



रेल भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS
सी ई एन आर आर बी - ०३/२०२४ - CEN RRB - 03/2024



Test Date	16/12/2024
Test Time	9:00 AM - 10:30 AM
Subject	RRB JE DMS CMA CS MS

* 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 JE, DMS, CMA, CS, MS CBT-1

Q.1 SKIB is related to OGNG in a certain way based on the English alphabetical order. In the same way, CUCV is related to YQHA. To which of the following options is QIRK related, following the same logic?

Ans

- 1. MWEP
- 2. MWPE
- 3. MEPW
- 4. MEWP

Q.2 The magnetic field inside a long, straight solenoid carrying current is _____.

Ans

- 1. uniform and parallel to the axis of the solenoid
- 2. inversely proportional to the current
- 3. zero
- 4. stronger near the edges

Q.3 Which of the following materials is likely to be non-biodegradable?

Ans

- 1. Paper
- 2. Plastic
- 3. Vegetable peels
- 4. Wood

Q.4 Which of the following articles deals with the Finance Commission that distributes taxes between the Centre and State?

Ans

- 1. Article 281
- 2. Article 283
- 3. Article 282
- 4. Article 280

Q.5 If the three angles of a quadrilateral are 70° , 85° and 95° , then find the fourth angle.

Ans

- 1. 115°
- 2. 105°
- 3. 110°
- 4. 100°

Q.6 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

ONL AZX MLJ YXV ?

Ans 1. JKH
 2. JHK
 3. KJH
 4. KHJ

Q.7 What should come in place of the question mark (?) in the given series?
1 13 28 46 67 ?

Ans 1. 90
 2. 92
 3. 93
 4. 91

Q.8 Which of the following is NOT an agent of dispersal of seeds?

Ans 1. Animal
 2. Sunlight
 3. Wind
 4. Water

Q.9 Write the expanded form of $(9a + 4b + 5c)^2$.

Ans 1. $81a^2 + 16b^2 + 25c^2 + 72ab + 35bc + 90ac$
 2. $81a^2 + 16b^2 + 25c^2 + 72ab + 40bc + 100ac$
 3. $81a^2 + 16b^2 + 25c^2 + 72ab + 40bc + 90ac$
 4. $81a^2 + 16b^2 + 25c^2 + 76ab + 40bc + 90ac$

Q.10 Evaluate: $16 + 16 \div 4 - 3 \times 3$

Ans 1. 14
 2. 13
 3. 11
 4. 10

Q.11 On oxidation, silver changes its colour to _____ and copper changes its colour to _____.

Ans 1. grey; green
 2. black; green
 3. black; blue
 4. grey; blue

Q.12 Find the median of the data given below.

180, 90, 134, 68, 52, 152, 88, 110

Ans 1. 89
 2. 60
 3. 100
 4. 110

Q.13 17 men can dig a ditch 26 m long in 18 days, working 8 hours a day. How many more men should be engaged to dig a similar ditch 39 m long in 6 days, each man now working 9 hours a day?

Ans

- 1. 48
- 2. 55
- 3. 51
- 4. 53

Q.14 Self pollination is possible only in:

Ans

- 1. bisexual flowers with both stamens and pistil maturing at the different time
- 2. unisexual flowers with pistil maturing first
- 3. unisexual flowers with stamen maturing first
- 4. bisexual flowers with both stamens and pistil maturing at the same time

Q.15 P is the sister of Q's brother R. S is the husband of Q and T is the son of S. How is P related to T?

Ans

- 1. Mother's sister
- 2. Mother's mother
- 3. Mother
- 4. Sister

Q.16 Select the term from among the given options that can replace the question mark (?) in the following series.

OJH 20, MHF 25, KFD 35, IDB 55, GBZ 95, ?

Ans

- 1. EZX 175
- 2. EXO 175
- 3. YXS 175
- 4. EXS 175

Q.17 A man sold an article for ₹346 by first giving a d% discount on its marked price, and then another discount having the same nominal value (in ₹). If the marked price of the article is ₹1730, then what is the value of d?

Ans

- 1. 44
- 2. 43
- 3. 40
- 4. 38

Q.18 Where is the Taj Mahotsav held?

Ans

- 1. Near the Eastern gate of Taj Mahal
- 2. In Fatehpur Sikri
- 3. In Agra Fort
- 4. Near the Western gate of Taj Mahal

Q.19 Chaitanya Mahaprabhu was related to which of the following religious sects?

Ans

- 1. Kapalika
- 2. Vaishnava
- 3. Shaiva
- 4. Tantra

Q.20 Select the option in which the triads share the same relationship as that shared by the given triads.

LIFE - IFEL - FELI
CALM - ALMC - LMCA

Ans

- 1. MUGS - UGSM - GSMU
- 2. LAST - TLAS - STLA
- 3. FLIP - LIFP - FPLI
- 4. HUNT - HTUN - HNTU

Q.21 Find the value of $K^2 - 3K$, for which the number 58K764 is divisible by 11.

Ans

- 1. 40
- 2. 60
- 3. 52
- 4. 48

Q.22 An electric pole casts a shadow of length 42 m at a time when a tree 12 m high casts a shadow of length 16 m. Find the height of the pole.

Ans

- 1. 31.5 m
- 2. 30.5 m
- 3. 29 m
- 4. 33 m

Q.23 Which of the following is a viral infection that can be transmitted through sexual contact?

Ans

- 1. Tuberculosis
- 2. Gonorrhoea
- 3. HIV-AIDS
- 4. Syphilis

Q.24 $(1 + \sin A)(1 - \sin A)(1 + \tan^2 A)$ is equal to:

Ans

- 1. $\cos A$
- 2. 0
- 3. 1
- 4. $\tan A$

Q.25 B, C, D, F and H have different marks. Only one person has scored between C and D. Only one person has scored between H and D. F has scored less than C and D. How many people have scored less than B?

Ans

- 1. Two
- 2. Three
- 3. One
- 4. Four

Q.26 Seven boxes, D, E, F, R, S, T and U, are kept one over the other but not necessarily in the same order. U is kept immediately above T. E is kept immediately above D. Only F is kept above S. Only two boxes are kept above U. E is not kept at third position from the bottom. How many boxes are kept between R and F?

Ans

- 1. Four
- 2. Two
- 3. One
- 4. Three

Q.27 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 select the most appropriate answer.

Question:

Five friends, S, T, U, V and W, are of different ages. Who is the second eldest among them?

Statements:

(I) W is younger than T. W is elder than U.
 (II) T is the eldest. Only one person is younger than V.

Ans 1. Data in statements I and II together are not sufficient to answer the question.

2. Data in statements I and II together are sufficient to answer the question.

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

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

Q.28 Match the following rivers with their tributaries.

Rivers	Tributaries
1. Brahmaputra	a. Betwa
2. Indus	b. Chenab
3. Yamuna	c. Dibang

Ans 1. 1-a, 2-b, 3-c

2. 1-c, 2-a, 3-b

3. 1-b, 2-c, 3-a

4. 1-c, 2-b, 3-a

Q.29 What is the relationship between current (I), power (P), and voltage (V)?

Ans 1. $I = P/V$

2. $I = PV$

3. $I = V \div P$

4. $I = P \div V$

Q.30 Which of the following articles deal with the provisions regarding the election, qualification, and removal of the Vice-President of India?

Ans 1. Article 78 - 80

2. Article 63 - 71

3. Article 68 - 75

4. Article 224 - 245

Q.31 In a certain code language, 'soldier protect country' is coded as 'lu mh na', 'entrepreneur prosper country' is coded as 'na ki tu' and 'soldier entrepreneur vital' is coded as 'mh tu sy'. What is the possible code for 'country vital' in that language?

Ans 1. na sy

2. mh na

3. sy ki

4. tu na

Q.32 A conical tent has to accommodate 30 persons. Each person must have 5 m^2 spaces on the ground and 120 m^3 of air to breathe. Find the height (in m) of the tent.

Ans 1. 64

2. 60

3. 84

4. 72

Q.33 A number when increased by 50 %, gives 2820. The number is:

Ans 1. 3760

2. 940

3. 1880

4. 5640

Q.34 What is the process by which sodium hydroxide is prepared?

Ans 1. Solvay's process

2. Chlor-alkali process

3. Haber's process

4. Contact process

Q.35 In a series combination of resistors, how is the voltage distributed across each resistor?

Ans 1. The same across all resistors

2. Unaffected by resistance values

3. Inversely proportional to resistance

4. Directly proportional to resistance

Q.36 The length of each of the two equal sides of an isosceles triangle is 100 cm each and the length of its base is 56 cm. The area (in cm^2) of the triangle is:

Ans 1. 2690

2. 2688

3. 2675

4. 2672

Q.37 Which of the following reactions represents the combustion of methane?

Ans 1. $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$

2. $\text{CH}_4 + \text{H}_2\text{O} \rightarrow \text{CO} + \text{H}_2$

3. $\text{CH}_4 + \text{Cl}_2 \rightarrow \text{CH}_3\text{Cl} + \text{HCl}$

4. $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO} + \text{H}_2\text{O}$

Q.38 What is the average of all the natural numbers from 1 to 92?

Ans 1. 47

2. 46

3. 46.5

4. 47.5

Q.39 Hritik ranked 20th from the bottom and 30th from the top in his class. How many students are there in his class?

Ans 1. 45

2. 34

3. 47

4. 49

Q.40 Which of the following is a method of reproduction in plants, where only a single parent is involved?

Ans 1. Pollination

2. Asexual reproduction

3. Fertilisation

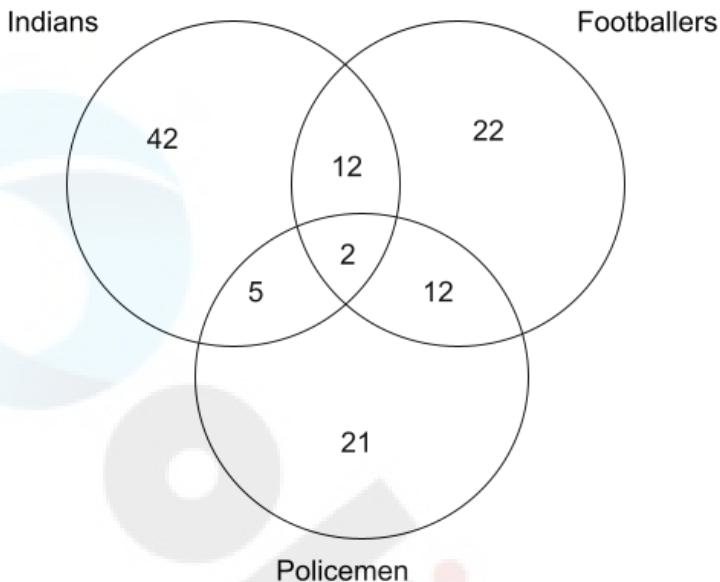
4. Sexual reproduction

Q.41	What determines the sex of a child in humans?
Ans	<input checked="" type="checkbox"/> 1. Environmental cues <input checked="" type="checkbox"/> 2. The temperature at which fertilised eggs are placed <input checked="" type="checkbox"/> 3. The fate of the embryo <input checked="" type="checkbox"/> 4. Genetic constitution
Q.42	Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 12 February 2024 to 13 April 2024
Ans	<input checked="" type="checkbox"/> 1. 36 <input checked="" type="checkbox"/> 2. 35 <input checked="" type="checkbox"/> 3. 34 <input checked="" type="checkbox"/> 4. 33
Q.43	Every year, Foreign Trade Policy has been declared by which ministry of the Government of India?
Ans	<input checked="" type="checkbox"/> 1. Ministry of Commerce and Industry <input checked="" type="checkbox"/> 2. Ministry of External Affairs <input checked="" type="checkbox"/> 3. Ministry of Information <input checked="" type="checkbox"/> 4. Ministry of Home Affairs
Q.44	Who among the following is India's first civilian space tourist?
Ans	<input checked="" type="checkbox"/> 1. Prasanth Balakrishnan Nair <input checked="" type="checkbox"/> 2. Shubhanshu Shukla <input checked="" type="checkbox"/> 3. Ajit Krishnan <input checked="" type="checkbox"/> 4. Gopichand Thotakura
Q.45	Which of the following is an effective method to reduce plastic waste?
Ans	<input checked="" type="checkbox"/> 1. Burning plastic waste <input checked="" type="checkbox"/> 2. Using disposable plastic bags <input checked="" type="checkbox"/> 3. Recycling and reusing plastic materials <input checked="" type="checkbox"/> 4. Dumping plastic waste in landfills
Q.46	Which of the following is a natural ecosystem?
Ans	<input checked="" type="checkbox"/> 1. Crop field <input checked="" type="checkbox"/> 2. Aquarium <input checked="" type="checkbox"/> 3. Garden <input checked="" type="checkbox"/> 4. Forest
Q.47	<p>In a certain code language, 'house fire gas' is coded as 'dy ph mt', 'pressure gas station' is coded as 'lp ph st', 'station house farm' is coded as 'st bq dy'. What is the code for 'gas' in that language? (Note: All the codes are two-letter coded only.)</p>
Ans	<input checked="" type="checkbox"/> 1. st <input checked="" type="checkbox"/> 2. lp <input checked="" type="checkbox"/> 3. mt <input checked="" type="checkbox"/> 4. ph

Q.48	What is the average of all the natural numbers from 1 to 91?
Ans	<input checked="" type="checkbox"/> 1. 46.5
	<input checked="" type="checkbox"/> 2. 46
	<input checked="" type="checkbox"/> 3. 45.5
	<input checked="" type="checkbox"/> 4. 47
Q.49	What property of carbon allows it to form long chains and rings?
Ans	<input checked="" type="checkbox"/> 1. Ability to form covalent bonds
	<input checked="" type="checkbox"/> 2. Ability to form stable bonds with other elements
	<input checked="" type="checkbox"/> 3. Ability to form multiple bonds
	<input checked="" type="checkbox"/> 4. Tendency to form single bonds
Q.50	Based on the English alphabetical order, three of the following four are alike in a certain way and thus form a group. Which is the one that DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)
Ans	<input checked="" type="checkbox"/> 1. FHD
	<input checked="" type="checkbox"/> 2. VST
	<input checked="" type="checkbox"/> 3. ZWX
	<input checked="" type="checkbox"/> 4. NKL
Q.51	Akshat completes his journey in 20 hours. He covers half the distance at 57 km/h and the rest at 95 km/h. What is the length of the journey (in Km)?
Ans	<input checked="" type="checkbox"/> 1. 1435
	<input checked="" type="checkbox"/> 2. 1423
	<input checked="" type="checkbox"/> 3. 1416
	<input checked="" type="checkbox"/> 4. 1425
Q.52	Which of the following statements accurately describes the role of moral suasion in controlling money?
Ans	<input checked="" type="checkbox"/> 1. It is a combination of persuasion and pressure used by the RBI to influence banks' lending behaviour.
	<input checked="" type="checkbox"/> 2. It is a direct tool used by the RBI to control the money supply by setting interest rates.
	<input checked="" type="checkbox"/> 3. It refers to the variation in the statutory liquidity ratio to regulate the allocation of bank credit.
	<input checked="" type="checkbox"/> 4. It involves the sale and purchase of government securities to influence the money supply.
Q.53	Kamal starts from Point A and drives 17 km towards south. He then takes a left turn, drives 13 km, turns left and drives 21 km. He then takes a left turn and drives 18 km. He takes a final left turn, drives 4 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° turns only unless specified.)
Ans	<input checked="" type="checkbox"/> 1. 3 km to the east
	<input checked="" type="checkbox"/> 2. 5 km to the east
	<input checked="" type="checkbox"/> 3. 4 km to the east
	<input checked="" type="checkbox"/> 4. 6 km to the east
Q.54	The dark blue colour in the pH scale refers to _____.
Ans	<input checked="" type="checkbox"/> 1. strong acidic solution
	<input checked="" type="checkbox"/> 2. weak basic solution
	<input checked="" type="checkbox"/> 3. neutral solution
	<input checked="" type="checkbox"/> 4. strong basic solution

Q.55	What is the pH range of a strongly acidic solution?
Ans	<input checked="" type="checkbox"/> 1. 7-8 <input checked="" type="checkbox"/> 2. 0-3 <input checked="" type="checkbox"/> 3. 12-14 <input checked="" type="checkbox"/> 4. 10-11
Q.56	Which of the following is the product of the neutralisation of hydrochloric acid (HCl) with sodium hydroxide (NaOH)?
Ans	<input checked="" type="checkbox"/> 1. Sodium hydroxide and hydrochloric acid <input checked="" type="checkbox"/> 2. Sodium chloride and water <input checked="" type="checkbox"/> 3. Sodium chloride and hydrogen gas <input checked="" type="checkbox"/> 4. Sodium hydroxide and water
Q.57	Which of the following released the fourth edition of SDG India Index 2023-24?
Ans	<input checked="" type="checkbox"/> 1. National Institute for Transforming India <input checked="" type="checkbox"/> 2. National Commission for Women <input checked="" type="checkbox"/> 3. National Commission of Backward Classes <input checked="" type="checkbox"/> 4. National Crime Record Bureau
Q.58	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? 93 D 7 B 5 C (69 A 3) C 26 = ?
Ans	<input checked="" type="checkbox"/> 1. 75 <input checked="" type="checkbox"/> 2. 122 <input checked="" type="checkbox"/> 3. 93 <input checked="" type="checkbox"/> 4. 107
Q.59	Washing soda ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) is obtained from which compound in the Solvay process?
Ans	<input checked="" type="checkbox"/> 1. Sodium chloride <input checked="" type="checkbox"/> 2. Sodium hydroxide <input checked="" type="checkbox"/> 3. Sodium bicarbonate <input checked="" type="checkbox"/> 4. Sodium sulphate

Q.60 Study the given diagram carefully and answer the question that follows. The numbers in different sections indicate the number of persons.



How many such policemen exist that are also Indians and footballers?

Ans

- 1. 5
- 2. 2
- 3. 12
- 4. 3

Q.61 Two taps can fill a cistern in 2 hours and 54 hours respectively. A third tap can empty it in 54 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

Ans

- 1. 3
- 2. 5
- 3. 2
- 4. 4

Q.62 In the following number-pairs, the second number is obtained by applying certain mathematical operations to the first number. 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.)

37.4, 34.6
45, 42.2

Ans

- 1. 32.9, 29.1
- 2. 69, 66.2
- 3. 21.5, 17.7
- 4. 58, 56.2

Q.63 What is the primary purpose of an electric fuse in a household circuit?

Ans

- 1. To reduce resistance in the circuit
- 2. To increase current flow
- 3. To regulate voltage supply
- 4. To prevent overloading and short circuits

Q.64 A shopkeeper lists the price of a fan at 20% above its cost price and offers a 10% discount on its list price. If he earns a profit of ₹150, then what is the list price (in ₹) of the fan?

Ans

- 1. 2054
- 2. 1969
- 3. 2250
- 4. 2172

Q.65 What are regenerative cells used by Hydra for?

Ans

- 1. Hydra uses regenerative cells for reproduction by sexual reproduction.
- 2. Hydra uses regenerative cells for reproduction by spore formation.
- 3. Hydra uses regenerative cells for reproduction by fragmentation.
- 4. Hydra uses regenerative cells for reproduction by budding.

Q.66 The commutator in an electric motor is used to:

Ans

- 1. change the direction of the magnetic field
- 2. maintain the magnetic field in the circuit
- 3. maintain the potential difference in the circuit
- 4. reverse the direction of current flowing through the coil

Q.67 What is the power rating of a device that draws 1.75 A of current when connected to a 180-V source?

Ans

- 1. 105 W
- 2. 315 W
- 3. 225 W
- 4. 440 W

Q.68 The marks scored by 10 students are given below.

17, 16, 12, 16, 15, 16, 13, 14, 13, 20

The mode of the data is:

Ans

- 1. 16
- 2. 18
- 3. 12
- 4. 17

Q.69 There are total 120 students in three sections A, B and C of Class 10. The average marks of the three sections is 85. The average marks of section B and C is 88 and the average marks of section A is 78. Find the number of students in section A.

Ans

- 1. 36
- 2. 28
- 3. 33
- 4. 24

Q.70 The cost of a washing machine is 75% less than the cost of a TV. If the cost of the washing machine increases by 77% and that of the TV decreases by 27%, then what is the change in the total cost of 8 washing machines and 2 TVs?

Ans

- 1. Increase by 31%
- 2. Increase by 25%
- 3. Decrease by 22%
- 4. Decrease by 29%

Q.71	Who is the author of 'The Great Indian Novel,' published in 2011?
Ans	<input checked="" type="checkbox"/> 1. Shashi Tharoor <input type="checkbox"/> 2. Kiran Nagarkar <input type="checkbox"/> 3. Arundhati Roy <input type="checkbox"/> 4. Vikram Seth
Q.72	<p>Refer to the following number and symbol series and answer the question that follows. (Counting to be done from left to right only.) (Left) @ 2 # 2 4 3 = % 8 * 1 8 @ \$ 4 ! 6 4 3 * 8 = (Right) How many such numbers are there, each of which is immediately preceded by and also immediately followed by a symbol?</p> <p>Ans</p> <p> <input type="checkbox"/> 1. Three <input type="checkbox"/> 2. One <input checked="" type="checkbox"/> 3. Four <input type="checkbox"/> 4. Five </p>
Q.73	Which of the following committees suggested that the 'duty to pay taxes' should also be a Fundamental Duty of the Indian citizen?
Ans	<input type="checkbox"/> 1. Santhanam Committee <input checked="" type="checkbox"/> 2. Swaran Singh Committee <input type="checkbox"/> 3. Justice JS Verma Committee <input type="checkbox"/> 4. Sarkaria Commission
Q.74	Which of the following rules is used to determine the direction of the force on a current-carrying conductor in an electric motor?
Ans	<input type="checkbox"/> 1. Fleming's Right-Hand Rule <input type="checkbox"/> 2. Ampere's Law <input type="checkbox"/> 3. Right-Hand Thumb Rule <input checked="" type="checkbox"/> 4. Fleming's Left-Hand Rule
Q.75	A shopkeeper bought an article for ₹740. At what price (in ₹) should he sell the article to make 20% profit?
Ans	<input type="checkbox"/> 1. 876 <input type="checkbox"/> 2. 900 <input type="checkbox"/> 3. 592 <input checked="" type="checkbox"/> 4. 888
Q.76	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	<input type="checkbox"/> 1. CFLP <input checked="" type="checkbox"/> 2. RUAF <input type="checkbox"/> 3. TWCG <input type="checkbox"/> 4. HKQU
Q.77	Which of the following countries hosted the first business summit of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) in 2024?
Ans	<input type="checkbox"/> 1. Kathmandu, Nepal <input type="checkbox"/> 2. Thimphu, Bhutan <input type="checkbox"/> 3. Dhaka, Bangladesh <input checked="" type="checkbox"/> 4. New Delhi, India

Q.78 Six students are sitting around a circular table facing the centre. L is an immediate neighbour of both J and H. I is sitting second to the left of J. K is sitting third to the right of H. G is an immediate neighbour of both I and H. The position of how many persons will remain unchanged if all persons are arranged in English alphabetical order in clockwise direction, starting from G (including G)?

Ans 1. One

2. Two

3. Three

4. Four

Q.79 Write the expanded form of $(8a + 3b + 9c)^2$.

Ans 1. $64a^2 + 9b^2 + 81c^2 + 48ab + 54bc + 144ac$

2. $64a^2 + 9b^2 + 81c^2 + 52ab + 54bc + 144ac$

3. $64a^2 + 9b^2 + 81c^2 + 48ab + 54bc + 154ac$

4. $64a^2 + 9b^2 + 81c^2 + 48ab + 49bc + 144ac$

Q.80 Radhika travels a distance of 230 km with speed of 46 km/h and 400 km with 100 km/h by her car. Find the average speed (in km/h) of Radhika.

Ans 1. 70

2. 75

3. 72

4. 80

Q.81 Why is bleaching powder used for disinfecting drinking water?

Ans 1. It reduces the hardness of water.

2. It neutralises the water.

3. It provides an acidic medium.

4. It releases chlorine, which kills germs.

Q.82 Write the expanded form of $(4a + 9b + 5c)^2$.

Ans 1. $16a^2 + 81b^2 + 25c^2 + 76ab + 90bc + 40ac$

2. $16a^2 + 81b^2 + 25c^2 + 72ab + 90bc + 40ac$

3. $16a^2 + 81b^2 + 25c^2 + 72ab + 90bc + 50ac$

4. $16a^2 + 81b^2 + 25c^2 + 72ab + 85bc + 40ac$

Q.83 The first session of Indian National Congress took place at which of the following places?

Ans 1. Bombay

2. Lahore

3. Calcutta

4. Allahabad

Q.84 The power in a circuit having voltage V and current I during time interval t is:

Ans 1. V/I

2. $I \times V$

3. $(I \times t)/V$

4. I/V

Q.85 Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number result(s) in the second number. Similarly, certain mathematical operation(s) on the second number result(s) in the third number and so on. Which of the given options follows the same set of operations as in the given sets?

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

16 – 17 – 21 – 30; 13 – 14 – 18 – 27

Ans

- 1. 24 – 25 – 29 – 42
- 2. 15 – 16 – 20 – 26
- 3. 11 – 12 – 16 – 18
- 4. 22 – 23 – 27 – 36

Q.86 The area of a square plot is 289 m^2 . The length of each side of the plot (in m) is:

Ans

- 1. 27
- 2. 11
- 3. 17
- 4. 7

Q.87 Which of the following letter-clusters should replace # and % so that the pattern and relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?
: OKR :: XTA : %

Ans

- 1. # = KGN, % = BXP
- 2. # = KGN, % = BXE
- 3. # = KGN, % = FXE
- 4. # = KLN, % = BXE

Q.88 Who among the following secured a gold medal for India at the Paris Paralympics 2024?

Ans

- 1. Nishad Kumar
- 2. Preethi Pal
- 3. Mona Agarwal
- 4. Avani Lekhara

Q.89 In a parallel circuit, how does the voltage across each resistor compare to the total voltage supplied by the battery?

Ans

- 1. It is the same for each resistor.
- 2. It is inversely proportional to the resistance.
- 3. It is zero.
- 4. It is divided according to the resistance values.

Q.90 As of 30 September 2024, how many Jan Aushadhi Kendras have been established by the Government of India across the country?

Ans

- 1. 13,822
- 2. 14,822
- 3. 12,822
- 4. 11,822

Q.91	If third proportional of 12 and 24 be x, then what is the value of x?
Ans	<input checked="" type="checkbox"/> 1. 45
	<input checked="" type="checkbox"/> 2. 49
	<input checked="" type="checkbox"/> 3. 50
	<input checked="" type="checkbox"/> 4. 48
Q.92	An emf is induced whenever there is a change in the magnetic field linked with electric circuits. This is stated by the:
Ans	<input checked="" type="checkbox"/> 1. Ohm's law
	<input checked="" type="checkbox"/> 2. Gravitation law
	<input checked="" type="checkbox"/> 3. Newton's law
	<input checked="" type="checkbox"/> 4. Faraday's law
Q.93	Which of the following reactions does NOT represent a neutralisation reaction?
Ans	<input checked="" type="checkbox"/> 1. $\text{H}_2\text{SO}_4 + \text{Ca}(\text{OH})_2 \rightarrow \text{CaSO}_4 + 2\text{H}_2\text{O}$
	<input checked="" type="checkbox"/> 2. $\text{CH}_3\text{COOH} + \text{NaOH} \rightarrow \text{CH}_3\text{COONa} + \text{H}_2\text{O}$
	<input checked="" type="checkbox"/> 3. $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
	<input checked="" type="checkbox"/> 4. $\text{Na}_2\text{CO}_3 + \text{HCl} \rightarrow \text{NaCl} + \text{CO}_2 + \text{H}_2\text{O}$
Q.94	Two pieces of cloth measure 96 metres and 144 metres in length. What is the maximum length of cloth that can be cut equally from both pieces without any remainder?
Ans	<input checked="" type="checkbox"/> 1. 96 metres
	<input checked="" type="checkbox"/> 2. 24 metres
	<input checked="" type="checkbox"/> 3. 12 metres
	<input checked="" type="checkbox"/> 4. 48 metres
Q.95	Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only. (Left) \$ 7 @ 6 = & 5 \Omega 4 > # 8 & % 9 1 * £ 3 (Right) How many such symbols are there each of which is immediately preceded by a number and also immediately followed by another number?
Ans	<input checked="" type="checkbox"/> 1. Three
	<input checked="" type="checkbox"/> 2. Four
	<input checked="" type="checkbox"/> 3. One
	<input checked="" type="checkbox"/> 4. Two
Q.96	If in a code language, If 'A' stands for '÷', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '−', then the resultant of which of the following would be 55?
Ans	<input checked="" type="checkbox"/> 1. 16 D 112 A 63 C 77 B 31
	<input checked="" type="checkbox"/> 2. 16 A 112 B 63 C 77 D 31
	<input checked="" type="checkbox"/> 3. 16 B 112 C 63 A 77 D 31
	<input checked="" type="checkbox"/> 4. 16 C 112 D 63 A 77 B 31
Q.97	What should come in place of the question mark (?) in the given series? 17 22 37 62 97 ?
Ans	<input checked="" type="checkbox"/> 1. 137
	<input checked="" type="checkbox"/> 2. 140
	<input checked="" type="checkbox"/> 3. 142
	<input checked="" type="checkbox"/> 4. 148

Q.98	If a child inherits an Y chromosome from the father, what will be the sex of the child?
Ans	<input checked="" type="checkbox"/> 1. Female
	<input checked="" type="checkbox"/> 2. Male
	<input checked="" type="checkbox"/> 3. Hermaphrodite
	<input checked="" type="checkbox"/> 4. Cannot be determined
Q.99	Komal invested a sum of ₹5000 at 20% per annum compound interest, compounded annually. If she received an amount of ₹8640 after n years, the value of n is:
Ans	<input checked="" type="checkbox"/> 1. 3.5
	<input checked="" type="checkbox"/> 2. 4
	<input checked="" type="checkbox"/> 3. 3
	<input checked="" type="checkbox"/> 4. 2.5
Q.100	50 men can do a piece of work in 12 days. The number of men required to complete the same work in 50 days is:
Ans	<input checked="" type="checkbox"/> 1. 12
	<input checked="" type="checkbox"/> 2. 11
	<input checked="" type="checkbox"/> 3. 19
	<input checked="" type="checkbox"/> 4. 15

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