Research Centre, Thiruvananthapuram
 - ☒ 4. Integrated Test Range (ITR), Chandipur, Odisha



Q.42 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. Which numbers should replace X and Y so that the pattern followed by the two numbers on the left side of :: is the same as that on the right side of ::?

(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.)

X : 88 :: 12 : Y

- Ans**
- ☒ 1. X = 14, Y = 132
 - ☒ 2. X = 14, Y = 176
 - ☒ 3. X = 8, Y = 152
 - ☒ 4. X = 8, Y = 132

Q.43 When plant cells lose water by osmosis, the contents shrink away from the cell wall; this process is known as _____.

- Ans**
- ☒ 1. Passive Transport
 - ☒ 2. Active Transport
 - ☒ 3. Plasmolysis
 - ☒ 4. Diffusion

Q.44 Which of the following is/are correct regarding the components of an ecosystem?

A. Living organisms - Abiotic Component

B. Soil - Biotic component

C. Minerals - Abiotic component

- Ans**
- ☒ 1. Only B
 - ☒ 2. Both A and C
 - ☒ 3. Only C
 - ☒ 4. A, B and C

Q.45 The average of the first 10 prime numbers is:

- Ans**
- ☒ 1. 10
 - ☒ 2. 12.5
 - ☒ 3. 15.5
 - ☒ 4. 12.9

Q.46 What will come in the place of '?' in the following equation, if '+' and '×' are interchanged?

$$8 + 7 \div 36 \times 9 - 12 = ?$$

- Ans**
- ☒ 1. 25
 - ☒ 2. 24
 - ☒ 3. 19
 - ☒ 4. 21



Q.47 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. DA-CF
 - ☒ 2. JG-IM
 - ☒ 3. GD-FI
 - ☒ 4. NK-MP

Q.48 Which of the following is the characteristic of a liquid?

- Ans**
- ☒ 1. It has fixed shape and volume.
 - ☒ 2. It is highly compressible.
 - ☒ 3. It has fixed volume but not fixed shape.
 - ☒ 4. It is hard.

Q.49 If $10000x = (9982)^2 - (18)^2$, then the value of x is:

- Ans**
- ☒ 1. 9809
 - ☒ 2. 9886
 - ☒ 3. 9976
 - ☒ 4. 9964

Q.50 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. AGH
 - ☒ 2. ZBD
 - ☒ 3. QSU
 - ☒ 4. MOQ

Q.51 In September 2024, which bank launched Aditi, a GenAI powered Virtual Relationship Manager that aims to enhance the digital customer service experience?

- Ans**
- ☒ 1. State Bank of India
 - ☒ 2. Bank of Baroda
 - ☒ 3. Canara Bank
 - ☒ 4. HDFC Bank

Q.52 The average of all natural numbers between 12 and 39 which are divisible by 5 is _____.

- Ans**
- ☒ 1. 21
 - ☒ 2. 28
 - ☒ 3. 25
 - ☒ 4. 25.5

Q.53 Simmi's mother made 8ltr 785 ml of soup for the party. If the soup was distributed equally among 35 people, how much soup was given to each person?

- Ans**
- ☒ 1. 251 ml
 - ☒ 2. 255 ml
 - ☒ 3. 250 ml
 - ☒ 4. 254 ml

Q.54 In order to pass in an examination, a student is required to get 780 marks out of the maximum aggregate marks. Sonal got 728 marks and was declared failed by 5%. What is the maximum aggregate marks that a student can get in the examination?

- Ans**
- ☐ 1. 1140
 - ☐ 2. 1100
 - ☐ 3. 1000
 - ☒ 4. 1040

Q.55 Select the correct pair from the following options.

- Ans**
- ☐ 1. Velocity does not change with time - Non-uniform motion
 - ☒ 2. Change in velocity per unit time - Acceleration
 - ☐ 3. Motion of a freely falling body - Non-uniform acceleration
 - ☐ 4. Velocity varies with time - Uniform motion

Q.56 The United Nations 2024 Multidimensional Poverty Index (MPI) highlights that India has the highest number of people in multidimensional poverty globally, with _____ million affected.

- Ans**
- ☐ 1. 245
 - ☐ 2. 225
 - ☐ 3. 214
 - ☒ 4. 234

Q.57 If $40 : 35 :: 35 : k$, find the value of $k - 1$.

- Ans**
- ☒ 1. $\frac{237}{8}$
 - ☐ 2. $\frac{245}{8}$
 - ☐ 3. $\frac{49}{8}$
 - ☐ 4. $\frac{49}{16}$

Q.58 In a certain code language,

$A + B$ means 'A is the brother of B',

$A - B$ means 'A is the wife of B',

$A \times B$ means 'A is the father of B',

and $A \div B$ means 'A is the sister of B'.

How is P related to T if ' $P \times Q \div R - S \times T$ '?

- Ans**
- ☐ 1. Father's father
 - ☐ 2. Mother's brother
 - ☒ 3. Mother's father
 - ☐ 4. Father's brother



Q.59 Which of the following is an example of suspension?

- Ans**
- ☐ 1. Oil in water
 - ☐ 2. Solution of sugar in water
 - ☒ 3. Chalk powder in water
 - ☐ 4. Few drops of milk in water

Q.60 The sum of ages of Amit and Amita is 15 years more than the sum of ages of Amita and Amrita. How many years younger is Amrita as compared to Amit?

- Ans**
- ☐ 1. 12
 - ☐ 2. 13
 - ☐ 3. 19
 - ☒ 4. 15

Q.61 In electrolytic refining procedure, the cathode is made up of:

- Ans**
- ☐ 1. alloy metal
 - ☐ 2. impure metal
 - ☐ 3. metal salt
 - ☒ 4. pure metal

Q.62 Which of the following is the olfactory indicator to check the acidic or basic nature of the substance?

- Ans**
- ☐ 1. Phenolphthalein
 - ☒ 2. Vanilla essence
 - ☐ 3. Red litmus
 - ☐ 4. Methyl orange

Q.63 What is the angle between the two lateral faces of a triangular glass prism called?

- Ans**
- ☐ 1. Inclination angle
 - ☐ 2. Angle of deviation
 - ☐ 3. Base angle
 - ☒ 4. Angle of prism

Q.64 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?

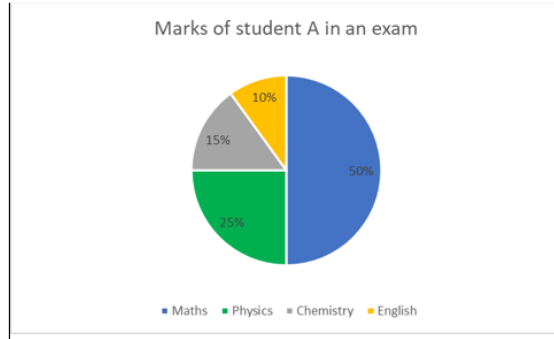
$$18 \text{ C } 6 \text{ D } 18 \text{ A } 6 \text{ B } 18 = ?$$

- Ans**
- ☐ 1. 62
 - ☐ 2. 7
 - ☒ 3. 42
 - ☐ 4. 67



Q.65 Study the following pie-chart and answer the question that follows.

The following pie chart shows the breakup of the percentage marks of Student A in an exam.



If the total marks scored by Student A are 260, then what are the total marks scored by the student in Physics and English in the exam?

- Ans**
- ☒ 1. 85
 - ☒ 2. 91
 - ☒ 3. 95
 - ☒ 4. 87

Q.66 Find the area of a regular hexagon (in cm^2) with sides of length 6 cm.

- Ans**
- ☒ 1. 36
 - ☒ 2. $54\sqrt{3}$
 - ☒ 3. 18
 - ☒ 4. $5\sqrt{2}$

Q.67 Which of the following techniques is used to separate colloidal particles from the mixture?

- Ans**
- ☒ 1. Filtration
 - ☒ 2. Evaporation
 - ☒ 3. Distillation
 - ☒ 4. Centrifugation

Q.68 In a certain code language, 'cant hurt me' is written as 'yk ja cm' and 'did he hurt' is coded as 'bt yo ja'. How is 'hurt' coded in the given language?

- Ans**
- ☒ 1. pr
 - ☒ 2. qe
 - ☒ 3. ja
 - ☒ 4. cr

Q.69 When we are standing in a bus facing towards the driver and the bus begins to move straight suddenly, we tend to fall:

- Ans**
- ☒ 1. backwards
 - ☒ 2. left side
 - ☒ 3. right side
 - ☒ 4. forward

Q.70 What is the speed v of an athlete, if the athlete takes t seconds to go once around a circular path of radius r ?

- Ans**
- ✓ 1. $v = 2\pi r/t$
 - ✗ 2. $v = 2\text{ m/s}$
 - ✗ 3. $v = 0$
 - ✗ 4. $v = \pi r^2 /t$

Q.71 Which of the options provides the correct explanation for the following statement?

Sweating cools down your body on a hot day.

- Ans**
- ✗ 1. Sweating increases the body's temperature.
 - ✗ 2. Sweating increases blood circulation and cools the body.
 - ✗ 3. The given statement is wrong.
 - ✓ 4. Sweating causes rapid evaporation, which absorbs heat from the body surface and cools the body.

Q.72 What is the displacement accomplished by an object if it moves 15 m to the right from point 'A' and then moves 15 m to the opposite direction to reach the same point 'A'?

- Ans**
- ✓ 1. 0 m
 - ✗ 2. 15 m
 - ✗ 3. 30 m
 - ✗ 4. 7.5 m

Q.73 Refer to the given series and answer the question that follows (all numbers are single-digit numbers only).

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

What is the sum of the 10th digit from the left and the 4th digit from the right?

- Ans**
- ✗ 1. 10
 - ✓ 2. 9
 - ✗ 3. 8
 - ✗ 4. 11

Q.74 If a car travelling along a straight road increases its speed by unequal amounts in equal intervals of time, then the car is said to be moving with:

- Ans**
- ✓ 1. non-uniform acceleration
 - ✗ 2. uniform velocity
 - ✗ 3. uniform speed
 - ✗ 4. uniform acceleration

Q.75 Shahid starts from Point A and drives 20 km towards West. He then takes a left turn, drives 20 km, turns left and drives 15 km. He then takes a left turn and drives 12 km. He takes a final right turn, drives 5 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. 10 km towards South
 - ✗ 2. 5 km towards North
 - ✗ 3. 8 km towards East
 - ✓ 4. 8 km towards North

Q.76 PLSO is related to VRYU in a certain way based on the English alphabetical order. In the same way, MIPL is related to SOVR. To which of the following options is IELH related, following the same logic?

- Ans**
- ✓ 1. OKRN
 - ✗ 2. KONR
 - ✗ 3. KORN
 - ✗ 4. OKNR

Q.77 TPVS is related to LHNK in a certain way based on the English alphabetical order. In the same way, WSYV is related to OKQN. To which of the following options is RNTQ related, following the same logic?

- Ans**
- ✓ 1. JFLI
 - ✗ 2. FJLI
 - ✗ 3. FJIL
 - ✗ 4. JFIL

Q.78 Evaluate the given expression.

$$6 + 6 \times 6 - 6$$

- Ans**
- ✓ 1. 36
 - ✗ 2. 42
 - ✗ 3. 0
 - ✗ 4. 66

Q.79 $\sec^2 A + (\operatorname{cosec}^2 A - 1) + (1 + \tan^2 A) - \cot^2 A = \underline{\hspace{2cm}}$.

- Ans**
- ✗ 1. 0
 - ✗ 2. 1
 - ✓ 3. $2\sec^2 A$
 - ✗ 4. $\cot^2 A$

Q.80 Select the greatest number from the given numbers.

$$4^{50}, 2^{100}, 16^{25}$$

- Ans**
- ✗ 1. 4^{50}
 - ✓ 2. All are equal
 - ✗ 3. 2^{100}
 - ✗ 4. 16^{25}

Q.81 Which reproductive part(s) is/are essential for fertilisation?

- Ans**
- ✓ 1. Pollen grain and ovule
 - ✗ 2. Sepal
 - ✗ 3. Thalamus
 - ✗ 4. Petals

Q.82 Given below is a statement followed by two possible reasons numbered I and II. Read the statement carefully and decide which of the two explain(s) the event/observation/information given in the statement.

Statement - Even though Company X is the biggest exporter of wheat in the country, it is not among one of the biggest profit earning companies in the Country.

Reasons:

I. Trading in other materials other than wheat, like iron, is much more profitable

II. Company X has heavy miscellaneous expenditure

- Ans**
- ☒ 1. Only I is a possible reason.
 - ☒ 2. Neither I nor II is a possible reason.
 - ☒ 3. Both I and II are possible reasons.
 - ☒ 4. Only II is a possible reason.

Q.83 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

JLO, KMP, LNQ, MOR, ?

- Ans**
- ☒ 1. PNS
 - ☒ 2. PSN
 - ☒ 3. NSP
 - ☒ 4. NPS

Q.84 A, B, E, G, P, L and M are sitting around a circular table facing the centre. Only two people sit between A and M when counted from the right of A. Only three people sit between P and L when counted from the right of L. M sits to the immediate right of L. E sits to the immediate right of G. Who sits fourth to the right of B?

- Ans**
- ☒ 1. P
 - ☒ 2. G
 - ☒ 3. M
 - ☒ 4. E

Q.85 If lysosomes are also known as the 'suicide bags' of the cell, then which of the following is the powerhouse of the cell?

- Ans**
- ☒ 1. Vacuoles
 - ☒ 2. Mitochondria
 - ☒ 3. Plastids
 - ☒ 4. Endoplasmic reticulum

Q.86 _____, conferred the prestigious Sangeet Natak Akademi Awards (Akademi Puraskar) for the years 2022 and 2023 to 94 eminent artists.

- Ans**
- ☒ 1. Prime Minister of India, Shri. Narendra Modi
 - ☒ 2. President of India, Smt. Droupadi Murmu
 - ☒ 3. Home Minister of India, Shri. Amit Shah
 - ☒ 4. Defense Minister of India, Shri. Rajnath Singh

Q.87 What is the primary objective of the partnership between the British Council and Guidance Tamil Nadu?

- Ans**
- ☒ 1. To empower the creative economy and cultural industries of Tamil Nadu
 - ☒ 2. To support traditional agriculture in Tamil Nadu
 - ☒ 3. To promote tourism in Tamil Nadu
 - ☒ 4. To foster international trade agreements

Q.88 In a row of people all facing North, Shreya is 11th from the left end. Ravi is 12th from the left end. Ravi is exactly between Shreya and Rahul. If Rahul is 15th from the right end of the line, how many people are there in the row?

- Ans**
- ☐ 1. 29
 - ☐ 2. 45
 - ☐ 3. 28
 - ☒ 4. 27

Q.89 Which of the following synthetic chemicals was responsible for the sharp drop in the amount of ozone in the atmosphere in the 1980s?

- Ans**
- ☐ 1. Iodofluorocarbons
 - ☐ 2. Iodobromocarbons
 - ☐ 3. Chloriodocarbons
 - ☒ 4. Chlorofluorocarbons

Q.90 In what duration will a sum of money double itself at 20% per annum simple interest?

- Ans**
- ☐ 1. 8 years
 - ☐ 2. 12 years
 - ☐ 3. 10 years
 - ☒ 4. 5 years

Q.91 A solid iron rod is placed on the surface of the water. What would happen if the upthrust of water on the iron rod were greater than the downward force acting on it?

- Ans**
- ☒ 1. The iron rod would float on water surface.
 - ☐ 2. The iron rod would move downwards.
 - ☐ 3. The iron rod would sink slowly.
 - ☐ 4. The iron rod would sink faster.

Q.92 A uniform magnetic field is represented by:

- Ans**
- ☐ 1. concentric circular lines
 - ☐ 2. elliptical lines
 - ☒ 3. parallel and equidistant straight lines
 - ☐ 4. parallel but irregular straight lines

Q.93 In which district of Kerala did a major landslide occur in July 2024?

- Ans**
- ☒ 1. Wayanad
 - ☐ 2. Idukki
 - ☐ 3. Malappuram
 - ☐ 4. Thrissur

Q.94 The flexibility in plants is due to which permanent tissue that allows bending of various parts of a plant like tendrils and stems of climbers without breaking?

- Ans**
- ☐ 1. Chlorenchyma
 - ☒ 2. Collenchyma
 - ☐ 3. Aerenchyma
 - ☐ 4. Parenchyma



Q.95 All of the following are examples of connective tissue, EXCEPT:

- Ans**
- ☒ 1. blood
 - ☒ 2. tracheid
 - ☒ 3. cartilage
 - ☒ 4. bone

Q.96 Which of the following options should come in place of the question mark (?) in the given series based on the English alphabetical order?

YEF, VFI, SGL, PHO, ?

- Ans**
- ☒ 1. NMR
 - ☒ 2. MIR
 - ☒ 3. NMQ
 - ☒ 4. IMR

Q.97 When the level of growth hormone is low, which releases growth hormone releasing factor and stimulates the pituitary gland to release growth hormone?

- Ans**
- ☒ 1. Pancreas
 - ☒ 2. Hypothalamus
 - ☒ 3. Thyroid gland
 - ☒ 4. Adrenal gland

Q.98 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 2 8 2 4 1 7 6 1 7 3 2 9 7 5 1 7 8 6 8 2 4 3 9 4 6 6 2 (Right)

How many such odd 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. 4
 - ☒ 2. 1
 - ☒ 3. 2
 - ☒ 4. 3

Q.99 Which of the following statements of force is/are correct?

- A. Weight is a force that acts vertically downward on an object.
- B. Thrust is the force acting on an object perpendicular to the surface.

- Ans**
- ☒ 1. 'A' is correct and 'B' is incorrect.
 - ☒ 2. Both 'A' and 'B' are incorrect.
 - ☒ 3. Both 'A' and 'B' are correct.
 - ☒ 4. 'A' is incorrect and 'B' is correct.

Q.100 Refer to the given series and answer the question that follows (all numbers are single-digit numbers only).
(Left) 2 7 5 3 1 5 8 7 7 4 0 6 3 1 2 1 9 2 2 6 5 0 8 6 2 7 5 3 9 3 (Right)

What is the sum of the 1st digit from the left and the 15th digit from the right?

Ans  1. 0
 2. 6
 3. 3
 4. 5

2024/12/22-10:33:39