



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



Test Center Name	iON Digital Zone iDZ Arunodaya Nagar
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.

- Options shown in green color with a tick icon are correct.
- 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 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.2 What should come in place of the question mark (?) in the given series?
1 13 28 46 67 ?

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

Q.3 An emf is induced whenever there is a change in the magnetic field linked with electric circuits. This is stated by the:

- Ans
- 1. Ohm's law
 - 2. Newton's law
 - 3. Faraday's law
 - 4. Gravitation law

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

Q.5	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	<input type="checkbox"/> 1. 1969
	<input type="checkbox"/> 2. 2054
	<input type="checkbox"/> 3. 2172
	<input checked="" type="checkbox"/> 4. 2250

Q.6	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	<input checked="" type="checkbox"/> 1. Mother's sister
	<input type="checkbox"/> 2. Mother's mother
	<input type="checkbox"/> 3. Mother
	<input type="checkbox"/> 4. Sister

Q.7	Which of the following reactions does NOT represent a neutralisation reaction?
Ans	<input checked="" type="checkbox"/> 1. $\text{Na}_2\text{CO}_3 + \text{HCl} \rightarrow \text{NaCl} + \text{CO}_2 + \text{H}_2\text{O}$
	<input type="checkbox"/> 2. $\text{CH}_3\text{COOH} + \text{NaOH} \rightarrow \text{CH}_3\text{COONa} + \text{H}_2\text{O}$
	<input type="checkbox"/> 3. $\text{H}_2\text{SO}_4 + \text{Ca}(\text{OH})_2 \rightarrow \text{CaSO}_4 + 2\text{H}_2\text{O}$
	<input type="checkbox"/> 4. $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

Q.8	Who among the following is India's first civilian space tourist?
Ans	<input type="checkbox"/> 1. Prasanth Balakrishnan Nair
	<input type="checkbox"/> 2. Ajit Krishnan
	<input checked="" type="checkbox"/> 3. Gopichand Thotakura
	<input type="checkbox"/> 4. Shubhanshu Shukla

Q.9	The commutator in an electric motor is used to:
Ans	<input type="checkbox"/> 1. maintain the potential difference in the circuit
	<input type="checkbox"/> 2. maintain the magnetic field in the circuit
	<input checked="" type="checkbox"/> 3. reverse the direction of current flowing through the coil
	<input type="checkbox"/> 4. change the direction of the magnetic field

Q.1	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	<input checked="" type="checkbox"/> 1. 51
	<input type="checkbox"/> 2. 55
	<input type="checkbox"/> 3. 53
	<input type="checkbox"/> 4. 48

Q.1	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. 900
	<input type="checkbox"/> 2. 876
	<input type="checkbox"/> 3. 592
	<input checked="" type="checkbox"/> 4. 888

Q.1 2	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	<input type="checkbox"/> 1. MEPW
	<input type="checkbox"/> 2. MWEP
	<input checked="" type="checkbox"/> 3. MEWP
	<input type="checkbox"/> 4. MWPE

Q.1 3	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 type="checkbox"/> 1. 36
	<input checked="" type="checkbox"/> 2. 35
	<input type="checkbox"/> 3. 34
	<input type="checkbox"/> 4. 33

Q.1 4	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	<input checked="" type="checkbox"/> 1. Data in statement II alone is sufficient to answer the question while data in statement I is not.
	<input type="checkbox"/> 2. Data in statement I alone is sufficient to answer the question while data in statement II is not.
	<input type="checkbox"/> 3. Data in statements I and II together are not sufficient to answer the question.
	<input type="checkbox"/> 4. Data in statements I and II together are sufficient to answer the question.

Q.1 5	Write the expanded form of $(8a + 3b + 9c)^2$.
Ans	<input checked="" type="checkbox"/> 1. $64a^2 + 9b^2 + 81c^2 + 48ab + 54bc + 144ac$
	<input type="checkbox"/> 2. $64a^2 + 9b^2 + 81c^2 + 48ab + 49bc + 144ac$
	<input type="checkbox"/> 3. $64a^2 + 9b^2 + 81c^2 + 48ab + 54bc + 154ac$
	<input type="checkbox"/> 4. $64a^2 + 9b^2 + 81c^2 + 52ab + 54bc + 144ac$

Q.1 6	Chaitanya Mahaprabhu was related to which of the following religious sects?
Ans	<input checked="" type="checkbox"/> 1. Vaishnava
	<input type="checkbox"/> 2. Shaiva
	<input type="checkbox"/> 3. Kapalika
	<input type="checkbox"/> 4. Tantra

Q.1 7	A number when increased by 50 %, gives 2820. The number is:
Ans	<input type="checkbox"/> 1. 940
	<input type="checkbox"/> 2. 3760
	<input checked="" type="checkbox"/> 3. 1880
	<input type="checkbox"/> 4. 5640

Q.1 8	Who among the following secured a gold medal for India at the Paris Paralympics 2024?
Ans	<input type="checkbox"/> 1. Nishad Kumar
	<input checked="" type="checkbox"/> 2. Avani Lekhara
	<input type="checkbox"/> 3. Mona Agarwal
	<input type="checkbox"/> 4. Preethi Pal

Q.1 9	What are regenerative cells used by Hydra for?
Ans	<input type="checkbox"/> 1. Hydra uses regenerative cells for reproduction by spore formation.
	<input type="checkbox"/> 2. Hydra uses regenerative cells for reproduction by fragmentation.
	<input checked="" type="checkbox"/> 3. Hydra uses regenerative cells for reproduction by budding.
	<input type="checkbox"/> 4. Hydra uses regenerative cells for reproduction by sexual reproduction.

Q.2 0	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	<input checked="" type="checkbox"/> 1. na sy
	<input type="checkbox"/> 2. mh na
	<input type="checkbox"/> 3. sy ki
	<input type="checkbox"/> 4. tu na

Q.2 1	Which of the following reactions represents the combustion of methane?
Ans	<input checked="" type="checkbox"/> 1. $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$
	<input type="checkbox"/> 2. $\text{CH}_4 + \text{Cl}_2 \rightarrow \text{CH}_3\text{Cl} + \text{HCl}$
	<input type="checkbox"/> 3. $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO} + \text{H}_2\text{O}$
	<input type="checkbox"/> 4. $\text{CH}_4 + \text{H}_2\text{O} \rightarrow \text{CO} + \text{H}_2$

Q.2 2	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. 5 km to the east
	<input type="checkbox"/> 2. 3 km to the east
	<input type="checkbox"/> 3. 6 km to the east
	<input type="checkbox"/> 4. 4 km to the east

Q.2 3	What should come in place of the question mark (?) in the given series based on the English alphabetical order? ONL AZX MLJ YXV ?
Ans	<input type="checkbox"/> 1. JHK
	<input type="checkbox"/> 2. JKH
	<input checked="" type="checkbox"/> 3. KJH
	<input type="checkbox"/> 4. KHJ

Q.2 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. 11 – 12 – 16 – 18

2. 24 – 25 – 29 – 42

3. 15 – 16 – 20 – 26

4. 22 – 23 – 27 – 36

Q.2 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. 5

2. 4

3. 3

4. 2

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

6

Ans 1. $81a^2 + 16b^2 + 25c^2 + 72ab + 35bc + 90ac$

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

3. $81a^2 + 16b^2 + 25c^2 + 72ab + 40bc + 100ac$

4. $81a^2 + 16b^2 + 25c^2 + 76ab + 40bc + 90ac$

Q.2 If a child inherits an Y chromosome from the father, what will be the sex of the child?

7

Ans 1. Hermaphrodite

2. Female

3. Male

4. Cannot be determined

Q.2 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:

8

Ans 1. 4

2. 3.5

3. 3

4. 2.5

Q.2 If the three angles of a quadrilateral are 70° , 85° and 95° , then find the fourth angle.

9

Ans 1. 105°

2. 110°

3. 100°

4. 115°

Q.3 0	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 type="checkbox"/> 1. 96 metres
	<input type="checkbox"/> 2. 24 metres
	<input type="checkbox"/> 3. 12 metres
	<input checked="" type="checkbox"/> 4. 48 metres

Q.3 1	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. Ampere's Law
	<input type="checkbox"/> 2. Right-Hand Thumb Rule
	<input type="checkbox"/> 3. Fleming's Right-Hand Rule
	<input checked="" type="checkbox"/> 4. Fleming's Left-Hand Rule

Q.3 2	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. 1425
	<input type="checkbox"/> 2. 1416
	<input type="checkbox"/> 3. 1423
	<input type="checkbox"/> 4. 1435

Q.3 3	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 type="checkbox"/> 1. 19
	<input type="checkbox"/> 2. 11
	<input type="checkbox"/> 3. 15
	<input checked="" type="checkbox"/> 4. 12

Q.3 4	Which of the following is the product of the neutralisation of hydrochloric acid (HCl) with sodium hydroxide (NaOH)?
Ans	<input type="checkbox"/> 1. Sodium chloride and hydrogen gas
	<input type="checkbox"/> 2. Sodium hydroxide and water
	<input type="checkbox"/> 3. Sodium hydroxide and hydrochloric acid
	<input checked="" type="checkbox"/> 4. Sodium chloride and water

Q.3 5	Match the following rivers with their tributaries.								
	<table border="1"> <thead> <tr> <th>Rivers</th> <th>Tributaries</th> </tr> </thead> <tbody> <tr> <td>1. Brahmaputra</td> <td>a. Betwa</td> </tr> <tr> <td>2. Indus</td> <td>b. Chenab</td> </tr> <tr> <td>3. Yamuna</td> <td>c. Dibang</td> </tr> </tbody> </table>	Rivers	Tributaries	1. Brahmaputra	a. Betwa	2. Indus	b. Chenab	3. Yamuna	c. Dibang
Rivers	Tributaries								
1. Brahmaputra	a. Betwa								
2. Indus	b. Chenab								
3. Yamuna	c. Dibang								
Ans	<input type="checkbox"/> 1. 1-b, 2-c, 3-a								
	<input type="checkbox"/> 2. 1-c, 2-a, 3-b								
	<input checked="" type="checkbox"/> 3. 1-c, 2-b, 3-a								
	<input type="checkbox"/> 4. 1-a, 2-b, 3-c								

Q.3 6	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 type="checkbox"/> 2. National Commission for Women
	<input type="checkbox"/> 3. National Crime Record Bureau
	<input type="checkbox"/> 4. National Commission of Backward Classes

Q.3 7	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	<input type="checkbox"/> 1. 64
	<input type="checkbox"/> 2. 84
	<input type="checkbox"/> 3. 60
	<input checked="" type="checkbox"/> 4. 72

Q.3 8	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 type="checkbox"/> 1. 16 B 112 C 63 A 77 D 31
	<input type="checkbox"/> 2. 16 D 112 A 63 C 77 B 31
	<input type="checkbox"/> 3. 16 C 112 D 63 A 77 B 31
	<input checked="" type="checkbox"/> 4. 16 A 112 B 63 C 77 D 31

Q.3 9	Which of the following is NOT an agent of dispersal of seeds?
Ans	<input type="checkbox"/> 1. Wind
	<input checked="" type="checkbox"/> 2. Sunlight
	<input type="checkbox"/> 3. Animal
	<input type="checkbox"/> 4. Water

Q.4 0	What is the process by which sodium hydroxide is prepared?
Ans	<input type="checkbox"/> 1. Solvay's process
	<input checked="" type="checkbox"/> 2. Chlor-alkali process
	<input type="checkbox"/> 3. Contact process
	<input type="checkbox"/> 4. Haber's process

Q.4 1	What is the pH range of a strongly acidic solution?
Ans	<input type="checkbox"/> 1. 12-14
	<input checked="" type="checkbox"/> 2. 0-3
	<input type="checkbox"/> 3. 7-8
	<input type="checkbox"/> 4. 10-11

Q.4 2	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	<input type="checkbox"/> 1. HUNT - HTUN - HNTU
	<input checked="" type="checkbox"/> 2. MUGS - UGSM - GSMU
	<input type="checkbox"/> 3. FLIP - LIFP - FPLI
	<input type="checkbox"/> 4. LAST - TLAS - STLA

Q.4 3	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	<input type="checkbox"/> 1. 72
	<input type="checkbox"/> 2. 80
	<input checked="" type="checkbox"/> 3. 70
	<input type="checkbox"/> 4. 75

Q.4 4	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?
Ans	<input type="checkbox"/> 1. One
	<input checked="" type="checkbox"/> 2. Four
	<input type="checkbox"/> 3. Three
	<input type="checkbox"/> 4. Five

Q.4 5	What should come in place of the question mark (?) in the given series? 17 22 37 62 97 ?
Ans	<input type="checkbox"/> 1. 137
	<input type="checkbox"/> 2. 140
	<input checked="" type="checkbox"/> 3. 142
	<input type="checkbox"/> 4. 148

Q.4 6	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 type="checkbox"/> 2. ZWX
	<input type="checkbox"/> 3. VST
	<input type="checkbox"/> 4. NKL

Q.4 7	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 type="checkbox"/> 2. It refers to the variation in the statutory liquidity ratio to regulate the allocation of bank credit.
	<input type="checkbox"/> 3. It is a direct tool used by the RBI to control the money supply by setting interest rates.
	<input type="checkbox"/> 4. It involves the sale and purchase of government securities to influence the money supply.

Q.4 8	What determines the sex of a child in humans?
Ans	<input checked="" type="checkbox"/> 1. Genetic constitution
	<input type="checkbox"/> 2. Environmental cues
	<input type="checkbox"/> 3. The temperature at which fertilised eggs are placed
	<input type="checkbox"/> 4. The fate of the embryo

Q.4 9	Which of the following is a natural ecosystem?
Ans	<input type="checkbox"/> 1. Crop field
	<input type="checkbox"/> 2. Aquarium
	<input type="checkbox"/> 3. Garden
	<input checked="" type="checkbox"/> 4. Forest

Q.5 The magnetic field inside a long, straight solenoid carrying current is _____.

0

Ans 1. zero

2. uniform and parallel to the axis of the solenoid

3. inversely proportional to the current

4. stronger near the edges

Q.5 On oxidation, silver changes its colour to _____ and copper changes its colour to _____.

1

Ans 1. grey; green

2. black; green

3. black; blue

4. grey; blue

Q.5 Which of the following articles deals with the Finance Commission that distributes taxes between the Centre and State?

2

Ans 1. Article 280

2. Article 282

3. Article 283

4. Article 281

Q.5 The dark blue colour in the pH scale refers to _____.

3

Ans 1. neutral solution

2. strong acidic solution

3. strong basic solution

4. weak basic solution

Q.5 $(1 + \sin A)(1 - \sin A)(1 + \tan^2 A)$ is equal to:

4

Ans 1. $\cos A$

2. 0

3. 1

4. $\tan A$

Q.5 Find the value of $K^2 - 3K$, for which the number 58K764 is divisible by 11.

5

Ans 1. 60

2. 52

3. 40

4. 48

Q.5 What is the average of all the natural numbers from 1 to 91?

6

Ans 1. 46.5

2. 45.5

3. 47

4. 46

Q.5	Who is the author of 'The Great Indian Novel,' published in 2011?
7	
Ans	<input type="checkbox"/> 1. Kiran Nagarkar
	<input checked="" type="checkbox"/> 2. Shashi Tharoor
	<input type="checkbox"/> 3. Vikram Seth
	<input type="checkbox"/> 4. Arundhati Roy

Q.5	If third proportional of 12 and 24 be x, then what is the value of x?
8	
Ans	<input type="checkbox"/> 1. 50
	<input checked="" type="checkbox"/> 2. 48
	<input type="checkbox"/> 3. 45
	<input type="checkbox"/> 4. 49

Q.5	Which of the following committees suggested that the 'duty to pay taxes' should also be a Fundamental Duty of the Indian citizen?
9	
Ans	<input type="checkbox"/> 1. Sarkaria Commission
	<input type="checkbox"/> 2. Justice JS Verma Committee
	<input checked="" type="checkbox"/> 3. Swaran Singh Committee
	<input type="checkbox"/> 4. Santhanam Committee

Q.6	Evaluate: $16 + 16 \div 4 - 3 \times 3$
0	
Ans	<input type="checkbox"/> 1. 13
	<input checked="" type="checkbox"/> 2. 11
	<input type="checkbox"/> 3. 14
	<input type="checkbox"/> 4. 10

Q.6	What property of carbon allows it to form long chains and rings?
1	
Ans	<input type="checkbox"/> 1. Ability to form stable bonds with other elements
	<input type="checkbox"/> 2. Tendency to form single bonds
	<input checked="" type="checkbox"/> 3. Ability to form multiple bonds
	<input type="checkbox"/> 4. Ability to form covalent bonds

Q.6	The power in a circuit having voltage V and current I during time interval t is:
2	
Ans	<input type="checkbox"/> 1. I/V
	<input type="checkbox"/> 2. $(I \times t)/V$
	<input checked="" type="checkbox"/> 3. $I \times V$
	<input type="checkbox"/> 4. V/I

Q.6	Which of the following materials is likely to be non-biodegradable?
3	
Ans	<input type="checkbox"/> 1. Wood
	<input type="checkbox"/> 2. Vegetable peels
	<input checked="" type="checkbox"/> 3. Plastic
	<input type="checkbox"/> 4. Paper

Q.6 4	In a parallel circuit, how does the voltage across each resistor compare to the total voltage supplied by the battery?
Ans	<input type="checkbox"/> 1. It is divided according to the resistance values.
	<input type="checkbox"/> 2. It is zero.
	<input type="checkbox"/> 3. It is inversely proportional to the resistance.
	<input checked="" type="checkbox"/> 4. It is the same for each resistor.

Q.6 5	What is the relationship between current (I), power (P), and voltage (V)?
Ans	<input type="checkbox"/> 1. $I = PV$
	<input type="checkbox"/> 2. $I = P^2V$
	<input type="checkbox"/> 3. $I = V \div P$
	<input checked="" type="checkbox"/> 4. $I = P \div V$

Q.6 6	Which of the following is an effective method to reduce plastic waste?
Ans	<input type="checkbox"/> 1. Using disposable plastic bags
	<input type="checkbox"/> 2. Burning plastic waste
	<input type="checkbox"/> 3. Dumping plastic waste in landfills
	<input checked="" type="checkbox"/> 4. Recycling and reusing plastic materials

Q.6 7	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	<input type="checkbox"/> 1. 12
	<input checked="" type="checkbox"/> 2. 16
	<input type="checkbox"/> 3. 18
	<input type="checkbox"/> 4. 17

Q.6 8	What is the average of all the natural numbers from 1 to 92?
Ans	<input type="checkbox"/> 1. 46
	<input checked="" type="checkbox"/> 2. 46.5
	<input type="checkbox"/> 3. 47
	<input type="checkbox"/> 4. 47.5

Q.6 9	Which of the following is a method of reproduction in plants, where only a single parent is involved?
Ans	<input type="checkbox"/> 1. Sexual reproduction
	<input checked="" type="checkbox"/> 2. Asexual reproduction
	<input type="checkbox"/> 3. Fertilisation
	<input type="checkbox"/> 4. Pollination

Q.7 0	If 'A' stands for '+', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-', what will come in place of the question mark (?) in the following equation? $93 D 7 B 5 C (69 A 3) C 26 = ?$
Ans	<input type="checkbox"/> 1. 75
	<input type="checkbox"/> 2. 122
	<input type="checkbox"/> 3. 93
	<input checked="" type="checkbox"/> 4. 107

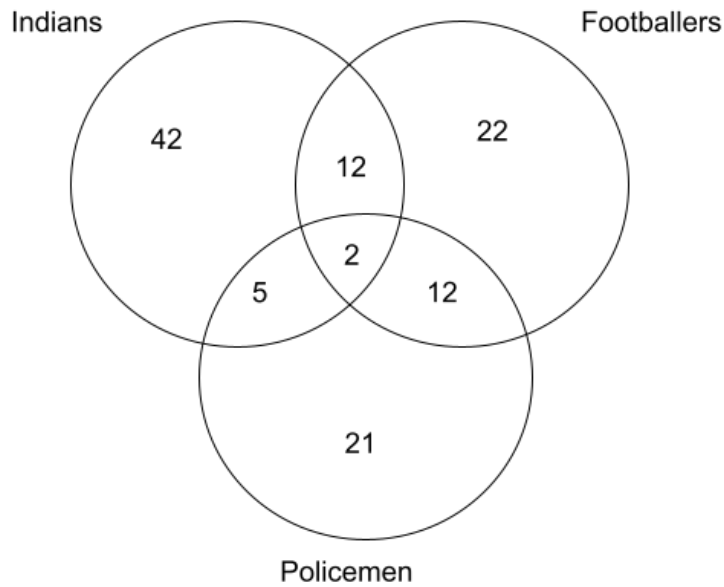
Q.7 1	B, C, D, F and H have different marks. Only one person has scored between C and D. Only one person has scored between H and D. F has scored less than C and D. How many people have scored less than B?
Ans	<input checked="" type="checkbox"/> 1. Three <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. One <input type="checkbox"/> 4. Four

Q.7 2	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 checked="" type="checkbox"/> 1. RUAF <input type="checkbox"/> 2. HKQU <input type="checkbox"/> 3. TWCG <input type="checkbox"/> 4. CFLP

Q.7 3	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	<input type="checkbox"/> 1. 2672 <input type="checkbox"/> 2. 2690 <input checked="" type="checkbox"/> 3. 2688 <input type="checkbox"/> 4. 2675

Q.7 4	Hritik ranked 20 th from the bottom and 30 th from the top in his class. How many students are there in his class?
Ans	<input type="checkbox"/> 1. 45 <input type="checkbox"/> 2. 34 <input type="checkbox"/> 3. 47 <input checked="" type="checkbox"/> 4. 49

Q.7 Study the given diagram carefully and answer the question that follows. The numbers
5 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.7 What is the power rating of a device that draws 1.75 A of current when connected to a
6 180-V source?

Ans 1. 440 W

2. 315 W

3. 225 W

4. 105 W

Q.7 Which of the following articles deal with the provisions regarding the election,
7 qualification, and removal of the Vice-President of India?

Ans 1. Article 224 - 245

2. Article 68 - 75

3. Article 78 - 80

4. Article 63 - 71

Q.7 Find the median of the data given below.

8

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

Ans 1. 89

2. 60

3. 110

4. 100

Q.7 9	As of 30 September 2024, how many Jan Aushadhi Kendras have been established by the Government of India across the country?
Ans	<input type="checkbox"/> 1. 12,822
	<input checked="" type="checkbox"/> 2. 13,822
	<input type="checkbox"/> 3. 14,822
	<input type="checkbox"/> 4. 11,822

Q.8 0	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	<input type="checkbox"/> 1. # = KGN, % = FXE
	<input type="checkbox"/> 2. # = KLN, % = BXE
	<input type="checkbox"/> 3. # = KGN, % = BXP
	<input checked="" type="checkbox"/> 4. # = KGN, % = BXE

Q.8 1	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 Ω 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 type="checkbox"/> 1. One
	<input checked="" type="checkbox"/> 2. Two
	<input type="checkbox"/> 3. Three
	<input type="checkbox"/> 4. Four

Q.8 2	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 type="checkbox"/> 1. Sodium chloride
	<input checked="" type="checkbox"/> 2. Sodium bicarbonate
	<input type="checkbox"/> 3. Sodium hydroxide
	<input type="checkbox"/> 4. Sodium sulphate

Q.8 3	Where is the Taj Mahotsav held?
Ans	<input type="checkbox"/> 1. Near the Western gate of Taj Mahal
	<input checked="" type="checkbox"/> 2. Near the Eastern gate of Taj Mahal
	<input type="checkbox"/> 3. In Fatehpur Sikri
	<input type="checkbox"/> 4. In Agra Fort

Q.8 4	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	<input type="checkbox"/> 1. EXS 175
	<input checked="" type="checkbox"/> 2. EZX 175
	<input type="checkbox"/> 3. YXS 175
	<input type="checkbox"/> 4. EXO 175

Q.8 5	Self pollination is possible only in:
Ans	<input type="checkbox"/> 1. unisexual flowers with stamen maturing first
	<input checked="" type="checkbox"/> 2. bisexual flowers with both stamens and pistil maturing at the same time
	<input type="checkbox"/> 3. bisexual flowers with both stamens and pistil maturing at the different time
	<input type="checkbox"/> 4. unisexual flowers with pistil maturing first

Q.8 6	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	<input type="checkbox"/> 1. 33
	<input type="checkbox"/> 2. 24
	<input type="checkbox"/> 3. 28
	<input checked="" type="checkbox"/> 4. 36

Q.8 7	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	<input checked="" type="checkbox"/> 1. 40
	<input type="checkbox"/> 2. 43
	<input type="checkbox"/> 3. 38
	<input type="checkbox"/> 4. 44

Q.8 8	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	<input checked="" type="checkbox"/> 1. Three
	<input type="checkbox"/> 2. Four
	<input type="checkbox"/> 3. Two
	<input type="checkbox"/> 4. One

Q.8 9	The first session of Indian National Congress took place at which of the following places?
Ans	<input type="checkbox"/> 1. Lahore
	<input checked="" type="checkbox"/> 2. Bombay
	<input type="checkbox"/> 3. Calcutta
	<input type="checkbox"/> 4. Allahabad

Q.9 0	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.)
Ans	<input type="checkbox"/> 1. lp
	<input type="checkbox"/> 2. st
	<input checked="" type="checkbox"/> 3. ph
	<input type="checkbox"/> 4. mt

Q.9 1	Every year, Foreign Trade Policy has been declared by which ministry of the Government of India?
Ans	<input type="checkbox"/> 1. Ministry of Information
	<input type="checkbox"/> 2. Ministry of Home Affairs
	<input type="checkbox"/> 3. Ministry of External Affairs
	<input checked="" type="checkbox"/> 4. Ministry of Commerce and Industry

Q.9 2	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. Dhaka, Bangladesh
	<input type="checkbox"/> 2. Thimphu, Bhutan
	<input checked="" type="checkbox"/> 3. New Delhi, India
	<input type="checkbox"/> 4. Kathmandu, Nepal

Q.9 3	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	<input type="checkbox"/> 1. One
	<input type="checkbox"/> 2. Two
	<input type="checkbox"/> 3. Three
	<input checked="" type="checkbox"/> 4. Four

Q.9 4	Write the expanded form of $(4a + 9b + 5c)^2$.
Ans	<input type="checkbox"/> 1. $16a^2 + 81b^2 + 25c^2 + 72ab + 90bc + 50ac$
	<input type="checkbox"/> 2. $16a^2 + 81b^2 + 25c^2 + 76ab + 90bc + 40ac$
	<input type="checkbox"/> 3. $16a^2 + 81b^2 + 25c^2 + 72ab + 85bc + 40ac$
	<input checked="" type="checkbox"/> 4. $16a^2 + 81b^2 + 25c^2 + 72ab + 90bc + 40ac$

Q.9 5	What is the primary purpose of an electric fuse in a household circuit?
Ans	<input checked="" type="checkbox"/> 1. To prevent overloading and short circuits
	<input type="checkbox"/> 2. To increase current flow
	<input type="checkbox"/> 3. To regulate voltage supply
	<input type="checkbox"/> 4. To reduce resistance in the circuit

Q.9 6	Why is bleaching powder used for disinfecting drinking water?
Ans	<input checked="" type="checkbox"/> 1. It releases chlorine, which kills germs.
	<input type="checkbox"/> 2. It neutralises the water.
	<input type="checkbox"/> 3. It reduces the hardness of water.
	<input type="checkbox"/> 4. It provides an acidic medium.

Q.9 7	Which of the following is a viral infection that can be transmitted through sexual contact?
Ans	<input type="checkbox"/> 1. Tuberculosis
	<input type="checkbox"/> 2. Gonorrhoea
	<input type="checkbox"/> 3. Syphilis
	<input checked="" type="checkbox"/> 4. HIV-AIDS

Q.9
8 The area of a square plot is 289 m^2 . The length of each side of the plot (in m) is:

Ans 1. 11

2. 17

3. 7

4. 27

Q.9
9 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. 29 m

2. 30.5 m

3. 33 m

4. 31.5 m

Q.1
00 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

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



Test Center Name	Xeon Technologies
Test Date	16/12/2024
Test Time	12:45 PM - 2:15 PM
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.

- Options shown in green color with a tick icon are correct.
- 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 Which of the following states is also known as the 'Molassis basin', which is made up of soft unconsolidated deposits?

- Ans
- 1. Tripura
 - 2. Assam
 - 3. Mizoram
 - 4. Meghalaya

Q.2 If a 1352 m long train crosses a pole in 169 seconds, then find the time (in seconds) taken by the train to cross a 256 m long platform.

- Ans
- 1. 195
 - 2. 201
 - 3. 193
 - 4. 205

Q.3 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statements.

Statements:
All ovals are bins. No bin is a car. No bin is a plum.

Conclusions:
(I): No oval is a car.
(II): Some plums are cars.

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

Q.4	What should come in place of the question mark (?) in the given series based on the English alphabetical order? VCF PWZ JQT DKN ?
Ans	<input type="checkbox"/> 1. EHX
	<input checked="" type="checkbox"/> 2. XEH
	<input type="checkbox"/> 3. XHE
	<input type="checkbox"/> 4. EXH

Q.5	What was the venue of the 23 rd meeting of the Shanghai Cooperation Organisation (SCO) in 2024?
Ans	<input checked="" type="checkbox"/> 1. Islamabad, Pakistan
	<input type="checkbox"/> 2. Dhaka, Bangladesh
	<input type="checkbox"/> 3. Sanghai, China
	<input type="checkbox"/> 4. New Delhi, India

Q.6	Select the letter-cluster from among the given options that can replace the question mark (?) in the following series. OHA MFY KDW IBU ?
Ans	<input checked="" type="checkbox"/> 1. GZS
	<input type="checkbox"/> 2. GSZ
	<input type="checkbox"/> 3. SGZ
	<input type="checkbox"/> 4. SZG

Q.7	A man sold an article for ₹390 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 ₹3900, then what is the value of d?
Ans	<input type="checkbox"/> 1. 48
	<input checked="" type="checkbox"/> 2. 45
	<input type="checkbox"/> 3. 50
	<input type="checkbox"/> 4. 41

Q.8	An electric motor converts electrical energy into:
Ans	<input type="checkbox"/> 1. electron energy
	<input type="checkbox"/> 2. magnetic energy
	<input checked="" type="checkbox"/> 3. mechanical energy
	<input type="checkbox"/> 4. nuclear energy

Q.9	What is the average of all the natural numbers from 1 to 87?
Ans	<input type="checkbox"/> 1. 44.5
	<input type="checkbox"/> 2. 43.5
	<input type="checkbox"/> 3. 45
	<input checked="" type="checkbox"/> 4. 44

Q.1	Pratap starts from Point A and drives 16 km towards south. He then takes a right turn, drives 13 km, turns right and drives 18 km. He then takes a right turn and drives 18 km. He takes a final right turn, drives 2 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90° turns only unless specified.)
Ans	<input type="checkbox"/> 1. 6 km to the west
	<input type="checkbox"/> 2. 3 km to the west
	<input type="checkbox"/> 3. 7 km to the west
	<input checked="" type="checkbox"/> 4. 5 km to the west

Q.1 1	If 'A' stands for '+', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-', then what will be come in place of the question mark (?) in the following equation? 13 D 32 C 36 B 49 A 49 = ?
Ans	<input type="checkbox"/> 1. 19
	<input type="checkbox"/> 2. 15
	<input type="checkbox"/> 3. 18
	<input checked="" type="checkbox"/> 4. 17

Q.1 2	Express the value of $35.63 - 47.058 + 10.36 - 24.28 + 5.316 \times 5$ as
Ans	<input checked="" type="checkbox"/> 1. $1\frac{29}{125}$
	<input type="checkbox"/> 2. $2\frac{13}{58}$
	<input type="checkbox"/> 3. $1\frac{31}{48}$
	<input type="checkbox"/> 4. $1\frac{21}{47}$

Q.1 3	Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only. (Left) 7 5 ^ 5 + % 5 6 \$ 2 3 * 6 + 3 & 4 ? \$ # 6 1 2 3 & 6 3 % @ (Right) How many such symbols are there each of which is immediately preceded by a number and immediately followed by another symbol?
Ans	<input type="checkbox"/> 1. 4
	<input type="checkbox"/> 2. 1
	<input checked="" type="checkbox"/> 3. 3
	<input type="checkbox"/> 4. 2

Q.1 4	Two numbers are in the ratio 7 : 5. If the first number is increased by 14 and the second number is decreased by 5, then the ratio becomes 4 : 2. What is the sum of the original two numbers?
Ans	<input type="checkbox"/> 1. 106
	<input checked="" type="checkbox"/> 2. 96
	<input type="checkbox"/> 3. 115
	<input type="checkbox"/> 4. 111

Q.1 5	Why is the depletion of the ozone layer a concern for humans?
Ans	<input type="checkbox"/> 1. It promotes plant growth.
	<input type="checkbox"/> 2. It leads to increased water pollution.
	<input checked="" type="checkbox"/> 3. It protects us from harmful radiation.
	<input type="checkbox"/> 4. It increases soil fertility.

Q.1 6	Which of the following categories are NOT a class of consumers?
Ans	<input type="checkbox"/> 1. Carnivores
	<input type="checkbox"/> 2. Herbivores
	<input type="checkbox"/> 3. Parasites
	<input checked="" type="checkbox"/> 4. Producers

Q.1 What will come in the place of the question mark (?) in the following equation if '+' and 7 '-' are interchanged and '+' and 'x' are interchanged?

$$10 + 52 - 13 \times 4 \div 18 = ?$$

Ans 1. 19

2. 26

3. 22

4. 24

Q.1 In May 2024, the Indian Air Force successfully tested its Arogya Maitri Disaster 8 Management Cube in _____.

Ans 1. Pokhran

2. Agra

3. Bhuj

4. Mysuru

Q.1 Consider a conductor in the plane of the paper with current going from bottom to the 9 top. What will be the direction of the magnetic field lines to the left of the conductor?

Ans 1. Perpendicular to the plane of the paper and going in.

2. Opposite to the direction of the current.

3. In the direction of the current.

4. Perpendicular to the plane of the paper and coming out.

Q.2 If the interest earned during the 2nd year on a certain sum is ₹9911, and the rate of 0 interest is 10% per annum compounded annually, then the sum is:

Ans 1. ₹90100

2. ₹90055

3. ₹90115

4. ₹90080

Q.2 What is the name of the Lunar Polar Exploration Mission, a collaboration with Japan's 1 JAXA which was approved by India's National Space Commission in October 2024?

Ans 1. Lupex

2. Mopex

3. SpaceX

4. Moonet

Q.2 A and B complete a work in 17 days. If A alone can do it in 34 days then, B alone can do 2 in _____(days).

Ans 1. 34

2. 35

3. 36

4. 33

Q.2 A shopkeeper bought an article for ₹760. At what price (in ₹) should he sell the article to 3 make 30% profit?

Ans 1. 988

2. 532

3. 976

4. 1000

Q.2
4 Which of the following Constitution Amendments empowers Parliament to establish common High court for two or more than two States?

Ans 1. 6th Constitutional Amendment Act

2. 8th Constitutional Amendment Act

3. 7th Constitutional Amendment Act

4. 9th Constitutional Amendment Act

Q.2
5 Who is the author of 'Fiction as History: The Novel and the City in Modern North India,' published in 2019?

Ans 1. Vasudha Dalmia

2. Arundhati Roy

3. Salman Rushdie

4. Jhumpa Lahiri

Q.2
6 Match the Following:

Column A	Column B
1. Marginal Efficiency of Capital	A. Spending on consumer goods
2. Autonomous Investment	B. Tendency for employment to fluctuate
3. Consumption Function	C. Expected rate of return on investment
4. Paradox of Thrift	D. Investment independent of income
5. Cyclical Unemployment	E. Increased saving reduces total demand

Ans 1. 1 - E, 2 - D, 3 - A, 4 - C, 5 - B

2. 1 - B, 2 - D, 3 - A, 4 - E, 5 - C

3. 1 - C, 2 - D, 3 - A, 4 - E, 5 - B

4. 1 - A, 2 - D, 3 - C, 4 - E, 5 - B

Q.2
7 Aman completes his journey in 14 hours. He covers half the distance at 39 km/h and the rest at 45 km/h. What is the length of the journey (in Km)?

Ans 1. 592

2. 585

3. 594

4. 591

Q.2
8 Why do non-biodegradable wastes cause environmental problems?

Ans 1. They are toxic to plants only.

2. They remain in the environment for a long time.

3. They increase soil fertility.

4. They can be easily recycled.

Q.2
9 A number when increased by 50 %, gives 3030. The number is:

Ans 1. 1010

2. 4040

3. 6060

4. 2020

Q.3 0	Which ion reduces at the cathode during electrolysis of fresh brine solution?
Ans	<input type="checkbox"/> 1. Na^+
	<input type="checkbox"/> 2. OH^-
	<input checked="" type="checkbox"/> 3. H^+
	<input type="checkbox"/> 4. Cl^-

Q.3 1	Which metal is placed at the top of the reactivity series?
Ans	<input type="checkbox"/> 1. Copper
	<input type="checkbox"/> 2. Iron
	<input type="checkbox"/> 3. Silver
	<input checked="" type="checkbox"/> 4. Potassium

Q.3 2	A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question. A, B, C, D and E are sitting in a straight line facing north. Who sits on the extreme left end? (I) Exactly 2 people sit between A and E. (II) Exactly 2 people sit between B and C.
Ans	<input type="checkbox"/> 1. Both Statements I and II put together (and not independently) are sufficient to answer the question.
	<input type="checkbox"/> 2. Data in Statement I alone is sufficient to answer the question, while data in Statement II alone is not.
	<input checked="" type="checkbox"/> 3. Both Statements I and II put together are not sufficient to answer the question.
	<input type="checkbox"/> 4. Data in Statement II alone is sufficient to answer the question, while data in Statement I alone is not.

Q.3 3	Find the simple interest (in closest integral ₹) on ₹3000 at 8% per annum rate of interest for the period from 22 February 2024 to 23 April 2024
Ans	<input type="checkbox"/> 1. 38
	<input checked="" type="checkbox"/> 2. 40
	<input type="checkbox"/> 3. 39
	<input type="checkbox"/> 4. 41

Q.3 4	PN is a secant intersecting a circle at points M and N such that $\text{PN} > \text{PM}$. A tangent PT is drawn to the circle touching it at T. If $\text{PM} = 32$ cm and $\text{PT} = 40$ cm, what is the length (in cm) of the chord MN?
Ans	<input type="checkbox"/> 1. 20
	<input type="checkbox"/> 2. 36
	<input type="checkbox"/> 3. 50
	<input checked="" type="checkbox"/> 4. 18

Q.3 5	L is brother of K. Q is married to N. Z is mother of L. N is daughter of Z. P is wife of K. How is Q related to K?
Ans	<input checked="" type="checkbox"/> 1. Sister's husband
	<input type="checkbox"/> 2. Mother's father
	<input type="checkbox"/> 3. Father's brother
	<input type="checkbox"/> 4. Brother

Q.3 6	The Khilafat committee was formed in Bombay, to defend temporal powers of Khalifa, in _____.
Ans	<input type="checkbox"/> 1. July 1919
	<input type="checkbox"/> 2. June 1919
	<input checked="" type="checkbox"/> 3. March 1919
	<input type="checkbox"/> 4. January 1919

Q.3 7	Among five people named A, B, C, D and E, each has a certain age. D is four times the age of C. A is two times the age of C. D is five times the age of B. The age of B is 12. If E is thrice the age of A, what is the age of E?
Ans	<input checked="" type="checkbox"/> 1. 90
	<input type="checkbox"/> 2. 92
	<input type="checkbox"/> 3. 88
	<input type="checkbox"/> 4. 94

Q.3 8	According to the Annual Report 2019-20 of the Ministry of Textiles, India's textile industry contributes what percentage to the industry output, in value terms?
Ans	<input checked="" type="checkbox"/> 1. 7%
	<input type="checkbox"/> 2. 6%
	<input type="checkbox"/> 3. 15%
	<input type="checkbox"/> 4. 18%

Q.3 9	Which of the following best describes why ionic compounds like potassium bromide (KBr) do NOT conduct electricity in solid form but do in molten form?
Ans	<input type="checkbox"/> 1. Solid KBr consists of neutral atoms with no free electrons.
	<input type="checkbox"/> 2. Solid KBr has weak ions that do not conduct electricity.
	<input checked="" type="checkbox"/> 3. Ionic bonds prevent ion movement in solid KBr.
	<input type="checkbox"/> 4. In molten form, KBr decomposes into gaseous atoms.

Q.4 0	Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only. (Left) 6 \$ < 8 1 ^ 3 * 2 @ 7 # 4 & 5 % @ 9 (Right) If all the symbols are dropped from the series, which of the following will be fifth from right?
Ans	<input checked="" type="checkbox"/> 1. 2
	<input type="checkbox"/> 2. 7
	<input type="checkbox"/> 3. 4
	<input type="checkbox"/> 4. 5

Q.4 1	Ravi has purchased an aquarium and was surprised to know that regular cleaning of aquariums is essential. Why does it have to be regularly cleaned?
Ans	<input type="checkbox"/> 1. Dead fish and plants may spoil the electric supply of the aquarium.
	<input type="checkbox"/> 2. Dead fish and plants are decomposed by microorganisms and smell bad.
	<input type="checkbox"/> 3. Dead fish and plants may spoil the aeration system of the aquarium.
	<input checked="" type="checkbox"/> 4. Dead fish and plants should be disposed of in the soil, not in water.

Q.4 2	Garden is an ecosystem because:
Ans	<input type="checkbox"/> 1. it has both plants, trees and animals like insects, frogs, birds, etc., as biotic components
	<input type="checkbox"/> 2. the living organisms in it interact with each other and are not affected by abiotic components
	<input checked="" type="checkbox"/> 3. the living organisms in it interact with each other and are affected by abiotic components
	<input type="checkbox"/> 4. it has only biotic components like plants, trees and flowers

Q.4 3	44 men can do a piece of work in 48 days. The number of men required to complete the same work in 8 days is:
Ans	<input checked="" type="checkbox"/> 1. 264
	<input type="checkbox"/> 2. 260
	<input type="checkbox"/> 3. 266
	<input type="checkbox"/> 4. 261

Q.4 4	In which of the following cases did the Supreme Court mention that the Fundamental Right to Primary Education is the Right to Life under Article 21 of the Indian Constitution?
Ans	<input type="checkbox"/> 1. P Sambamurthy vs Union of India
	<input type="checkbox"/> 2. Navtej Singh Johar vs Union of India
	<input checked="" type="checkbox"/> 3. Unni Krishnan vs State of Andhra Pradesh
	<input type="checkbox"/> 4. Shreya Singhal vs Union of India

Q.4 5	The marks scored by 10 students are given below. 14, 15, 16, 17, 10, 17, 19, 13, 14, 14 The mode of the data is:
Ans	<input type="checkbox"/> 1. 17
	<input type="checkbox"/> 2. 15
	<input checked="" type="checkbox"/> 3. 14
	<input type="checkbox"/> 4. 16

Q.4 6	If the radius of a hemisphere is increased by 50%, then find the percentage increase in its surface area.
Ans	<input type="checkbox"/> 1. 137.5%
	<input checked="" type="checkbox"/> 2. 125%
	<input type="checkbox"/> 3. 150%
	<input type="checkbox"/> 4. 112.5%

Q.4 7	If the mean of the following data is 37, then the value of X is:										
	<table border="1"> <tr> <td>xi</td> <td>20</td> <td>30</td> <td>40</td> <td>85</td> </tr> <tr> <td>fi</td> <td>19</td> <td>X</td> <td>13</td> <td>24</td> </tr> </table>	xi	20	30	40	85	fi	19	X	13	24
xi	20	30	40	85							
fi	19	X	13	24							
Ans	<input type="checkbox"/> 1. 106										
	<input type="checkbox"/> 2. 107										
	<input checked="" type="checkbox"/> 3. 124										
	<input type="checkbox"/> 4. 125										

Q.4 8	What industrial method is most typically used to produce sodium hydroxide (NaOH)?
Ans	<input checked="" type="checkbox"/> 1. Electrolysis of brine <input type="checkbox"/> 2. Castner-Kellner process <input type="checkbox"/> 3. Contact process <input type="checkbox"/> 4. Haber process

Q.4 9	In a certain code language, 'PLOT' is coded as '9137' and 'LIFE' is coded as '4872'. What is the code for 'L' in the given code language?
Ans	<input checked="" type="checkbox"/> 1. 7 <input type="checkbox"/> 2. 1 <input type="checkbox"/> 3. 4 <input type="checkbox"/> 4. 3

Q.5 0	If 214 apples were distributed among Ajay, Amit, and Amar in the ratio
Ans	<input type="checkbox"/> 1. 40 <input checked="" type="checkbox"/> 2. 70 <input type="checkbox"/> 3. 100 <input type="checkbox"/> 4. 80

Q.5 1	Write the expanded form of $(6a + 5b + 8c)^2$.
Ans	<input type="checkbox"/> 1. $36a^2 + 25b^2 + 64c^2 + 64ab + 80bc + 96ac$ <input type="checkbox"/> 2. $36a^2 + 25b^2 + 64c^2 + 60ab + 80bc + 106ac$ <input checked="" type="checkbox"/> 3. $36a^2 + 25b^2 + 64c^2 + 60ab + 80bc + 96ac$ <input type="checkbox"/> 4. $36a^2 + 25b^2 + 64c^2 + 60ab + 75bc + 96ac$

Q.5 2	Sangeeta and Hemlata invest in a business in the ratio 1 : 3. If total profit is Rs. 2568, then what is difference between the profit (in Rs.) of Sangeeta and Hemlata?
Ans	<input type="checkbox"/> 1. 1184 <input type="checkbox"/> 2. 1334 <input checked="" type="checkbox"/> 3. 1284 <input type="checkbox"/> 4. 1384

Q.5 3	Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below. OQP : PTO VVV : WZU
Ans	<input checked="" type="checkbox"/> 1. HFN : IIM <input type="checkbox"/> 2. NEO : OHL <input type="checkbox"/> 3. KND : LQF <input type="checkbox"/> 4. QEK : RHI

Q.5 4	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 ::? # : DHJ :: BFH : %
Ans	<input checked="" type="checkbox"/> 1. # = JNP, % = VZB <input type="checkbox"/> 2. # = JNP, % = WZB <input type="checkbox"/> 3. # = KNP, % = VZB <input type="checkbox"/> 4. # = JNP, % = VZO

Q.5 5	Manyakheta was the capital of which of following dynasties during the eighth century AD?
Ans	<input checked="" type="checkbox"/> 1. Rashtrakuta <input type="checkbox"/> 2. Pratiharas <input type="checkbox"/> 3. Chera <input type="checkbox"/> 4. Pala

Q.5 6	Which of the following options represents the correct Lewis structure for methane (CH ₄)?
Ans	<input type="checkbox"/> 1. A carbon atom bonded to two hydrogen atoms with double bonds <input checked="" type="checkbox"/> 2. A carbon atom bonded to four hydrogen atoms with single bonds <input type="checkbox"/> 3. A carbon atom bonded to one hydrogen atom with a double bond <input type="checkbox"/> 4. A carbon atom bonded to four hydrogen atoms with triple bonds

Q.5 7	Write the expanded form of $(5a + 7b + 3c)^2$.
Ans	<input checked="" type="checkbox"/> 1. $25a^2 + 49b^2 + 9c^2 + 70ab + 42bc + 30ac$ <input type="checkbox"/> 2. $25a^2 + 49b^2 + 9c^2 + 74ab + 42bc + 30ac$ <input type="checkbox"/> 3. $25a^2 + 49b^2 + 9c^2 + 70ab + 37bc + 30ac$ <input type="checkbox"/> 4. $25a^2 + 49b^2 + 9c^2 + 70ab + 42bc + 40ac$

Q.5 8	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. CJSX <input type="checkbox"/> 2. BIRW <input checked="" type="checkbox"/> 3. JQZF <input type="checkbox"/> 4. UBKP

Q.5 9	What impact does human activities have on the environment?
Ans	<input type="checkbox"/> 1. They help in waste disposal <input type="checkbox"/> 2. Only a positive impact <input checked="" type="checkbox"/> 3. They contribute to environmental pollution <input type="checkbox"/> 4. No impact

Q.6 Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

NGJ : OJE
MHK : NKF

Ans 1. XHJ : YKF

2. KNI : LQD

3. JJK : KME

4. LMO : MOJ

Q.6 If a conductor follows the Ohm's law, then the graph between current and voltage will be a/an _____.

Ans 1. ellipse

2. hyperbola

3. parabola

4. straight line

Q.6 How many seats did the Bhartiya Janata Party win in the Jammu & Kashmir assembly elections held in 2024?

Ans 1. 39

2. 19

3. 29

4. 49

Q.6 What should come in place of the question mark (?) in the given series?

3

18 49 18 45 18 41 18 ?

Ans 1. 31

2. 34

3. 37

4. 29

Q.6 A wire has a resistance of R. If its length is increased by a factor of 8 and its cross-sectional area is decreased by a factor of 4, what is its new resistance (R')?

Ans 1. $R' = 2R$

2. $R' = 8R$

3. $R' = 32R$

4. $R' = 16R$

Q.6 What should come in place of the question mark (?) in the given series?

5

180 131 90 57 32 ?

Ans 1. 22

2. 20

3. 17

4. 15

Q.6 What is formed when ammonium dichromate is heated?

6

Ans 1. Chromium oxide and water

2. Chromium and oxygen

3. Chromium oxide and nitrogen

4. Nitrogen, oxygen and chromium oxide

Q.6 7	The cost of a washing machine is 40% less than the cost of a TV. If the cost of the washing machine increases by 64% and that of the TV decreases by 20%, then what is the change in the total cost of 5 washing machines and 7 TVs?
Ans	<input type="checkbox"/> 1. Decrease by 5%
	<input type="checkbox"/> 2. Increase by 13%
	<input type="checkbox"/> 3. Decrease by 4%
	<input checked="" type="checkbox"/> 4. Increase by 5.2%

Q.6 8	Combination reaction can be represented as:
Ans	<input checked="" type="checkbox"/> 1. $AB + C \rightarrow ABC$
	<input type="checkbox"/> 2. $ABC \rightarrow AB + C$
	<input type="checkbox"/> 3. $AB + CD \rightarrow AD + CD$
	<input type="checkbox"/> 4. $AB + C \rightarrow CB + A$

Q.6 9	A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. E lives on an even numbered floor but not 6. The sum of floors on which A and E live is 7. F lives immediately above B. The sum of floors on which E and D live is 3. How many people live between A and D?
Ans	<input type="checkbox"/> 1. 1
	<input type="checkbox"/> 2. 2
	<input checked="" type="checkbox"/> 3. 3
	<input type="checkbox"/> 4. 4

Q.7 0	Rashi wants to make compost for her kitchen garden. She plans to use kitchen wastes. Which set of articles is best suited for her work?
Ans	<input type="checkbox"/> 1. Peels of fruits, leftover vegetables, paper, packing sheets.
	<input type="checkbox"/> 2. Peels of fruits, leftover vegetables, plastic waste, old mobile phone.
	<input checked="" type="checkbox"/> 3. Peels of fruits, leftover vegetables, paper, torn cotton clothes.
	<input type="checkbox"/> 4. Peels of fruits, leftover vegetables, plastic waste, thermocol cups.

Q.7 1	The average price of three items of furniture is Rs 16845. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is
Ans	<input checked="" type="checkbox"/> 1. 10107
	<input type="checkbox"/> 2. 5615
	<input type="checkbox"/> 3. 7861
	<input type="checkbox"/> 4. 3369

Q.7 2	What is the pH value of pure water at 25°C?
Ans	<input checked="" type="checkbox"/> 1. 7
	<input type="checkbox"/> 2. 5
	<input type="checkbox"/> 3. 3
	<input type="checkbox"/> 4. 1

Q.7 3	If a resistor of 15 Ω carries a current of 2.5 A for 12 seconds, the heat produced is _____ joules.
Ans	<input type="checkbox"/> 1. 900
	<input checked="" type="checkbox"/> 2. 1125
	<input type="checkbox"/> 3. 1800
	<input type="checkbox"/> 4. 450

Q.7 4	L, K, M, N, O and P are sitting around a circular table facing the centre. L sits fourth to the right of O. M sits second to the left of L. N is not the immediate neighbour of M. K sits second to the right of N. How many people are sitting between P and N, when counted from the left of N?
Ans	<input type="checkbox"/> 1. None
	<input checked="" type="checkbox"/> 2. One
	<input type="checkbox"/> 3. Two
	<input type="checkbox"/> 4. Three

Q.7 5	A, B, C, D, E, F and G live on seven different floors of the same building. The lowermost floor on the building is numbered 1, the floor above it, number 2 and so on, till the topmost floor is numbered 7. C lives on the sixth floor. Only three people live between C and F. A lives on an even numbered floor. D lives on one of the floors below B but immediately above F. E lives on one of the floors above C. Who lives on the lowermost floor?
Ans	<input checked="" type="checkbox"/> 1. G
	<input type="checkbox"/> 2. F
	<input type="checkbox"/> 3. E
	<input type="checkbox"/> 4. B

Q.7 6	The length of each of the two equal sides of an isosceles triangle is 89 cm each and the length of its base is 78 cm. The area (in cm ²) of the triangle is:
Ans	<input type="checkbox"/> 1. 3139
	<input type="checkbox"/> 2. 3134
	<input type="checkbox"/> 3. 3102
	<input checked="" type="checkbox"/> 4. 3120

Q.7 7	$\frac{(a^{10} \times b^3 \times c^9)}{(a^9 \times b^6 \times c^9)}$ in simplified form is:
Ans	<input type="checkbox"/> 1. $(a^{-1}) \times (b^{-9}) \times (c^{-8})$
	<input type="checkbox"/> 2. $(a^{-1}) \times (b^{-3}) \times (c^{-10})$
	<input checked="" type="checkbox"/> 3. $(a^1) \times (b^{-3}) \times (c^0)$
	<input type="checkbox"/> 4. $(a^1) \times (b^{-9}) \times (c^{-7})$

Q.7 8	Thermocol disposables are being widely used in parties and restaurants. By promoting this practice _____.
Ans	<input type="checkbox"/> 1. we are reducing expenses; disposables are cheap to use
	<input type="checkbox"/> 2. we are increasing the hygiene concern in us
	<input type="checkbox"/> 3. we are making the waste biodegradable
	<input checked="" type="checkbox"/> 4. we are increasing non-biodegradable waste

Q.7 9	A conductor has a current of 150 mA flowing through it with a resistance of 0.8 Ω. Find the potential difference across the conductor.
Ans	<input type="checkbox"/> 1. 120 V
	<input checked="" type="checkbox"/> 2. 0.12 V
	<input type="checkbox"/> 3. 18.75 V
	<input type="checkbox"/> 4. 5.3 V

Q.8 0 If a wire is stretched to quadruple its length without changing its area, what will happen to its resistivity?

Ans 1. It remains the same.

2. It doubles.

3. It halves.

4. It quadruples.

Q.8 1 By selling an article at $\frac{2}{5}$ of its actual selling price, Manav incurs a loss

Ans 1. 56.9%

2. 52.6%

3. 53.3%

4. 55.5%

Q.8 2 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans 1. NJ – SO

2. VQ – ZU

3. GB – KF

4. MH – QL

Q.8 3 Write the expanded form of $(8a + 5b + 9c)^2$.

Ans 1. $64a^2 + 25b^2 + 81c^2 + 80ab + 85bc + 144ac$

2. $64a^2 + 25b^2 + 81c^2 + 80ab + 90bc + 154ac$

3. $64a^2 + 25b^2 + 81c^2 + 84ab + 90bc + 144ac$

4. $64a^2 + 25b^2 + 81c^2 + 80ab + 90bc + 144ac$

Q.8 4 In a certain code, 'silence gold words' is coded as 'nu mh ke', 'gold is precious' is coded as 'mh bi py' and 'silence is calm' is coded as 'nu py gh'. What is the possible code for 'gold silence' in that language?

Ans 1. mh nu

2. nu ke

3. bi ke

4. mh bi

Q.8 5 Evaluate 184^2

Ans 1. 33856

2. 33866

3. 33806

4. 33836

Q.8 6 Evaluate: $16 + 18 \div 6 - 2 \times 3$

Ans 1. 12

2. 15

3. 13

4. 16

Q.8 7	Which of the following is the correct definition of a homologous series?
Ans	<input type="checkbox"/> 1. A series of compounds having different functional groups
	<input checked="" type="checkbox"/> 2. A series of compounds having the same functional group and similar chemical properties
	<input type="checkbox"/> 3. A series of compounds having identical physical properties
	<input type="checkbox"/> 4. A series of compounds with the same molecular mass

Q.8 8	Select the option in which the numbers share the same relationship as that shared by the given pairs of numbers. (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.) 18, 111 13, 81
Ans	<input checked="" type="checkbox"/> 1. 15, 93
	<input type="checkbox"/> 2. 19, 114
	<input type="checkbox"/> 3. 12, 69
	<input type="checkbox"/> 4. 17, 104

Q.8 9	Which of the following is/are responsible for the depletion of the ozone layer in the atmosphere?
Ans	<input type="checkbox"/> 1. Ethane
	<input type="checkbox"/> 2. Hydrofluorocarbons
	<input type="checkbox"/> 3. Methane
	<input checked="" type="checkbox"/> 4. Chlorofluorocarbons

Q.9 0	The average marks of a student in six subjects is 94. After re-evaluation in three subjects the marks were changed to 89 from 75, 90 from 82 and 88 from 80. In the remaining subjects, the marks remained unchanged. Find the new average marks.
Ans	<input type="checkbox"/> 1. 95
	<input type="checkbox"/> 2. 97
	<input type="checkbox"/> 3. 98
	<input checked="" type="checkbox"/> 4. 99

Q.9 1	What do the magnetic field lines around a bar magnet represent?
Ans	<input type="checkbox"/> 1. The gravitational field
	<input type="checkbox"/> 2. The flow of air around the magnet
	<input checked="" type="checkbox"/> 3. The direction and strength of the magnetic field
	<input type="checkbox"/> 4. The movement of electrons around the magnet

Q.9 2	Find the value of $\frac{\cos 35^\circ}{\sin 55^\circ} - \frac{\sin 11^\circ}{\cos 79^\circ} + \cos 28^\circ \operatorname{cosec} 62^\circ + \cos 0^\circ$.
Ans	<input type="checkbox"/> 1. 0
	<input checked="" type="checkbox"/> 2. 2
	<input type="checkbox"/> 3. 1
	<input type="checkbox"/> 4. -1

Q.9 3	The Fleming's right hand rule is used to find the:
Ans	<input type="checkbox"/> 1. direction of the magnetic field associated with a current carrying conductor
	<input type="checkbox"/> 2. direction of the gravitational field
	<input checked="" type="checkbox"/> 3. direction of the current of a current carrying conductor
	<input type="checkbox"/> 4. direction of the motion of the current carrying conductor

Q.9 4	In a redox reaction, reduction can be described as:
Ans	<input type="checkbox"/> 1. loss of electrons
	<input type="checkbox"/> 2. addition of an electronegative element
	<input type="checkbox"/> 3. addition of oxygen
	<input checked="" type="checkbox"/> 4. addition of hydrogen

Q.9 5	Which of the following articles deals with the office of the special officer for Linguistic Minorities?
Ans	<input checked="" type="checkbox"/> 1. 350-B
	<input type="checkbox"/> 2. 351-B
	<input type="checkbox"/> 3. 351-A
	<input type="checkbox"/> 4. 350-A

Q.9 6	Which of the following teams won the 17 th Edition of Indian Premier League?
Ans	<input checked="" type="checkbox"/> 1. Kolkata Knight Riders
	<input type="checkbox"/> 2. Delhi Capitals
	<input type="checkbox"/> 3. Mumbai Indians
	<input type="checkbox"/> 4. Chennai Superkings

Q.9 7	Select the option in which the numbers share the same relationship as that shared by the given pair of numbers. (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.) 12, 113 15, 140
Ans	<input type="checkbox"/> 1. 14, 126
	<input type="checkbox"/> 2. 8, 67
	<input type="checkbox"/> 3. 17, 136
	<input checked="" type="checkbox"/> 4. 11, 104

Q.9 8	Mohan went to a cafe and ordered a soft drink. The waiter brought his order in a plastic glass with a plastic straw. Mohan, being environment friendly, is not happy as:
Ans	<input checked="" type="checkbox"/> 1. plastic glass and plastic straw is non biodegradable and persists in soil for a long time
	<input type="checkbox"/> 2. a plastic glass and plastic straw does not add to the standard of the cafe
	<input type="checkbox"/> 3. the plastic glass and plastic straw were not of his favourite colour
	<input type="checkbox"/> 4. plastic glass and plastic straw spoils the taste of the drink

Q.9 The potential difference, V , across the ends of a given metallic wire in an electric circuit is directly proportional to the current flowing through it, provided its temperature remains the same. This is known as:

- Ans**
- 1. Ohm's law
 - 2. Ampere's law
 - 3. Newton's law
 - 4. Resistance law

Q.100 What is the primary function of 'viharas' in Buddhist architecture?

- Ans**
- 1. To serve as meditation halls
 - 2. To house relics
 - 3. To serve as residential places for Buddhist priests
 - 4. To hold public gatherings

2024/12/19-21:11:39



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



Test Center Name	Om Sri Sai Buddhi Siddhi
Test Date	16/12/2024
Test Time	4:30 PM - 6:00 PM
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.

- Options shown in green color with a tick icon are correct.
- 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 In the reaction $MnO_2 + 4HCl \rightarrow MnCl_2 + 2H_2O + Cl_2$, what is being reduced?

Ans 1. Chlorine (Cl)

2. Manganese (Mn)

3. Oxygen (O)

4. Hydrogen (H)

Q.2 Who is the author of 'Segar: Autobiography with Paintings,' published in 2013?

Ans 1. Salman Rushdie

2. D Raja Segar

3. Jhumpa Lahiri

4. Githa Hariharan

Q.3 What is the perimeter of a sector of a circle (in cm) if the radius of the circle is 10.5 cm and the angle subtended at the centre of the circle is 60° ?
(Use $\pi = \frac{22}{7}$)

Ans 1. 43

2. 37

3. 41

4. 32

Q.4 Which factor does NOT affect the electric power consumed by an electric device?

Ans 1. Resistance of the device

2. Voltage applied to the device

3. Frequency of the device

4. Current passing through the device

Q.5 Which of the following factors directly affects the resistance of a conductor?

Ans 1. Length of the conductor

2. Current through the conductor

3. Power of the conductor

4. Voltage across the conductor

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Q.6	After fertilisation, the zygote divides multiple times to form which structure within the ovule?
Ans	<input type="checkbox"/> 1. Style
	<input checked="" type="checkbox"/> 2. Embryo
	<input type="checkbox"/> 3. Seed
	<input type="checkbox"/> 4. Fruit

Q.7	If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 4835176, what will be the sum of the digits which are second from the left and second from the right?
Ans	<input type="checkbox"/> 1. 11
	<input checked="" type="checkbox"/> 2. 14
	<input type="checkbox"/> 3. 12
	<input type="checkbox"/> 4. 10

Q.8	Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)
Ans	<input type="checkbox"/> 1. ZW - SP
	<input type="checkbox"/> 2. NK - GD
	<input checked="" type="checkbox"/> 3. RV - KJ
	<input type="checkbox"/> 4. TQ - MJ

Q.9	According to the Citizenship Amendment Act of 2019, individuals who entered India on or before _____ and belong to the Hindu, Sikh, Buddhist, Jain, Parsi or Christian community from Pakistan, Afghanistan or Bangladesh are eligible for citizenship.
Ans	<input type="checkbox"/> 1. 31 December 2017
	<input type="checkbox"/> 2. 31 December 2016
	<input checked="" type="checkbox"/> 3. 31 December 2014
	<input type="checkbox"/> 4. 31 December 2015

Q.1	Which of the following are the 6 accounts that have a role in the economic classification of the budget?
Ans	<input type="checkbox"/> 1. Accounts 1 to 6: Transaction in commodities and services and transfers
	<input type="checkbox"/> 2. Accounts A to F: Transaction in goods, services, and capital
	<input checked="" type="checkbox"/> 3. Accounts I to VI: Transaction in commodities, revenue, and capital
	<input type="checkbox"/> 4. Accounts X to XV: Transaction in current and capital assets

Q.1	Which of the following metals is least likely to corrode in moist air?
1	
Ans	<input type="checkbox"/> 1. Magnesium
	<input type="checkbox"/> 2. Zinc
	<input checked="" type="checkbox"/> 3. Copper
	<input type="checkbox"/> 4. Iron

Q.1	P is the son of Q's brother R. S is the wife of Q and T is the son of S. How is P related to S?
2	
Ans	<input type="checkbox"/> 1. Father's brother
	<input type="checkbox"/> 2. Brother's son
	<input checked="" type="checkbox"/> 3. Father's brother's son
	<input type="checkbox"/> 4. Father's son

Q.1 3	In plants, spore formation is a mode of reproduction that involves the production of spores. Which of the following statements about spore formation is true?
Ans	<input type="checkbox"/> 1. Spores are produced by flowers, and they grow into seeds.
	<input type="checkbox"/> 2. Spores are a form of vegetative propagation in angiosperms only.
	<input checked="" type="checkbox"/> 3. Spores are produced by non-flowering plants like ferns and mosses, and they grow into new plants.
	<input type="checkbox"/> 4. Spores are formed through sexual reproduction in plants.

Q.1 4	The average age of Mohan and his four friends is 36 years. Mohan is 5 years older than the average age of his four friends. Determine Mohan's age in years.
Ans	<input checked="" type="checkbox"/> 1. 40
	<input type="checkbox"/> 2. 42
	<input type="checkbox"/> 3. 38
	<input type="checkbox"/> 4. 44

Q.1 5	Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete? QTW 13, MPS 19, ILO 25, EHK 31, ADG 37, ?
Ans	<input type="checkbox"/> 1. WZC 47
	<input type="checkbox"/> 2. ZZC 43
	<input type="checkbox"/> 3. WGC 43
	<input checked="" type="checkbox"/> 4. WZC 43

Q.1 6	Two pipes can fill a tank in 20 hours and 90 hours, respectively. The time (in hours) required to fill the tank when both pipes are opened simultaneously is:
Ans	<input type="checkbox"/> 1. $\frac{177}{13}$
	<input type="checkbox"/> 2. $\frac{179}{9}$
	<input checked="" type="checkbox"/> 3. $\frac{180}{11}$
	<input type="checkbox"/> 4. $\frac{183}{8}$

Q.1 7	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 ::? # : IBX :: HAW : %
Ans	<input type="checkbox"/> 1. # = FUU, % = KDZ
	<input type="checkbox"/> 2. # = FYU, % = KDO
	<input checked="" type="checkbox"/> 3. # = FYU, % = KDZ
	<input type="checkbox"/> 4. # = FYU, % = NDZ

Q.1 8	Double displacement reactions usually occur in:
Ans	<input checked="" type="checkbox"/> 1. aqueous solution
	<input type="checkbox"/> 2. all three states
	<input type="checkbox"/> 3. gaseous state
	<input type="checkbox"/> 4. solid state

Q.1 9	The selling price of 25 books is equal to the cost price of 41 books. Find the loss or gain percentage.
Ans	<input checked="" type="checkbox"/> 1. $\frac{100}{16}\%$ loss <input checked="" type="checkbox"/> 2. 64 % gain <input checked="" type="checkbox"/> 3. $\frac{100}{16}\%$ gain <input checked="" type="checkbox"/> 4. 64 % loss

Q.2 0	<p>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.</p> <p>Question: Five friends, P, Q, R, S and T, are sitting around a circular table facing the centre. Who is sitting second to the left of T?</p> <p>Statements: (I) S sits second to the right of P. T sits to the immediate left of P. (II) Only one person sits between Q and R. P sits to the immediate left of R.</p>
Ans	<input checked="" type="checkbox"/> 1. Data in statement I alone is sufficient to answer the question while data in statement II is not. <input checked="" type="checkbox"/> 2. Data in statements I and II together are sufficient to answer the question. <input checked="" type="checkbox"/> 3. Data in statements I and II together are not sufficient to answer the question. <input checked="" type="checkbox"/> 4. Data in statement II alone is sufficient to answer the question while data in statement I is not.

Q.2 1	At which of the following places is the tomb of Sher Shah located?
Ans	<input checked="" type="checkbox"/> 1. Patna <input checked="" type="checkbox"/> 2. Lahore <input checked="" type="checkbox"/> 3. Agra <input checked="" type="checkbox"/> 4. Sasaram

Q.2 2	<p>Refer to the given number, symbol series and answer the question that follows.</p> <p>Counting to be done from left to right only. (Left) 2 3 \$ 7 5 & 6 % 3 \$ # 9 @) 7 + 6 ? > ? 4 7 5 \$ (Right)</p> <p>How many such numbers are there each of which is immediately preceded by a symbol and also immediately followed by another symbol?</p>
Ans	<input checked="" type="checkbox"/> 1. 5 <input checked="" type="checkbox"/> 2. 6 <input checked="" type="checkbox"/> 3. 4 <input checked="" type="checkbox"/> 4. 7

Q.2 3	Who among the following is the leader of the house in the Lok Sabha?
Ans	<input checked="" type="checkbox"/> 1. Opposition Leader <input checked="" type="checkbox"/> 2. Prime Minister <input checked="" type="checkbox"/> 3. President of India <input checked="" type="checkbox"/> 4. Lok Sabha Speaker

Q.2
4 The mean marks of the following distribution is:

Marks Obtained	No. of Students
83	9
73	5
20	18
82	16

Ans 1. 58

2. 78

3. 57

4. 50

Q.2
5 Which of the following is the correct formula for the first member of the alkene series?

Ans 1. C_5H_{10}

2. C_2H_4

3. C_3H_6

4. C_4H_8

Q.2
6 Which of the following ratio is smallest?

Ans 1. 17 : 39

2. 10 : 36

3. 15 : 33

4. 23 : 48

Q.2
7 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

GNK IPM KRO MTQ ?

Ans 1. OVS

2. OUR

3. OUS

4. OVR

Q.2
8 Akshat completes his journey in 10 hours. He covers half the distance at 72 km/h and the rest at 36 km/h. What is the length of the journey (in Km)?

Ans 1. 473

2. 471

3. 480

4. 481

Q.2
9 A number when increased by 50 %, gives 2910. The number is:

Ans 1. 5820

2. 1940

3. 3880

4. 970

Q.3 Which of the following helps a developing embryo to expel waste products in case of humans?

Ans 1. Oviduct

2. Placenta

3. Ovary

4. Cervix

Q.3 If at same rate of interest, in 2 years, the simple interest is ₹56 and compound interest is ₹72, then what is the principal (in ₹)?

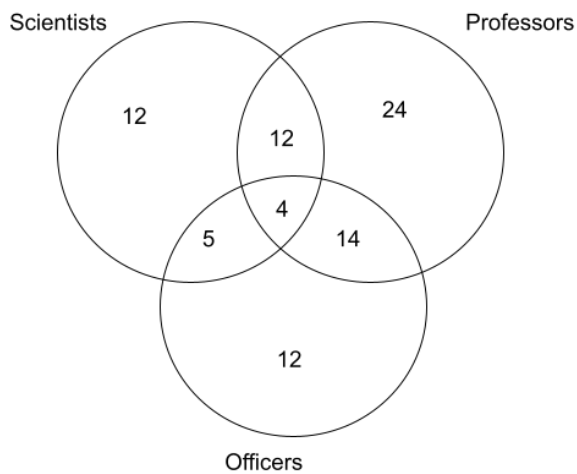
Ans 1. 44

2. 49

3. 53

4. 42

Q.3 Study the given diagram carefully and answer the question that follows. The numbers in different sections indicate the number of persons/objects.



How many such officers exist that are also scientists but not professors?

Ans 1. 12

2. 16

3. 4

4. 5

Q.3 Find the value of $2.5 \times 4 + 3.68 \div 4 - 8.46 \times 2 + 7.365 \times 4 + 2.8 \times 3$

Ans 1. 27.98

2. 28.96

3. 28.51

4. 27.21

Q.3 A vendor bought lemons at 40 for a rupee. How many must he sell for a rupee to gain 25%?

Ans 1. 32

2. 36

3. 33

4. 34

Q.3 5	What is the role of the stigma in the process of fertilisation?
Ans	<input type="checkbox"/> 1. Fusing with the egg cell
	<input type="checkbox"/> 2. Producing pollen
	<input type="checkbox"/> 3. Developing into a seed
	<input checked="" type="checkbox"/> 4. Serving as the site where pollen lands

Q.3 6	Covalent molecules have low melting and boiling point because:
Ans	<input type="checkbox"/> 1. they have strong electrostatic intermolecular forces
	<input checked="" type="checkbox"/> 2. they have weak intermolecular forces
	<input type="checkbox"/> 3. they are generally gaseous in nature
	<input type="checkbox"/> 4. they have strong bonds within the molecule

Q.3 7	If the ratio of four angles of a quadrilateral is $\angle A : \angle B : \angle C : \angle D :$
	<input type="text"/>
Ans	<input checked="" type="checkbox"/> 1. 60°
	<input type="checkbox"/> 2. 90°
	<input type="checkbox"/> 3. 50°
	<input type="checkbox"/> 4. 40°

Q.3 8	What is the median of the following data? 50, 48, 40, 73, 29, 14, 89, 14, 51, 76, 78
Ans	<input type="checkbox"/> 1. 50.5
	<input type="checkbox"/> 2. 49.5
	<input checked="" type="checkbox"/> 3. 50
	<input type="checkbox"/> 4. 51

Q.3 9	Which of the following statements is/are correct about the PM Vishwakarma Yojana? 1) The PM Vishwakarma Yojana was launched by the Hon'ble Prime Minister on 17 September 2023. 2) Scheme aims to provide end-to-end support to artisans and craftspeople who work with their hands and tools. 3) The Scheme components include recognition through PM Vishwakarma Certificate and ID Card, Skill Upgradation, Toolkit Incentive, Credit Support, Incentive for Digital Transactions, and Marketing Support.
Ans	<input type="checkbox"/> 1. 2 only
	<input type="checkbox"/> 2. 3 only
	<input type="checkbox"/> 3. 1 only
	<input checked="" type="checkbox"/> 4. 1, 2 and 3

Q.4 0	$\frac{(a^5 \times b^9 \times c^1)}{(a^6 \times b^3 \times c^8)}$ in simplified form is:
Ans	<input type="checkbox"/> 1. $(a^{-10}) \times (b^{-5}) \times (c^{-8})$
	<input checked="" type="checkbox"/> 2. $(a^{-1}) \times (b^6) \times (c^{-7})$
	<input type="checkbox"/> 3. $(a^{-5}) \times (b^3) \times (c^{-6})$
	<input type="checkbox"/> 4. $(a^4) \times (b^{-10}) \times (c^1)$

Q.4 1 If 'M' is the smallest perfect square number, which is exactly divisible by 12, 15 and 18, then find the sum of the digits of the quotient obtained, when M is divided by 25.

Ans 1. 7

2. 8

3. 6

4. 9

Q.4 2 Refer to the following number and symbol series and answer the question that follows.

Counting to be done from left to right only.

(Left) 7 % > 9 2 & 4 < 3 # 8 \$ 5 * 6 ^ # 1 (Right)

If all the symbols are dropped from the series, which of the following will be third from the left?

Ans 1. 2

2. 4

3. 3

4. 8

Q.4 3 If $\sin\theta = \frac{12}{13}$, then what is the value of $26 \sin\theta - 10 \sec\theta$?

Ans 1. 0

2. 1

3. 2

4. -2

Q.4 4 If two resistors in series are equal, say R each, what is the total resistance?

Ans 1. R^2

2. $R/2$

3. $2R$

4. R

Q.4 5 Find the total time taken by boat to travel upstream and downstream, if the distance travel in each direction (upstream and downstream) is 270km. If speed of boat is 24 km/h and speed of current is 21 km/h.

Ans 1. 106 hours

2. 104 hours

3. 87 hours

4. 96 hours

Q.4 6 Write the expanded form of $(4a + 6b + 9c)^2$.

Ans 1. $16a^2 + 36b^2 + 81c^2 + 52ab + 108bc + 72ac$

2. $16a^2 + 36b^2 + 81c^2 + 48ab + 108bc + 82ac$

3. $16a^2 + 36b^2 + 81c^2 + 48ab + 108bc + 72ac$

4. $16a^2 + 36b^2 + 81c^2 + 48ab + 103bc + 72ac$

Q.4 7 Resistance is the property of a material that _____.

Ans 1. generates electricity

2. allows the flow of current

3. opposes the flow of current

4. converts electrical energy to mechanical energy

Q.4 8	What should come in place of the question mark (?) in the given series? 305 251 206 170 143 ?
Ans	<input type="checkbox"/> 1. 130
	<input checked="" type="checkbox"/> 2. 125
	<input type="checkbox"/> 3. 120
	<input type="checkbox"/> 4. 115

Q.4 9	Who among the following secured a gold medal for India at the Paris Paralympics 2024?
Ans	<input type="checkbox"/> 1. Sachin Khilari
	<input type="checkbox"/> 2. Hokato Hotozhe Sema
	<input type="checkbox"/> 3. Pranav Soorma
	<input checked="" type="checkbox"/> 4. Navdeep Singh

Q.5 0	Evaluate: $16 + 18 \div 3 - 3 \times 3$
Ans	<input type="checkbox"/> 1. 15
	<input type="checkbox"/> 2. 12
	<input type="checkbox"/> 3. 16
	<input checked="" type="checkbox"/> 4. 13

Q.5 1	Keshav starts from Point A and drives 22 km towards the South. He then takes a left turn, drives 24 km, turns left and drives 27 km. He then takes a left turn and drives 25 km. He takes a final left 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 degrees turns only unless specified)
Ans	<input type="checkbox"/> 1. 2 km to the east
	<input checked="" type="checkbox"/> 2. 1 km to the east
	<input type="checkbox"/> 3. 4 km to the east
	<input type="checkbox"/> 4. 3 km to the east

Q.5 2	In which of the following scenarios does the focal length of a concave mirror vary?
Ans	<input type="checkbox"/> 1. When placed in air
	<input type="checkbox"/> 2. When placed in water
	<input checked="" type="checkbox"/> 3. Focal length does not vary in any media
	<input type="checkbox"/> 4. When placed in a vacuum

Q.5 3	Write the expanded form of $(3a + 5b + 7c)^2$.
Ans	<input type="checkbox"/> 1. $9a^2 + 25b^2 + 49c^2 + 34ab + 70bc + 42ac$
	<input type="checkbox"/> 2. $9a^2 + 25b^2 + 49c^2 + 30ab + 70bc + 52ac$
	<input checked="" type="checkbox"/> 3. $9a^2 + 25b^2 + 49c^2 + 30ab + 70bc + 42ac$
	<input type="checkbox"/> 4. $9a^2 + 25b^2 + 49c^2 + 30ab + 65bc + 42ac$

Q.5 4	Why might surgical family planning methods be risky if not done correctly?
Ans	<input type="checkbox"/> 1. They can increase fertility.
	<input checked="" type="checkbox"/> 2. They can lead to infections or complications.
	<input type="checkbox"/> 3. They may cause hormonal side effects.
	<input type="checkbox"/> 4. They might prevent ovulation.

Q.5 5	Which of the following best describes a combination reaction?
Ans	<input type="checkbox"/> 1. A reaction where a product releases gas
	<input checked="" type="checkbox"/> 2. Two elements combine to form a compound
	<input type="checkbox"/> 3. Ions exchange between two compounds
	<input type="checkbox"/> 4. A compound breaks down into simpler substances

Q.5 6	What is the thread-like structure in Rhizopus?
Ans	<input type="checkbox"/> 1. Sporangia
	<input type="checkbox"/> 2. Spores
	<input type="checkbox"/> 3. Blobs
	<input checked="" type="checkbox"/> 4. Hyphae

Q.5 7	Why does a compass needle get deflected when brought near a bar magnet?
Ans	<input checked="" type="checkbox"/> 1. The compass needle is a small bar magnet.
	<input type="checkbox"/> 2. The compass needle is non-magnetic.
	<input type="checkbox"/> 3. The compass needle has electric charge.
	<input type="checkbox"/> 4. The compass needle is made of iron.

Q.5 8	Find the simple interest (in closest integral ₹) on ₹3000 at 8% per annum rate of interest for the period from 25 February 2024 to 26 April 2024
Ans	<input type="checkbox"/> 1. 39
	<input type="checkbox"/> 2. 38
	<input type="checkbox"/> 3. 41
	<input checked="" type="checkbox"/> 4. 40

Q.5 9	Which of the following is NOT a private sector company in India?
Ans	<input type="checkbox"/> 1. Dabur
	<input type="checkbox"/> 2. Tata Iron and Steel Company
	<input checked="" type="checkbox"/> 3. Bharat Heavy Electricals Limited
	<input type="checkbox"/> 4. Bajaj Auto Limited

Q.6 0	Two taps can fill a cistern in 2 hours and 47 hours respectively. A third tap can empty it in 47 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?
Ans	<input type="checkbox"/> 1. 4
	<input type="checkbox"/> 2. 5
	<input type="checkbox"/> 3. 3
	<input checked="" type="checkbox"/> 4. 2

Q.6 1	What was the venue of the 57 th ASEAN Foreign Ministers' Meeting?
Ans	<input type="checkbox"/> 1. Jakarta, Indonesia
	<input type="checkbox"/> 2. Kuala Lumpur, Malaysia
	<input checked="" type="checkbox"/> 3. Vientiane, Lao People's Democratic Republic
	<input type="checkbox"/> 4. Naypyidaw, Myanmar

Q.6 2	The Great Stupa at Sanchi is an important site in which religion?
Ans	<input checked="" type="checkbox"/> 1. Buddhism <input type="checkbox"/> 2. Hinduism <input type="checkbox"/> 3. Jainism <input type="checkbox"/> 4. Islam

Q.6 3	In the case of a thin lens, how are the centres of curvature typically positioned relative to the optical centre?
Ans	<input type="checkbox"/> 1. They are closer to the edge than to the optical centre. <input type="checkbox"/> 2. They are located on the lens surface itself. <input type="checkbox"/> 3. They coincide with the optical centre. <input checked="" type="checkbox"/> 4. They are equidistant from the optical centre.

Q.6 4	If x is inversely proportional to y, and y = 7 when x = 5, find the value of x, when y = 90.
Ans	<input type="checkbox"/> 1. $\frac{8}{19}$ <input type="checkbox"/> 2. $\frac{9}{21}$ <input checked="" type="checkbox"/> 3. $\frac{7}{18}$ <input type="checkbox"/> 4. $\frac{7}{19}$

Q.6 5	What should come in place of the question mark (?) in the given series? 29 11 29 15 29 19 29 23 29 ?
Ans	<input type="checkbox"/> 1. 31 <input type="checkbox"/> 2. 25 <input type="checkbox"/> 3. 29 <input checked="" type="checkbox"/> 4. 27

Q.6 6	Which of the following chemical equations is balanced?
Ans	<input type="checkbox"/> 1. $H_2 + 2O_2 \rightarrow 2H_2O$ <input type="checkbox"/> 2. $H_2O + O_2 \rightarrow H_2O_2$ <input type="checkbox"/> 3. $H_2 + O_2 \rightarrow H_2O$ <input checked="" type="checkbox"/> 4. $2H_2 + O_2 \rightarrow 2H_2O$

Q.6 7	The knowledge of which two subjects played key role in formulating laws of Inheritance?
Ans	<input type="checkbox"/> 1. Maths and History <input type="checkbox"/> 2. Philosophy and Science <input type="checkbox"/> 3. Geography and Philosophy <input checked="" type="checkbox"/> 4. Maths and Science

Q.6
8 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.)

6-36-46-92; 7-49-59-118

Ans 1. 4-16-26-62

2. 5-25-35-70

3. 8-64-74-138

4. 3-9-29-58

Q.6
9 Which of the following statements is true about the pH of a neutral solution at 25°C?

Ans 1. The pH is less than 7.

2. The pH is greater than 7.

3. The pH is not equal to 7.

4. The pH is equal to 7.

Q.7
0 Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

DMO : HPM

LIF : PLD

Ans 1. ENZ : IQY

2. RKY : VNV

3. VFP : ZIN

4. NEL : RGJ

Q.7
1 Q, R, S, T, U and V live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. S lives on the third floor. Only two people live between S and U. R lives on one of the floors below U but immediately above Q. Q does not live on the fourth floor. V lives on an odd numbered floor. How many people live between T and Q?

Ans 1. Four

2. Three

3. Two

4. One

Q.7
2 A cylindrical rod has an outer curved surface area of 4500 cm². If the length of the rod is 39 cm, then the outer radius (in cm) of the rod, correct to two places of decimal, is:

$$\text{Take } \pi = \frac{22}{7}$$

Ans 1. 20.48

2. 18.25

3. 20.93

4. 18.36

Q.7
3 Write the expanded form of $(3a + 6b + 5c)^2$.

Ans 1. $9a^2 + 36b^2 + 25c^2 + 40ab + 60bc + 30ac$

2. $9a^2 + 36b^2 + 25c^2 + 36ab + 60bc + 30ac$

3. $9a^2 + 36b^2 + 25c^2 + 36ab + 55bc + 30ac$

4. $9a^2 + 36b^2 + 25c^2 + 36ab + 60bc + 40ac$

Q.7 When light exits a prism, what is the result of its interaction with the prism surfaces?

4

Ans 1. Light is refracted.

2. Light passes through without any change.

3. Light is only reflected.

4. Light is only absorbed.

Q.7 What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and '÷' and 'x' are interchanged?

$$51 - 8 \div 2 + 6 \times 2 = ?$$

Ans 1. 70

2. 71

3. 66

4. 64

Q.7 In a certain code language, 'fast and furious' is coded as 'bo li ke', 'quick is furious' is coded as 'ke ra ng' and 'fast but quick' is coded as 'ng li ty'. What is the code for 'furious' in that language?

Ans 1. bo

2. ra

3. li

4. ke

Q.7 Which of the following is called a motile germ cell?

7

Ans 1. Embryo

2. Zygote

3. Female gamete

4. Male gamete

Q.7 In a certain code, 'floor door room' is coded as 'bn la mt', 'door chair table' is coded as 'wd bn ka' and 'chair room window' is coded as 'ka bz la'. All the codes are two-letter code only. What is room coded as?

Ans 1. ka

2. bn

3. bz

4. la

Q.7 If A's salary is 37 % more than that of B, then how much percent is B's salary less than that of A (correct to 2 decimal places)?

9

Ans 1. 29.04%

2. 29.85%

3. 27.01%

4. 30.86%

Q.8 Where was the Swachh Vayu Diwas celebrated in India to combat air pollution in 2024?

0

Ans 1. Jaipur

2. Chandigarh

3. Bhopal

4. Indore

Q.8
1 When an atom of sodium reacts with an atom of chlorine to form sodium chloride, each sodium atom:

Ans 1. gains one proton

2. loses one proton

3. loses one electron

4. gains one electron

Q.8
2 The current through a resistor is:

Ans 1. inversely proportional to the resistance

2. proportional to the square of the resistance

3. proportional to the square root of the resistance

4. directly proportional to the resistance

Q.8
3 The average price of three items of furniture is Rs 16800. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

Ans 1. 5600

2. 10080

3. 7840

4. 3360

Q.8
4 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans 1. VY-CI

2. SV-ZF

3. HK-OU

4. FI-NS

Q.8
5 7 is related to 9.8 following a certain logic. Following the same logic, 11 is related to 15.4. To which of the given options is 9 related, following the same logic?

(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.)

Ans 1. 13.8

2. 12.4

3. 12.6

4. 11.6

Q.8
6 The Moplah Rebellion of 1921 took place in which of the following regions?

Ans 1. Assam

2. Kerala

3. Punjab

4. Bengal

Q.8 7	S, T, U, V, W, X and Y are sitting around a circular table facing the centre. S sits fourth to the left of W. T sits second to the right of S. V is neither the immediate neighbour of T nor S. X sits third to the right of V. Y is not the immediate neighbour of W. How many people are sitting between S and T, when counted from the left of S?
Ans	<input checked="" type="checkbox"/> 1. Four
	<input type="checkbox"/> 2. Three
	<input type="checkbox"/> 3. Two
	<input type="checkbox"/> 4. One

Q.8 8	B, C, D, F and H have different marks. Only one person has scored between B and D. Only three people have scored between H and B. No one has scored between F and B and F's score is more than B's score. How many people have scored less than C?
Ans	<input type="checkbox"/> 1. Two
	<input checked="" type="checkbox"/> 2. Three
	<input type="checkbox"/> 3. One
	<input type="checkbox"/> 4. Four

Q.8 9	Space Kidz India has launched the ShakthiSAT mission to train _____ girls aged 14-18 from 108 countries in space technology, aiming for a satellite launch under ISRO's Chandrayaan-4 mission in 2026.
Ans	<input type="checkbox"/> 1. 10,000
	<input type="checkbox"/> 2. 5000
	<input checked="" type="checkbox"/> 3. 12,000
	<input type="checkbox"/> 4. 7500

Q.9 0	What is the correct sequence of following mountain ranges of India from north to south? 1. Vindhya Range 2. Aravalli Range 3. Ajanta Range 4. Satpura Range
Ans	<input type="checkbox"/> 1. 2, 1, 3, 4
	<input type="checkbox"/> 2. 1, 2, 4, 3
	<input checked="" type="checkbox"/> 3. 2, 1, 4, 3
	<input type="checkbox"/> 4. 1, 2, 3, 4

Q.9 1	Which of the following is true regarding the bud development process in Hydra?
Ans	<input type="checkbox"/> 1. Formation of spore
	<input checked="" type="checkbox"/> 2. Cell divisions at one site
	<input type="checkbox"/> 3. Splitting of nucleus
	<input type="checkbox"/> 4. Splitting of cytoplasm

Q.9 2	If x varies inversely as $y^3 - 1$ and is equal to 7 when $y = 2$, find x when $y = 6$.
Ans	<input type="checkbox"/> 1. $\frac{49}{216}$
	<input checked="" type="checkbox"/> 2. $\frac{49}{215}$
	<input type="checkbox"/> 3. $\frac{51}{215}$
	<input type="checkbox"/> 4. $\frac{50}{216}$

Q.9 3	In which case will a lens produce a magnification of exactly 1?
Ans	<input checked="" type="checkbox"/> 1. When the object is placed at twice the focal length <input type="checkbox"/> 2. When the object is placed at the focal point <input type="checkbox"/> 3. When the object is placed between centre of curvature and focal point <input type="checkbox"/> 4. When the object is at infinity

Q.9 4	A shopkeeper sells an item for ₹287.7 after giving two successive discounts of 86% and 85% on its marked price. Had he not given any discount, he would have earned a profit of 37%. What is the cost price (in ₹) of the item?
Ans	<input type="checkbox"/> 1. 9958 <input type="checkbox"/> 2. 10046 <input checked="" type="checkbox"/> 3. 10000 <input type="checkbox"/> 4. 10038

Q.9 5	Which of the following is related to Article 84 of the Constitution?
Ans	<input type="checkbox"/> 1. Disqualification for membership <input checked="" type="checkbox"/> 2. Qualification for membership of Parliament <input type="checkbox"/> 3. Annual Financial Statement <input type="checkbox"/> 4. Ordinance making Power of President

Q.9 6	Which of the following reactions leads to the production of bleaching powder?
Ans	<input type="checkbox"/> 1. $\text{CaCO}_3 + \text{HCl} \rightarrow \text{CaCl}_2 + \text{CO}_2 + \text{H}_2\text{O}$ <input type="checkbox"/> 2. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$ <input type="checkbox"/> 3. $\text{Ca(OH)}_2 + \text{CO}_2 \rightarrow \text{CaCO}_3 + \text{H}_2\text{O}$ <input checked="" type="checkbox"/> 4. $\text{Ca(OH)}_2 + \text{Cl}_2 \rightarrow \text{CaOCl}_2 + \text{H}_2\text{O}$

Q.9 7	Select the option in which the triads share the same relationship as that shared by the given triads. HAND - ANDH - NDHA BIRD - IRDB - RDBI
Ans	<input type="checkbox"/> 1. DUCK - CKDU - CUKD <input type="checkbox"/> 2. FROG - ROGF - ROFG <input checked="" type="checkbox"/> 3. ROSE - OSER - SERO <input type="checkbox"/> 4. CUBE - CEBU - BUEC

Q.9 8	The average price of three items of furniture is Rs 16875. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is
Ans	<input type="checkbox"/> 1. 3375 <input checked="" type="checkbox"/> 2. 10125 <input type="checkbox"/> 3. 7875 <input type="checkbox"/> 4. 5625

Q.9 9	In a row of people all facing north, Shakshi is 11 th from the left end. Ravi is 12 th from the left end. Ravi is exactly between Shakshi and Ron. If Ron is 14 th from the right end of the row, how many people are there in the row?
Ans	<input type="checkbox"/> 1. 25 <input checked="" type="checkbox"/> 2. 26 <input type="checkbox"/> 3. 27 <input type="checkbox"/> 4. 28

Q.1 00	What is the final product of sexual reproduction in plants?
Ans	<input type="checkbox"/> 1. Fruits
	<input type="checkbox"/> 2. Leaves
	<input checked="" type="checkbox"/> 3. Seeds
	<input type="checkbox"/> 4. Flowers

2024/12/20-00:34:47



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



Test Center Name	Perth Digital Zone
Test Date	17/12/2024
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.

- Options shown in green color with a tick icon are correct.
- 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 Who among the following was the first attorney General of Independent India?

- Ans
- 1. SV Gupta
 - 2. Niren de
 - 3. Soli Sorabjee
 - 4. MC Setalvad

Q.2 Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)

- Ans
- 1. OF - NG
 - 2. CT - AU
 - 3. HY - FZ
 - 4. SJ - QK

Q.3 Evaluate: $32 \div 12 \times 3 - 3 \times 4$

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

Q.4 Which of the following is NOT an essential qualification for being elected as the President?

- Ans
- 1. Qualified for election as a member of the House of the People
 - 2. Highly educated
 - 3. Completion of 35 years
 - 4. Citizen of India

Q.5 The first fundamental factor for evolution is:

- Ans
- 1. competition among individuals
 - 2. genetic variation
 - 3. healthy offsprings
 - 4. cell division for growth

Q.6	Write the expanded form of $(6a + 8b + 3c)^2$.
Ans	<input checked="" type="checkbox"/> 1. $36a^2 + 64b^2 + 9c^2 + 96ab + 48bc + 36ac$ <input type="checkbox"/> 2. $36a^2 + 64b^2 + 9c^2 + 100ab + 48bc + 36ac$ <input type="checkbox"/> 3. $36a^2 + 64b^2 + 9c^2 + 96ab + 43bc + 36ac$ <input type="checkbox"/> 4. $36a^2 + 64b^2 + 9c^2 + 96ab + 48bc + 46ac$

Q.7	Among five people named A, B, C, D and E, each has a certain age. C is thrice the age of D. The age of A is 6. D is half the age of E. B is twice the age of A. If E is four times the age of B, what is the age of C?
Ans	<input type="checkbox"/> 1. 70 <input checked="" type="checkbox"/> 2. 72 <input type="checkbox"/> 3. 75 <input type="checkbox"/> 4. 76

Q.8	The diameters of two concentric circles are 34 cm and 50 cm. A straight line is drawn from the center of the larger circle to the circumference of the smaller circle. What is the length of this line?
Ans	<input type="checkbox"/> 1. 34 cm <input type="checkbox"/> 2. 30 cm <input type="checkbox"/> 3. 50 cm <input checked="" type="checkbox"/> 4. 40 cm

Q.9	In which process multicellular organisms break into smaller pieces upon maturation?
Ans	<input checked="" type="checkbox"/> 1. Fragmentation <input type="checkbox"/> 2. Sporulation <input type="checkbox"/> 3. Regeneration <input type="checkbox"/> 4. Fission

Q.1	Which of the following is an example of a natural monopoly?
Ans	<input type="checkbox"/> 1. Malls <input type="checkbox"/> 2. Apple store in delhi <input type="checkbox"/> 3. Bookshop <input checked="" type="checkbox"/> 4. Railways

Q.1	This question is based on five, four-digit numbers given below. 1 (Example- 6970 – First digit = 6, second digit = 9, third digit = 7 and fourth digit=0) 2314 7651 3245 9072 8062 How many numbers are there wherein the sum of first and second digits is equal to the sum of third and fourth digits?
Ans	<input checked="" type="checkbox"/> 1. Three <input type="checkbox"/> 2. Four <input type="checkbox"/> 3. One <input type="checkbox"/> 4. Two

Q.1	Pollen grains are transferred to which part of pistil?
Ans	<input type="checkbox"/> 1. Ovary <input type="checkbox"/> 2. Style <input type="checkbox"/> 3. Ovule <input checked="" type="checkbox"/> 4. Stigma

Q.1 3	In a certain code language, 'A + B' means 'A is the son of B', 'A - B' means 'A is the brother of B', 'A × B' means 'A is the wife of B' and 'A % B' means 'A is the father of B'. How is S related to H if 'S × D + F % G - H'?
Ans	<input checked="" type="checkbox"/> 1. Brother's wife <input type="checkbox"/> 2. Daughter <input type="checkbox"/> 3. Wife <input type="checkbox"/> 4. Brother's daughter

Q.1 4	Select the option in which the triads share the same relationship as that shared by the given triads. JINX - JXIN - JNXI COZY - CYOZ - CZYO
Ans	<input type="checkbox"/> 1. DRUG - DGUR - DUGR <input type="checkbox"/> 2. EVIL - EIVL - ELIV <input type="checkbox"/> 3. FAIR - FARI - FIAR <input checked="" type="checkbox"/> 4. JAWS - JSAW - JWSA

Q.1 5	If the area of a trapezium is 80 cm^2 and the parallel sides are 13.5 and 6.5 cm, then the distance between them (in cm) is _____.
Ans	<input type="checkbox"/> 1. 12 <input type="checkbox"/> 2. 9 <input type="checkbox"/> 3. 10 <input checked="" type="checkbox"/> 4. 8

Q.1 6	What should come in place of the question mark (?) in the given series? 19 30 52 96 184 ?
Ans	<input checked="" type="checkbox"/> 1. 360 <input type="checkbox"/> 2. 362 <input type="checkbox"/> 3. 361 <input type="checkbox"/> 4. 359

Q.1 7	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 ::? # : ZWP :: FCV : %
Ans	<input type="checkbox"/> 1. # = USL, % = JGZ <input type="checkbox"/> 2. # = VSU, % = JGZ <input type="checkbox"/> 3. # = VSL, % = JGO <input checked="" type="checkbox"/> 4. # = VSL, % = JGZ

Q.1 8	Write the expanded form of $(5a + 6b + 8c)^2$.
Ans	<input checked="" type="checkbox"/> 1. $25a^2 + 36b^2 + 64c^2 + 60ab + 96bc + 80ac$ <input type="checkbox"/> 2. $25a^2 + 36b^2 + 64c^2 + 60ab + 96bc + 90ac$ <input type="checkbox"/> 3. $25a^2 + 36b^2 + 64c^2 + 60ab + 91bc + 80ac$ <input type="checkbox"/> 4. $25a^2 + 36b^2 + 64c^2 + 64ab + 96bc + 80ac$

Q.1 9	Which of the following was the venue of the 46 th session of the UNESCO World Heritage Committee?
Ans	<input type="checkbox"/> 1. New York, United States
	<input type="checkbox"/> 2. Paris, France
	<input checked="" type="checkbox"/> 3. New Delhi, India
	<input type="checkbox"/> 4. Dubai, United Arab Emirates

Q.2 0	Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statements. Statements: All plums are lamps. Some lamps are ants. All ants are meats. Conclusions: (I): All meats are lamps. (II): Some meats are plums.
Ans	<input type="checkbox"/> 1. Only conclusion (II) follows.
	<input type="checkbox"/> 2. Both conclusions (I) and (II) follow.
	<input type="checkbox"/> 3. Only conclusion (I) follows.
	<input checked="" type="checkbox"/> 4. Neither conclusion (I) nor (II) follows.

Q.2 1	18 is related to 62 following a certain logic. Following the same logic, 22 is related to 78. To which of the given options is 15 related to, following the same logic? (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.)
Ans	<input type="checkbox"/> 1. 45
	<input checked="" type="checkbox"/> 2. 50
	<input type="checkbox"/> 3. 55
	<input type="checkbox"/> 4. 60

Q.2 2	Which of the following is the National Waterway 2 in India?
Ans	<input type="checkbox"/> 1. West Coast canal and Champakara and Udyogmandal canals
	<input type="checkbox"/> 2. East Coast canal and Matai river
	<input type="checkbox"/> 3. Kakinada canal (Kakinada to Rajahmundry)
	<input checked="" type="checkbox"/> 4. Brahmaputra river

Q.2 3	In the reaction: $Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$, what happens to zinc?
Ans	<input type="checkbox"/> 1. Zinc is reduced.
	<input checked="" type="checkbox"/> 2. Zinc is oxidised.
	<input type="checkbox"/> 3. Zinc does not change.
	<input type="checkbox"/> 4. Zinc loses electrons.

Q.2 In a certain code, 'air water land' is coded as 'dy ph mt', 'fire land ice' is coded as 'lp ph st', and 'water fire grass' is coded as 'st bq dy'. What is the code for 'land' in that language?

(Note: All the codes are two letter coded only.)

Ans 1. ph

2. st

3. mt

4. dy

Q.2 A and B can do a piece of work in 8 days and 37 days, respectively. The number of days [Correct to one decimal place] required to complete the work if both A and B work together is:

Ans 1. 10.7

2. 7.1

3. 7.7

4. 6.5

Q.2 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.)

8-24-72-216; 6-18-54-162

Ans 1. 11-33-99-287

2. 9-27-81-343

3. 12-36-108-216

4. 7-21-63-189

Q.2 Write the expanded form of $(7a + 9b + 4c)^2$.

Ans 1. $49a^2 + 81b^2 + 16c^2 + 130ab + 72bc + 56ac$

2. $49a^2 + 81b^2 + 16c^2 + 126ab + 67bc + 56ac$

3. $49a^2 + 81b^2 + 16c^2 + 126ab + 72bc + 66ac$

4. $49a^2 + 81b^2 + 16c^2 + 126ab + 72bc + 56ac$

Q.2 What is the average of all the natural numbers from 1 to 98?

Ans 1. 50

2. 49.5

3. 50.5

4. 49

Q.2 A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 3 hours 15 minutes. He would have gained 3 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

Ans 1. 6 hours 15 minutes

2. 5 hours 15 minutes

3. 6 hours 45 minutes

4. 7 hours 30 minutes

Q.3
0 A man spends 76% of his monthly salary (in ₹) on the rent of his house. If every month he also spends ₹813 on his conveyance and ₹2508 on his grocery and saves the remaining ₹687, his monthly salary (in ₹) is:

Ans 1. 16611

2. 16621

3. 16700

4. 16617

Q.3
1 Shalini travels a distance of 138 km with speed of 46 km/h and 438 km with 73 km/h by her car. Find the average speed (in km/h) of Shalini.

Ans 1. 64

2. 70

3. 68

4. 56

Q.3
2 Samples of four metals A, B, C and D were taken and added to a solution individually. The results obtained have been listed as follows.

A can displace B from its solution

B can displace D from its solution

C can displace D from its solution

C can displace A from its solution

Which is the most reactive metal?

Ans 1. D

2. C

3. A

4. B

Q.3
3 If at same rate of interest, in 2 years, the simple interest is ₹56 and compound interest is ₹64, then what is the principal (in ₹)?

Ans 1. 91

2. 102

3. 98

4. 93

Q.3
4 Seven boxes, R, S, T, U, X, Y and Z, are kept one over the other but not necessarily in the same order. Only T is kept above X. Only Z is kept between X and Y. Only U is kept below R. How many boxes are kept between S and U?

Ans 1. Three

2. Two

3. One

4. Four

Q.3
5 Which of these is NOT a property of magnetic field lines?

Ans 1. They repel each other.

2. They are continuous closed loops.

3. They travel from south to north inside the magnet.

4. They never intersect.

Q.3 6	What is the role of the ovary in the process of fertilisation in plants?
Ans	<input type="checkbox"/> 1. To produce pollen
	<input type="checkbox"/> 2. To provide nutrients to the pollen grains
	<input checked="" type="checkbox"/> 3. To produce the egg cell
	<input type="checkbox"/> 4. To store the male gametes

Q.3 7	Two taps can fill a cistern in 2 hours and 45 hours respectively. A third tap can empty it in 45 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?
Ans	<input type="checkbox"/> 1. 4
	<input checked="" type="checkbox"/> 2. 2
	<input type="checkbox"/> 3. 5
	<input type="checkbox"/> 4. 3

Q.3 8	If an image is formed by a spherical mirror with a magnification of +1, which of the following statements is true?
Ans	<input type="checkbox"/> 1. The image is virtual and half the size of the object.
	<input type="checkbox"/> 2. The image is real and equal in size to the object.
	<input type="checkbox"/> 3. The image is real and twice the size of the object.
	<input checked="" type="checkbox"/> 4. The image is virtual and equal in size to the object.

Q.3 9	In a certain code language, 'batter ball six' is coded as 'lo ka di', 'bowler ball wicket' is coded as 'ka mi th' and 'batter cricket bowler' is coded as 'lo th qy'. What is the possible code for 'cricket ball' in that language?
Ans	<input type="checkbox"/> 1. ka th
	<input checked="" type="checkbox"/> 2. ka qy
	<input type="checkbox"/> 3. th lo
	<input type="checkbox"/> 4. qy lo

Q.4 0	When several resistors are joined in series, the equivalent resistance of the combination is:
Ans	<input checked="" type="checkbox"/> 1. equal to the sum of the individual resistances
	<input type="checkbox"/> 2. greater than the sum of the individual resistances
	<input type="checkbox"/> 3. equal to the product of the individual resistances
	<input type="checkbox"/> 4. less than the sum of the individual resistances

Q.4 1	Which of the following statements is INCORRECT?
Ans	<input type="checkbox"/> 1. Amit Shah assumed charge as Union Home Minister and Minister of Cooperation in June 2024.
	<input type="checkbox"/> 2. Om Birla is elected as the Speaker of the 18 th Lok Sabha.
	<input type="checkbox"/> 3. Narendra Modi took oath as the Prime Minister of India in June 2024.
	<input checked="" type="checkbox"/> 4. Sonia Gandhi became the Leader of Opposition in the 18 th Lok Sabha.

Q.4 Find the arithmetic mean of the following data (correct to two places of decimals).

2	Class-interval	5-15	15-25	25-35	35-45	45-55	55-65
	Frequency	12	18	8	14	16	8

Ans 1. 43.72

2. 33.68

3. 39.45

4. 22.38

Q.4 A number when increased by 50 %, gives 2760. The number is:

3

Ans 1. 3680

2. 1840

3. 920

4. 5520

Q.4 In the process of vegetative propagation, which part of the plant is used in grafting?

4

Ans 1. Root

2. Seed

3. Leaf

4. Stem

Q.4 What is the average of all the natural numbers from 1 to 59?

5

Ans 1. 30

2. 30.5

3. 29.5

4. 31

Q.4 Mahesh purchased 10 kg of rice at the rate of ₹35 per kg and 38 kg of rice at ₹46 per kg. He sold the mixture at the rate of ₹43.5 per kg. Find his loss (in ₹).

6

Ans 1. 10

2. 18

3. 15

4. 5

Q.4 Which of the following rivers is ephemeral?

7

Ans 1. Beas

2. Chambal

3. Yamuna

4. Luni

Q.4 A piece of zinc is placed in three different solutions: lead nitrate, aluminium sulphate and silver nitrate. Which solution(s) will zinc be able to displace the metal from its solution?

8

Ans 1. Aluminium sulphate and silver nitrate

2. Lead nitrate and silver nitrate

3. Only silver nitrate

4. Lead nitrate and aluminium sulphate

Q.4 9	Evaluate: $16 + 16 \div 4 - 3 \times 4$
Ans	<input type="checkbox"/> 1. 11
	<input type="checkbox"/> 2. 10
	<input type="checkbox"/> 3. 7
	<input checked="" type="checkbox"/> 4. 8

Q.5 0	What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged? $26 + 43 - 32 \times 23 \div 46 = ?$
Ans	<input type="checkbox"/> 1. 45
	<input type="checkbox"/> 2. 48
	<input type="checkbox"/> 3. 49
	<input checked="" type="checkbox"/> 4. 47

Q.5 1	The concepts no double jeopardy, no self incrimination and no ex post facto are mentioned under _____ of the Indian Constitution.
Ans	<input checked="" type="checkbox"/> 1. Article 20
	<input type="checkbox"/> 2. Article 21
	<input type="checkbox"/> 3. Article 19
	<input type="checkbox"/> 4. Article 23

Q.5 2	One of the famous Kali temples in India, Kalighat, is located in which of the following Indian states?
Ans	<input checked="" type="checkbox"/> 1. West Bengal
	<input type="checkbox"/> 2. Maharastra
	<input type="checkbox"/> 3. Odisha
	<input type="checkbox"/> 4. Assam

Q.5 3	Which Indian cricketer was appointed as the brand ambassador for MotoGP in India in July 2024?
Ans	<input type="checkbox"/> 1. Rohit Sharma
	<input type="checkbox"/> 2. Jasprit Bumrah
	<input checked="" type="checkbox"/> 3. Shikhar Dhawan
	<input type="checkbox"/> 4. Virat Kohli

Q.5 4	Which of the following statements is NOT a reason for the versatile nature of carbon?
Ans	<input type="checkbox"/> 1. Carbon exhibits catenation
	<input checked="" type="checkbox"/> 2. Carbon can form ionic bonds with itself
	<input type="checkbox"/> 3. Carbon has tetravalency
	<input type="checkbox"/> 4. Carbon can form single, double, and triple bonds

Q.5 5	The National Health Authority (NHA) and _____ signed a Memorandum of Understanding (MoU) on 11 th September. The partnership aims to revolutionise artificial intelligence in health research with an innovative data platform.
Ans	<input type="checkbox"/> 1. IIT Kharagpur
	<input type="checkbox"/> 2. IIT Delhi
	<input type="checkbox"/> 3. IIT Madras
	<input checked="" type="checkbox"/> 4. IIT Kanpur

Q.5 6	The median of 7, 18, 22, 12, 14, 7, 23, 16 and 3 is:
Ans	<input type="checkbox"/> 1. 18
	<input checked="" type="checkbox"/> 2. 14
	<input type="checkbox"/> 3. 22
	<input type="checkbox"/> 4. 7

Q.5 7	What are the two versions of a gene controlling a trait called?
Ans	<input type="checkbox"/> 1. Chromosomes
	<input type="checkbox"/> 2. Proteins
	<input type="checkbox"/> 3. Mutations
	<input checked="" type="checkbox"/> 4. Alleles

Q.5 8	Five bells toll together initially and then continue to toll at time intervals of 4, 8, 12, 16 and 20 seconds respectively. If they start tolling simultaneously at 12:00 p.m., then find how many times they will toll together between 12:00 p.m. to 3:00 p.m.
Ans	<input type="checkbox"/> 1. 42
	<input type="checkbox"/> 2. 54
	<input type="checkbox"/> 3. 62
	<input checked="" type="checkbox"/> 4. 46

Q.5 9	Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 11 February 2024 to 12 April 2024
Ans	<input type="checkbox"/> 1. 34
	<input type="checkbox"/> 2. 36
	<input type="checkbox"/> 3. 33
	<input checked="" type="checkbox"/> 4. 35

Q.6 0	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 trees, S, M, N, O and A, are of different heights. Which among them is the tallest tree? Statements: (I) N is taller than A. A is taller than M. (II) S is taller than M. S is shorter than O.
Ans	<input type="checkbox"/> 1. Data in statement I alone is sufficient to answer the question while data in statement II is not.
	<input type="checkbox"/> 2. Data in statement II alone is sufficient to answer the question while data in statement I is not.
	<input checked="" type="checkbox"/> 3. Data in statements I and II together are not sufficient to answer the question.
	<input type="checkbox"/> 4. Data in statements I and II together are sufficient to answer the question.

Q.6 1	A vertical stick 11 m long casts a shadow 7 m long on the ground. At the same time, a tower casts a shadow of 35 m long on the ground. The height of the tower is:
Ans	<input type="checkbox"/> 1. 60 m
	<input type="checkbox"/> 2. 50 m
	<input type="checkbox"/> 3. 52 m
	<input checked="" type="checkbox"/> 4. 55 m

Q.6
2 Seven people, B, D, E, F, P, Q and R, are sitting in a row, facing north. No one sits to the left of E. Only four people sit between E and R. Only three people sit to the right of D. F sits to the immediate left of B. P is not an immediate neighbour of D. Who sits third to the left of P?

Ans 1. B

2. F

3. R

4. D

Q.6
3 Which of the following describes the relationship between the aperture of a lens and its radius of curvature in the context of thin lenses?

Ans 1. The aperture is independent of the radius of curvature.

2. The aperture is much larger than the radius of curvature.

3. The aperture is much smaller than the radius of curvature.

4. The aperture equals the radius of curvature.

Q.6
4 Which combination of factors would result in the lowest resistance for a conductor?

Ans 1. Short length and large cross-sectional area

2. Long length and small cross-sectional area

3. Short length and small cross-sectional area

4. Long length and large cross-sectional area

Q.6
5 Equipment such as geysers and air conditioners, compared to light bulbs and fans, require:

Ans 1. higher voltage

2. less power

3. less voltage

4. higher power

Q.6
6 In a row of 38 students facing north, Sunil is 20th from the left end. If Harsh is 10th to the right of Sunil, what is Harsh's position from the right end of the row?

Ans 1. 6th

2. 7th

3. 8th

4. 9th

Q.6
7 An electric fan is connected to a 220 V generator. The current is 0.50 A. What is the power used by the fan?

Ans 1. 11 Watt

2. 440 Watt

3. 220 Watt

4. 110 Watt

Q.6 8	Refer to the following number, symbol series and answer the question. Counting to be done from left to right only. (Left) € \$ 7 1 5 * 9 % 2 £ 5 \$ 6 £ € 8 8 4 6 £ % 8 (Right) How many such symbols are there each of which is immediately preceded by a number and also immediately followed by a number?
Ans	<input type="checkbox"/> 1. 5
	<input checked="" type="checkbox"/> 2. 4
	<input type="checkbox"/> 3. 3
	<input type="checkbox"/> 4. 6

Q.6 9	A man sold an article for ₹330 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 ₹1320, then what is the value of d?
Ans	<input checked="" type="checkbox"/> 1. 37.5
	<input type="checkbox"/> 2. 41.1
	<input type="checkbox"/> 3. 38.4
	<input type="checkbox"/> 4. 36.9

Q.7 0	Seeds that are dispersed by animals often:
Ans	<input checked="" type="checkbox"/> 1. have hooks or edible flesh
	<input type="checkbox"/> 2. are very small and light weight
	<input type="checkbox"/> 3. can float easily in water
	<input type="checkbox"/> 4. have wings or parachutes

Q.7 1	The selling price of 30 books is equal to the cost price of 45 books. Find the loss or gain percentage.
Ans	<input checked="" type="checkbox"/> 1. 50 % gain
	<input type="checkbox"/> 2. 50 % loss
	<input type="checkbox"/> 3. $\frac{100}{15}$ % loss
	<input type="checkbox"/> 4. $\frac{100}{15}$ % gain

Q.7 2	Quwwat-al-islam mosque <u>is</u> located in which of the following cities?
Ans	<input type="checkbox"/> 1. Hyderabad
	<input checked="" type="checkbox"/> 2. New Delhi
	<input type="checkbox"/> 3. Sikar
	<input type="checkbox"/> 4. Ajmer

Q.7 3	What should come in place of the question mark (?) in the given series? 136 117 122 103 108 89 ?
Ans	<input type="checkbox"/> 1. 108
	<input checked="" type="checkbox"/> 2. 94
	<input type="checkbox"/> 3. 70
	<input type="checkbox"/> 4. 84

Q.7 Which of the following statements is true about the physical properties of compounds in a homologous series?

Ans 1. They have identical melting and boiling points.

2. They have a regular change in melting and boiling points.

3. Their boiling points decrease as the number of carbon atoms increase.

4. Their physical properties do not change.

Q.7 Why are danger signals typically red in colour?

5

Ans 1. Red light has a longer wavelength and is scattered the least, making it visible from a distance.

2. Red light is more reflective than other colours.

3. Red light is easier to produce artificially.

4. The colour red is aesthetically pleasing.

Q.7 What was the name of the movement started in 1927 in Maharashtra, led by Dr. BR Ambedkar to access public resources such as water bodies, temples and schools?

6

Ans 1. Shahada Movement

2. Bombay Peasants Revolt

3. Kheda Satyagraha

4. Mahad Satyagraha

Q.7 Who is the author of "Postcolonial Elements in Amitav Ghosh's 'The Shadow Lines,'" published in 2018?

7

Ans 1. Arundhati Roy

2. Salman Rushdie

3. Nivedhaa Nivi

4. Amitav Ghosh

Q.7 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?
NTZ 14, KQW 23, HNT 32, EKQ 41, BHN 50, ?

8

Ans 1. YEK 58

2. ZEK 59

3. YKK 59

4. YEK 59

Q.7 Two numbers are in the ratio 2 : 4. If the first number is increased by 4 and the second number is decreased by 14, then the ratio becomes 8 : 5. What is the sum of the original two numbers?

9

Ans 1. 41

2. 38

3. 24

4. 36

Q.8 How do hormonal contraceptives prevent pregnancy?

0

Ans 1. By creating a physical barrier

2. By blocking the fallopian tubes

3. By increasing sperm production

4. By changing the hormonal balance to prevent egg release

Q.8 1	The balanced equation which shows the decomposition of hydrogen peroxide is:
Ans	<input checked="" type="checkbox"/> 1. $2\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$ <input type="checkbox"/> 2. $2\text{HO}_2 \rightarrow 2\text{HO} + \text{O}_2$ <input type="checkbox"/> 3. $\text{H}_2\text{O}_2 \rightarrow 2\text{H}_2\text{O} + \text{O}_2$ <input type="checkbox"/> 4. $\text{H}_2\text{O}_2 \rightarrow \text{H}_2\text{O} + \text{O}_2$

Q.8 2	$\frac{3x}{1 + \frac{1}{1 + \frac{x}{1-x}}} = 12,$ then find the value of 'x'.
Ans	<input checked="" type="checkbox"/> 1. 1.6 <input type="checkbox"/> 2. 1.4 <input type="checkbox"/> 3. 1.2 <input type="checkbox"/> 4. 1.8

Q.8 3	Which of the following best describes a common industrial use of washing soda?
Ans	<input type="checkbox"/> 1. Fertiliser manufacturing <input type="checkbox"/> 2. Cement production <input checked="" type="checkbox"/> 3. Glass manufacturing <input type="checkbox"/> 4. Vinegar production

Q.8 4	20 ml of NaOH is neutralised by 10 ml of HNO ₃ . How much NaOH will be required to neutralise 15 ml of HNO ₃ ?
Ans	<input type="checkbox"/> 1. 20 ml <input type="checkbox"/> 2. 25 ml <input type="checkbox"/> 3. 40 ml <input checked="" type="checkbox"/> 4. 30 ml

Q.8 5	Three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which is the letter-cluster pair that does NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their positions in the letter-cluster.)
Ans	<input checked="" type="checkbox"/> 1. FD - LK <input type="checkbox"/> 2. FI - EH <input type="checkbox"/> 3. LO - KN <input type="checkbox"/> 4. QT - PS

Q.8 6	The pattern of the magnetic field lines of a solenoid is similar to that of a:
Ans	<input checked="" type="checkbox"/> 1. bar magnet <input type="checkbox"/> 2. horseshoe magnet <input type="checkbox"/> 3. button magnet <input type="checkbox"/> 4. ring magnet

Q.8 7	Which of the following received the top honour in the Best Urban Local Body category at the 5 th National Water Awards for its innovative water conservation initiatives?
Ans	<input type="checkbox"/> 1. Pune, Maharashtra <input type="checkbox"/> 2. Indore, Madhya Pradesh <input checked="" type="checkbox"/> 3. Surat, Gujarat <input type="checkbox"/> 4. Bhopal, Madhya Pradesh

Q.8 The volume (in cm^3) of a wire of diameter 56 cm and length 3 m is:

8
 $take \pi = \frac{22}{7}$

Ans 1. 739700

2. 740200

3. 739200

4. 739400

Q.8 Mendel had selected garden pea for certain favourable reasons. Which of the following is NOT a reason for his choice required for his experiments?

9
Ans 1. They can be self-pollinated and cross-pollinated.

2. They produce many offsprings.

3. They have easily observable traits.

4. They have a long generation time.

Q.9 Which of the following statements is true for a balanced chemical equation?

0

Ans 1. The total mass of molecules is unequal on both sides.

2. The total number of molecules is the same on both sides.

3. The total number of moles is the same on both sides.

4. The total number of atoms of each element is the same on both sides.

Q.9 The average score of a cricketer in 20 matches is 40 runs. If his highest score in a match was 78 runs, what is the average of his scores in the remaining 19 matches?

1
Ans 1. 40

2. 36

3. 34

4. 38

Q.9 Anmol starts from Point A and drives 23 km towards the west. He then takes a right turn, drives 27 km, turns right and drives 29 km. He then takes a right turn and drives 32 km. He takes a final right turn, drives 6 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.)

2
Ans 1. 6 km to the north

2. 3 km to the north

3. 5 km to the north

4. 4 km to the north

Q.9 What is formed when sodium sulfate reacts with barium chloride in a double displacement reaction?

3
Ans 1. Sodium sulfate and barium chloride

2. Sodium chloride and barium hydroxide

3. Sodium chloride and barium sulfate

4. Sodium hydroxide and barium chloride

Q.9 If 2 is added to each odd digit and 1 is subtracted from each even digit in the number 42687531, then how many digits will appear more than once in the new number thus formed?

4
Ans 1. Three

2. One

3. Four

4. Two

Q.9 5	Which of the following ratio is smallest?
Ans	<input type="checkbox"/> 1. 28 : 39
	<input checked="" type="checkbox"/> 2. 20 : 51
	<input type="checkbox"/> 3. 22 : 47
	<input type="checkbox"/> 4. 21 : 49

Q.9 6	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 ::?
	# : RXT :: FLH : %
Ans	<input type="checkbox"/> 1. # = OGT, % = IKH
	<input checked="" type="checkbox"/> 2. # = OUQ, % = IOK
	<input type="checkbox"/> 3. # = OUP, % = KIU
	<input type="checkbox"/> 4. # = GHT, % = INY

Q.9 7	An object is placed 12 cm in front of a convex mirror with a focal length of 8 cm. What is the image distance (v)?
Ans	<input checked="" type="checkbox"/> 1. +4.8 cm
	<input type="checkbox"/> 2. -4.8 cm
	<input type="checkbox"/> 3. +20 cm
	<input type="checkbox"/> 4. -20 cm

Q.9 8	₹4800 were divided among P, Q and R, such that 6 times of P = 3 times of Q = 8 times of R. Find the share of R.
Ans	<input checked="" type="checkbox"/> 1. ₹960
	<input type="checkbox"/> 2. ₹1068
	<input type="checkbox"/> 3. ₹815
	<input type="checkbox"/> 4. ₹1034

Q.9 9	Suppose a gardener wants to plant pea which should be of the dwarf varieties. What do you suggest for the choice of the parent plant seeds by the gardener?
Ans	<input type="checkbox"/> 1. All seeds should be of tall varieties.
	<input type="checkbox"/> 2. Any kind of seed can be used.
	<input checked="" type="checkbox"/> 3. All seeds should be of dwarf varieties.
	<input type="checkbox"/> 4. All seeds should be of mixed varieties.

Q.1 00	Select the term from among the given options that can replace the question mark (?) in the following series.
	PKI 23, MHF 31, JEC 47, GBZ 79, DYW 143, ?
Ans	<input checked="" type="checkbox"/> 1. AVT 271
	<input type="checkbox"/> 2. AYT 271
	<input type="checkbox"/> 3. AVT 270
	<input type="checkbox"/> 4. UVT 271



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



Test Center Name	iON Digital Zone iDZ Asansol
Test Date	17/12/2024
Test Time	12:45 PM - 2:15 PM
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.

- Options shown in green color with a tick icon are correct.
- 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 Which of the following is a primary reason why all multi-cellular organisms do not reproduce by fragmentation?

- Ans
- 1. Their cells are loosely organised.
 - 2. They are unicellular.
 - 3. They have a random arrangement of cells.
 - 4. They have specialised cells organised into tissues and organs.

Q.2 Which of the following is true about asexual reproduction?

- Ans
- 1. It results in offspring genetically identical to the parent.
 - 2. It requires fertilisation.
 - 3. It involves two parent organisms.
 - 4. It requires complex reproductive organs.

Q.3 GJBF is related to ILDH in a certain way based on the English alphabetical order. In the same way, JMEI is related to LOGK. To which of the following is MPHL related, following the same logic?

- Ans
- 1. ORNJ
 - 2. ROJN
 - 3. RONJ
 - 4. ORJN

Q.4 For a concave mirror, where is the centre of curvature located relative to the mirror?

- Ans
- 1. At the mirror's surface
 - 2. Behind the mirror
 - 3. In front of the mirror
 - 4. At the mirror's focal point

Q.5 A number when increased by 50 %, gives 2790. The number is:

- Ans
- 1. 5580
 - 2. 3720
 - 3. 1860
 - 4. 930

Q.6	In which language was the classic Indian novel 'Chandrakanta' originally written?
Ans	<input checked="" type="checkbox"/> 1. Bengali
	<input checked="" type="checkbox"/> 2. Hindi
	<input checked="" type="checkbox"/> 3. Tamil
	<input checked="" type="checkbox"/> 4. Urdu

Q.7	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 checked="" type="checkbox"/> 1. ENPU
	<input checked="" type="checkbox"/> 2. KSV A
	<input checked="" type="checkbox"/> 3. CKNS
	<input checked="" type="checkbox"/> 4. HPSX

Q.8	What should come in place of the question mark (?) in the given series? 160 151 141 130 118 ?
Ans	<input checked="" type="checkbox"/> 1. 105
	<input checked="" type="checkbox"/> 2. 101
	<input checked="" type="checkbox"/> 3. 95
	<input checked="" type="checkbox"/> 4. 91

Q.9	Which of the following is NOT a homologous series?
Ans	<input checked="" type="checkbox"/> 1. C_3H_7OH , C_4H_9OH , $C_5H_{11}OH$, $C_6H_{11}OH$
	<input checked="" type="checkbox"/> 2. CH_4 , C_2H_6 , C_3H_8 , C_4H_{10}
	<input checked="" type="checkbox"/> 3. C_2H_2 , C_2H_4 , C_3H_6 , C_4H_8
	<input checked="" type="checkbox"/> 4. C_2H_4 , C_2H_6 , C_3H_6 , C_4H_8

Q.1	This question is based on the five, four-digit numbers given below. 0 (Left) 5479 3126 6785 9254 1630 (Right) (Example: 697 – First digit = 6, second digit = 9 and third digit = 7) NOTE: All the operations to be performed from left to right. What will be the resultant if the fourth digit of the second-greatest number is added to the third digit of the smallest number?
Ans	<input checked="" type="checkbox"/> 1. 14
	<input checked="" type="checkbox"/> 2. 12
	<input checked="" type="checkbox"/> 3. 8
	<input checked="" type="checkbox"/> 4. 10

Q.1	A double displacement reaction typically involves the exchange of:
1	
Ans	<input checked="" type="checkbox"/> 1. ions
	<input checked="" type="checkbox"/> 2. electrons
	<input checked="" type="checkbox"/> 3. protons
	<input checked="" type="checkbox"/> 4. neutrons

Q.1 2	Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)
Ans	✓ 1. VW – XZ
	✗ 2. JL – OQ
	✗ 3. DF – IK
	✗ 4. MO – RT

Q.1 3	If x is inversely proportional to y, and y = 6 when x = 7, find the value of x, when y = 64.
Ans	✓ 1. $\frac{21}{32}$
	✗ 2. $\frac{23}{35}$
	✗ 3. $\frac{21}{33}$
	✗ 4. $\frac{22}{33}$

Q.1 4	The ratio of the lengths of two corresponding sides of two similar triangles is 17 : 13. The ratio of the areas of these two triangles, in the order mentioned, is:
Ans	✓ 1. 289 : 169
	✗ 2. $17\sqrt{17} : 13$
	✗ 3. 17 : 13
	✗ 4. 290 : 170

Q.1 5	In a certain code language, 'hat tie watch' is coded as 'zm ph mt', 'belt bow tie' is coded as 'la oe zm', 'bow watch clip' is coded as 'oe mt dy'. What is the code for 'hat' in that language? (Note: All the codes are two-letter coded only.)
Ans	✓ 1. ph
	✗ 2. oe
	✗ 3. zm
	✗ 4. mt

Q.1 6	Which of the following ratio is smallest?
Ans	✓ 1. 19 : 60
	✗ 2. 29 : 55
	✗ 3. 15 : 47
	✗ 4. 18 : 42

Q.1 7	When a metal and sulphuric acid react with each other, metal displaces hydrogen, which is higher in the reactivity series. Identify the metal for which the bubbling of hydrogen gas will be the fastest.
Ans	<input checked="" type="checkbox"/> 1. Magnesium <input type="checkbox"/> 2. Iron <input type="checkbox"/> 3. Aluminium <input type="checkbox"/> 4. Zinc

Q.1 8	35 men can do a piece of work in 48 days. The number of men required to complete the same work in 21 days is:
Ans	<input type="checkbox"/> 1. 77 <input type="checkbox"/> 2. 72 <input checked="" type="checkbox"/> 3. 80 <input type="checkbox"/> 4. 79

Q.1 9	If the resistance in a circuit is increased while the voltage remains constant, the current will _____.
Ans	<input type="checkbox"/> 1. double <input type="checkbox"/> 2. increase <input checked="" type="checkbox"/> 3. decrease <input type="checkbox"/> 4. remain constant

Q.2 0	<p>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.)</p> <p>12-60-120-130; 14-70-140-150</p>
Ans	<input type="checkbox"/> 1. 15-75-150-140 <input type="checkbox"/> 2. 13-65-130-120 <input type="checkbox"/> 3. 11-55-110-130 <input checked="" type="checkbox"/> 4. 16-80-160-170

Q.2 1	Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 5 February 2024 to 6 April 2024
Ans	<input type="checkbox"/> 1. 36 <input checked="" type="checkbox"/> 2. 35 <input type="checkbox"/> 3. 34 <input type="checkbox"/> 4. 33

Q.2 2	Two taps can fill a cistern in 2 hours and 53 hours respectively. A third tap can empty it in 53 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?
Ans	<input type="checkbox"/> 1. 4 <input type="checkbox"/> 2. 3 <input checked="" type="checkbox"/> 3. 2 <input type="checkbox"/> 4. 5

Q.2 The average price of three items of furniture is Rs 16440. If their prices are in the ratio
3 3:5:7, the price of the cheapest item (in Rs) is

Ans 1. 9864

2. 3288

3. 5480

4. 7672

Q.2 If the distance between A and B is 1253 Km. From A, Chaman goes to B with speed 93
4 km/h and return to A with the speed 95 km/h. Find the average speed of Chaman.
(rounded off to two decimal place)

Ans 1. 93.99 km/h

2. 90.46 km/h

3. 103.98 km/h

4. 94.47 km/h

Q.2 If 'x' means 'addition', '+' means 'subtraction', '-' means 'division' and '÷' means
5 'multiplication', then what will come in place of the question mark (?) in the following
equation?

$$14 + 1 \div 7 \times 32 - 8 = ?$$

Ans 1. 12

2. 11

3. 14

4. 13

Q.2 What is the molecular formula of washing soda?

6

Ans 1. NaHCO_3

2. $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$

3. Na_2CO_3

4. NaCl

Q.2 Correctly match the following Biosphere Reserves to their respective states.

7

- Biosphere Reserves States
1. Nokrek a. Meghalaya
2. Panna b. Madhya Pradesh
3. Manas c. Assam

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

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

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

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

Q.2 The solution of the system of linear equations is:

8

$$x + y + z = 6, 2x - y + 3z = 14, -x + 2y - z = -2$$

Ans 1. $x = \frac{-5}{3}, y = \frac{5}{3}, z = -6$

2. $x = \frac{5}{3}, y = \frac{-5}{3}, z = 6$

3. $x = \frac{4}{3}, y = \frac{-4}{3}, z = 5$

4. $x = \frac{-4}{3}, y = \frac{4}{3}, z = 6$

Q.2 9	In a row of 25 students facing north, Manoj is 15 th from the right end. If Harish is 10 th to the left of Manoj, what is Harish's position from the left end of the row?
Ans	<input checked="" type="checkbox"/> 1. 1 st
	<input type="checkbox"/> 2. 2 nd
	<input type="checkbox"/> 3. 3 rd
	<input type="checkbox"/> 4. 4 th

Q.3 0	What is the pH of a solution containing significant concentrations of H ⁺ ions?
Ans	<input type="checkbox"/> 1. 7
	<input checked="" type="checkbox"/> 2. Less than 7
	<input type="checkbox"/> 3. Greater than 7
	<input type="checkbox"/> 4. Cannot be determined

Q.3 1	With respect to Quad Leaders' Summit, which of the following statements is/are correct? 1) The Quad Leaders' Summit was held in Wilmington (US) in 2024. 2) The year 2024 marks 22 years since the formation of the grouping. 3) India will host the 2025 Quad Leaders Summit.
Ans	<input type="checkbox"/> 1. 1 and 2 only
	<input checked="" type="checkbox"/> 2. 1 and 3 only
	<input type="checkbox"/> 3. 1 only
	<input type="checkbox"/> 4. 2 and 3 only

Q.3 2	How many members of the Rajya Sabha are nominated by the President of India?
Ans	<input type="checkbox"/> 1. 15
	<input type="checkbox"/> 2. 8
	<input type="checkbox"/> 3. 10
	<input checked="" type="checkbox"/> 4. 12

Q.3 3	What should come in place of the question mark (?) in the given series? 78 79 83 92 108 ?
Ans	<input type="checkbox"/> 1. 132
	<input type="checkbox"/> 2. 134
	<input checked="" type="checkbox"/> 3. 133
	<input type="checkbox"/> 4. 135

Q.3 4	A shopkeeper lists the price of a fan at 25% above its cost price and offers a 10% discount on its list price. If he earns a profit of ₹117, then what is the list price (in ₹) of the fan?
Ans	<input type="checkbox"/> 1. 1346
	<input checked="" type="checkbox"/> 2. 1170
	<input type="checkbox"/> 3. 1308
	<input type="checkbox"/> 4. 896

Q.3 5	Which of the following is true for a balanced chemical equation?
Ans	<input checked="" type="checkbox"/> 1. The total number of atoms for each element is the same on both sides of the equation.
	<input type="checkbox"/> 2. The products have more atoms than the reactants.
	<input type="checkbox"/> 3. The mass of reactants is always greater than the mass of products.
	<input type="checkbox"/> 4. The number of molecules on each side is always equal.

Q.3 6	Which of the following statements is correct regarding magnets?
Ans	<input checked="" type="checkbox"/> 1. A magnet is a dipole with north and south poles.
	<input type="checkbox"/> 2. A magnet produces magnetic as well as electric fields.
	<input type="checkbox"/> 3. A magnet can attract an electron.
	<input type="checkbox"/> 4. A magnet can have either north or south pole.

Q.3 7	The difference in the age of two people is 24 years. If 6 years ago, the older of the two was four times as old as the younger one, then find their present ages.
Ans	<input type="checkbox"/> 1. 15 and 39 years
	<input type="checkbox"/> 2. 12 and 36 years
	<input type="checkbox"/> 3. 16 and 40 years
	<input checked="" type="checkbox"/> 4. 14 and 38 years

Q.3 8	What is the sum of the numbers between 250 and 450, such that when it is divided by 8, 12 and 18, it leaves no remainder?
Ans	<input type="checkbox"/> 1. 1008
	<input checked="" type="checkbox"/> 2. 1080
	<input type="checkbox"/> 3. 936
	<input type="checkbox"/> 4. 1152

Q.3 9	In surgical procedures for contraception in males, sperm transfer gets prevented if which of the following is blocked?
Ans	<input type="checkbox"/> 1. Ovary
	<input type="checkbox"/> 2. Fallopian tubes
	<input type="checkbox"/> 3. Testes
	<input checked="" type="checkbox"/> 4. Vas deferens

Q.4 0	What develops into fruit after fertilisation?
Ans	<input type="checkbox"/> 1. Style
	<input type="checkbox"/> 2. Stigma
	<input type="checkbox"/> 3. Anther
	<input checked="" type="checkbox"/> 4. Ovary

Q.4 1	What should come in place of the question mark (?) in the given series based on the English alphabetical order? TUR FGD RSP DEB ?
Ans	<input type="checkbox"/> 1. NPQ
	<input checked="" type="checkbox"/> 2. PQN
	<input type="checkbox"/> 3. NQP
	<input type="checkbox"/> 4. PNQ

Q.4 2	What is the average of all the natural numbers from 1 to 95?
Ans	<input type="checkbox"/> 1. 48.5
	<input type="checkbox"/> 2. 49
	<input checked="" type="checkbox"/> 3. 48
	<input type="checkbox"/> 4. 47.5

Q.4 3	Which status was conferred upon Shipping Corporation of India (SCI) by the Government of India in August 2008?
Ans	<input type="checkbox"/> 1. Miniratna
	<input type="checkbox"/> 2. Dashratna
	<input type="checkbox"/> 3. Maharatna
	<input checked="" type="checkbox"/> 4. Navratna

Q.4 4	When the pH of rainwater falls below 5.6, it is commonly referred to as:
Ans	<input type="checkbox"/> 1. alkaline rain
	<input checked="" type="checkbox"/> 2. acid rain
	<input type="checkbox"/> 3. mineral rain
	<input type="checkbox"/> 4. hard water

Q.4 5	Manur starts from Point A and drives 12 km towards the East. He then takes a right turn, drives 11 km, turns right and drives 13 km. He then takes a right turn and drives 17 km. He takes a final right turn, drives 1 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 degrees turns only unless specified)
Ans	<input type="checkbox"/> 1. 2 km to the South
	<input checked="" type="checkbox"/> 2. 6 km to the South
	<input type="checkbox"/> 3. 3 km to the South
	<input type="checkbox"/> 4. 5 km to the South

Q.4 6	Refer to the following number, symbol series and answer the question. Counting to be done from left to right only. (Left) 3 8 9 5 £ 6 3 @ 3 % @ 7 * 1 # 2 6 9 2 7 & £ (Right) How many such symbols are there each of which is immediately preceded by a number and also immediately followed by a number?
Ans	<input checked="" type="checkbox"/> 1. 4
	<input type="checkbox"/> 2. 6
	<input type="checkbox"/> 3. 3
	<input type="checkbox"/> 4. 5

Q.4 7	What is the primary reason for a central bank to increase the reserve requirement ratio of commercial banks?
Ans	<input checked="" type="checkbox"/> 1. To decrease the money supply in the economy
	<input type="checkbox"/> 2. To increase the money supply in the economy
	<input type="checkbox"/> 3. To decrease the profitability of commercial banks
	<input type="checkbox"/> 4. To encourage banks to lend more

Q.4 8	Simplify the given expression. $(\sin A + \operatorname{cosec} A)^2 + (\cos A - \sec A)^2 + 3$
Ans	<input type="checkbox"/> 1. $\tan^2 A + \cot^2 A$
	<input type="checkbox"/> 2. $3 + \tan^2 A + \cot^2 A$
	<input checked="" type="checkbox"/> 3. $6 + \tan^2 A + \cot^2 A$
	<input type="checkbox"/> 4. $1 + \tan^2 A + \cot^2 A$

Q.4 9	Which of the following statements best describes what happens in a double displacement reaction?
Ans	<input type="checkbox"/> 1. Two elements combine to form a compound.
	<input type="checkbox"/> 2. A compound breaks down into simpler substances.
	<input type="checkbox"/> 3. Electrons are transferred between atoms.
	<input checked="" type="checkbox"/> 4. Ions in two compounds switch places to form two new compounds.

Q.5 0	A man sold an article for ₹533 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 ₹1025, then what is the value of d?
Ans	<input type="checkbox"/> 1. 22
	<input checked="" type="checkbox"/> 2. 24
	<input type="checkbox"/> 3. 29
	<input type="checkbox"/> 4. 21

Q.5 1	B, C, E, F and H have different heights. B is taller than C. Only E is shorter than F. H is taller than B. How many people are taller than C?
Ans	<input checked="" type="checkbox"/> 1. Two
	<input type="checkbox"/> 2. One
	<input type="checkbox"/> 3. Four
	<input type="checkbox"/> 4. Three

Q.5 2	P is the daughter of Q's sister R. S is the wife of Q and T is the son of S. How is P related to T?
Ans	<input type="checkbox"/> 1. Sister's daughter
	<input type="checkbox"/> 2. Father's daughter
	<input type="checkbox"/> 3. Father's mother
	<input checked="" type="checkbox"/> 4. Father's sister's daughter

Q.5 3	What is one of the main attractions of 'Mamallapuram' apart from the dance festival?
Ans	<input type="checkbox"/> 1. Modern art galleries
	<input type="checkbox"/> 2. Local handicrafts
	<input type="checkbox"/> 3. Wildlife sanctuaries
	<input checked="" type="checkbox"/> 4. Architectural beauty of temples

Q.5 4	Shalini travels a distance of 270 km with speed of 54 km/h and 300 km with 30 km/h by her car. Find the average speed (in km/h) of Shalini.
Ans	<input type="checkbox"/> 1. 47
	<input checked="" type="checkbox"/> 2. 38
	<input type="checkbox"/> 3. 44
	<input type="checkbox"/> 4. 43

Q.5 5	If the refractive index of water is 1.33, then the speed of light in water is approximately _____.
Ans	<input type="checkbox"/> 1. 3×10^8 m/s
	<input type="checkbox"/> 2. 1.5×10^8 m/s
	<input checked="" type="checkbox"/> 3. 2.26×10^8 m/s
	<input type="checkbox"/> 4. 4×10^8 m/s

Q.5 6	In a certain code, 'red blue green' is coded as 'dy ph mt', 'blue violet black' is coded as 'lp ph st' and 'black red white' is coded as 'st bq dy'. All the codes are two-letter codes only. What is white coded as?
Ans	<input type="checkbox"/> 1. st
	<input type="checkbox"/> 2. ph
	<input type="checkbox"/> 3. dy
	<input checked="" type="checkbox"/> 4. bq

Q.5 7	What is the result when sodium chloride and silver nitrate are mixed in a double displacement reaction?
Ans	<input type="checkbox"/> 1. Formation of water
	<input checked="" type="checkbox"/> 2. Formation of a precipitate
	<input type="checkbox"/> 3. Formation of a gas
	<input type="checkbox"/> 4. Formation of a salt

Q.5 8	If the interest earned during the 2nd year on a certain sum is ₹3726, and the rate of interest is 15% per annum compounded annually, then the sum is:
Ans	<input checked="" type="checkbox"/> 1. ₹21600
	<input type="checkbox"/> 2. ₹20885
	<input type="checkbox"/> 3. ₹20835
	<input type="checkbox"/> 4. ₹21185

Q.5 9	If the object is placed beyond the center of curvature (C) in front of a concave mirror, the image formed will be _____.
Ans	<input type="checkbox"/> 1. virtual, upright and diminished
	<input type="checkbox"/> 2. real, inverted and enlarged
	<input type="checkbox"/> 3. virtual, upright and enlarged
	<input checked="" type="checkbox"/> 4. real, inverted and diminished

Q.6 0	The special reproductive structures in fungi like Rhizopus, which germinate to form new individuals, are called:
Ans	<input type="checkbox"/> 1. Anthers
	<input checked="" type="checkbox"/> 2. Spores
	<input type="checkbox"/> 3. Gemmules
	<input type="checkbox"/> 4. Pollens

Q.6 1	KL91 is related to CD66 in a certain way. In the same way, MN81 is related to EF56. To which of the following is OP71 related, following the same logic?
Ans	<input type="checkbox"/> 1. HG46
	<input checked="" type="checkbox"/> 2. GH46
	<input type="checkbox"/> 3. HG56
	<input type="checkbox"/> 4. GH56

Q.6 2	Find the HCF of 84, 126 and 210.
Ans	<input type="checkbox"/> 1. 70
	<input checked="" type="checkbox"/> 2. 42
	<input type="checkbox"/> 3. 14
	<input type="checkbox"/> 4. 21

Q.6 3	What are the number of chromosomes in a human male germ cell?
Ans	<input type="checkbox"/> 1. 46 pairs of Chromosomes
	<input checked="" type="checkbox"/> 2. 23 Chromosomes
	<input type="checkbox"/> 3. 23 pairs of Chromosomes
	<input type="checkbox"/> 4. 46 Chromosomes

Q.6 4	P, Q, R, S, T and U are sitting around a circular table facing the centre. U sits third to the left of T. R sits second to the right of Q. Q is not the immediate neighbour of T. P is not the immediate neighbour of R. Who sits third to the left of Q?
Ans	<input type="checkbox"/> 1. P
	<input type="checkbox"/> 2. T
	<input checked="" type="checkbox"/> 3. S
	<input type="checkbox"/> 4. U

Q.6 5	The numbers of children in 10 families of a locality are 2, 1, 3, 4, 2, 3, 5, 1, 1, 3. The number of children per family is:
Ans	<input type="checkbox"/> 1. 3
	<input type="checkbox"/> 2. 2.8
	<input checked="" type="checkbox"/> 3. 2.5
	<input type="checkbox"/> 4. 2.4

Q.6 6	The magnetic field lines of a bar magnet may NOT be drawn using:
Ans	<input type="checkbox"/> 1. iron filings
	<input type="checkbox"/> 2. a magnetic compass
	<input checked="" type="checkbox"/> 3. wood particles
	<input type="checkbox"/> 4. another bar magnet

Q.6 7	A wire of given material having length L and area of cross-section A has a resistance of 4 Ω . The resistance of another wire of the same material having length L/2 will be:
Ans	<input type="checkbox"/> 1. 4 Ω
	<input type="checkbox"/> 2. 1 Ω
	<input type="checkbox"/> 3. 8 Ω
	<input checked="" type="checkbox"/> 4. 2 Ω

Q.6 8	Which electrical appliance helps preserve food by maintaining low temperatures?
Ans	<input type="checkbox"/> 1. Toaster
	<input type="checkbox"/> 2. Electric kettle
	<input type="checkbox"/> 3. Microwave
	<input checked="" type="checkbox"/> 4. Refrigerator

Q.6 9	What is the difference between baking powder and baking soda?
Ans	<input type="checkbox"/> 1. Baking powder is a mixture of baking soda and hydrochloric acid.
	<input type="checkbox"/> 2. Baking soda is a mixture of baking powder and tartaric acid.
	<input type="checkbox"/> 3. Baking soda is a mixture of baking powder and hydrochloric acid.
	<input checked="" type="checkbox"/> 4. Baking powder is a mixture of baking soda and tartaric acid.

Q.7 Find the value of $8.25 \times 6 - 3.14 \times 7 + 2.758$ of $2.5 - 4.365 \times 5$.

0

Ans 1. 12.59

2. 11.82

3. 12.97

4. 11.05

Q.7 The average of four consecutive odd numbers is 36. What is the greatest of these numbers?

Ans 1. 41

2. 43

3. 39

4. 37

Q.7 Which of the following diseases can be prevented by using a mechanical barrier contraceptive method?

Ans 1. AIDS

2. Typhoid

3. TB

4. Malaria

Q.7 If the mean of the following data is 40, then the value of X is:

3

xi	10	25	70	85
fi	21	X	22	35

Ans 1. 134

2. 112

3. 107

4. 120

Q.7 Which of the following statements about AIDS is FALSE?

4

Ans 1. AIDS affects the immune system of the body.

2. AIDS is caused by the HIV virus.

3. AIDS can be transmitted through mosquito bites.

4. AIDS can be prevented by practising safe sex.

Q.7 The population of a town in 1927 was 232300. If its population increased in two successive decades by 30% in each decade, the population of the town in 1947 was:

Ans 1. 392592

2. 392583

3. 392587

4. 392585

Q.7 6	A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question. Q. A, B, C, D and E are sitting in a straight line facing north. Who sits on the extreme left end? (I) A sits fourth to the right of E. (II) Exactly 1 person sits between B and C.
Ans	<input type="checkbox"/> 1. Both Statements I and II put together (and not independently) are sufficient to answer the question.
	<input type="checkbox"/> 2. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.
	<input type="checkbox"/> 3. Both Statements I and II put together are not sufficient to answer the question.
	<input checked="" type="checkbox"/> 4. Data in Statement I alone is sufficient to answer the question, while data in Statement II is not.

Q.7 7	Besides being a barrier method of contraception, condoms also serve which of the following purposes?
Ans	<input type="checkbox"/> 1. Help in transmission of STDs such as gonorrhoea
	<input checked="" type="checkbox"/> 2. Prevent transmission of STDs such as gonorrhoea
	<input type="checkbox"/> 3. Prevent diseases that spread through skin-to-skin contact
	<input type="checkbox"/> 4. Decrease sexual desire

Q.7 8	Hindustan Socialist Republican Association (HSRA) was founded in 1928 in which of the following cities?
Ans	<input type="checkbox"/> 1. Pune
	<input type="checkbox"/> 2. Calcutta
	<input type="checkbox"/> 3. Lahore
	<input checked="" type="checkbox"/> 4. Delhi

Q.7 9	Which of the following statements is true regarding the refractive index?
Ans	<input checked="" type="checkbox"/> 1. Refractive index of water is always greater than 1.
	<input type="checkbox"/> 2. Refractive index depends only on the speed of light in vacuum.
	<input type="checkbox"/> 3. Refractive index of glass is less than 1.
	<input type="checkbox"/> 4. Refractive index of a given medium is independent of the wavelength of the light.

Q.8 0	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 ::? # : DGJ :: EHK : %
Ans	<input type="checkbox"/> 1. # = WXC, % = LOR
	<input checked="" type="checkbox"/> 2. # = WZC, % = LOR
	<input type="checkbox"/> 3. # = WZC, % = LOP
	<input type="checkbox"/> 4. # = MZC, % = LOR

Q.8 1	Each of D, E, F, K, L, M and N has an exam on a different day of a week, starting from Monday and ending on Sunday of the same week. N has exam on Thursday. L has an exam two days before N. Only four people have exams between F and L. M has an exam on one of the days after L. D has an exam on the day immediately before E. How many people have exams between E and M?
Ans	<input type="checkbox"/> 1. Four
	<input checked="" type="checkbox"/> 2. Two
	<input type="checkbox"/> 3. Three
	<input type="checkbox"/> 4. One

Q.8 2	Let O be the incentre of a triangle PQR and S be a point on the side QR such that $OS \perp QR$. If $\angle QOS = 15^\circ$, then $\angle PQR = ?$
Ans	<input type="checkbox"/> 1. 75°
	<input type="checkbox"/> 2. 65°
	<input type="checkbox"/> 3. 130°
	<input checked="" type="checkbox"/> 4. 150°

Q.8 3	In Delhi Sultanate, the holder of an 'iqta', who also worked as the administrative head of his 'iqta', was designated as _____.
Ans	<input checked="" type="checkbox"/> 1. muqti
	<input type="checkbox"/> 2. qazi
	<input type="checkbox"/> 3. ariz
	<input type="checkbox"/> 4. wazir

Q.8 4	<p>Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statements.</p> <p>Statements: All waters are liquids. All liquids are juices. All juices are fruits.</p> <p>Conclusions: (I) All waters are fruits. (II) Some fruits are liquids.</p>
Ans	<input type="checkbox"/> 1. Only conclusion (II) follows.
	<input type="checkbox"/> 2. Only conclusion (I) follows.
	<input type="checkbox"/> 3. Neither conclusion (I) nor (II) follows.
	<input checked="" type="checkbox"/> 4. Both conclusions (I) and (II) follow.

Q.8 5	The radius of the base of a right circular cone is 21 m and its curved surface area is 1914 m^2 . Find the volume (in m^3) of the cone.
Ans	<input type="checkbox"/> 1. 9549
	<input checked="" type="checkbox"/> 2. 9240
	<input type="checkbox"/> 3. 10250
	<input type="checkbox"/> 4. 8549

Q.8 6	Which of the following Ministries launched the electric mobility promotion scheme in March 2024 to provide short term support to Electric Vehicles?
Ans	<input type="checkbox"/> 1. Ministry of Environment, Forest and Climate Change
	<input type="checkbox"/> 2. Ministry of Corporate Affairs
	<input checked="" type="checkbox"/> 3. Ministry of Heavy Industries
	<input type="checkbox"/> 4. Ministry of Road Transport and Highways

Q.8 7	<p>If 'A' stands for '+', 'B' stands for 'x', 'C' stands for '+' and 'D' stands for '-', then what will be come in place of the question mark (?) in the following equation?</p> $30 \text{ C } 48 \text{ D } 36 \text{ B } 50 \text{ A } 20 = ?$
Ans	<input checked="" type="checkbox"/> 1. -12
	<input type="checkbox"/> 2. -11
	<input type="checkbox"/> 3. -14
	<input type="checkbox"/> 4. -10

Q.8 8	The number of 176-Ω resistors (in parallel) required to carry 5 A on a 220-V line is:
Ans	<input type="checkbox"/> 1. 2
	<input type="checkbox"/> 2. 8
	<input checked="" type="checkbox"/> 3. 4
	<input type="checkbox"/> 4. 16

Q.8 9	Students and professors of which IIT have developed an innovative fire rescue drone in June 2024?
Ans	<input type="checkbox"/> 1. IIT Delhi
	<input type="checkbox"/> 2. IIT Madras
	<input checked="" type="checkbox"/> 3. IIT Dharwad
	<input type="checkbox"/> 4. IIT Mandi

Q.9 0	A six-digit number is divisible by 91. If 143 is added to this number, the resulting number is divisible by which of the following number?
Ans	<input type="checkbox"/> 1. 91
	<input type="checkbox"/> 2. 7
	<input checked="" type="checkbox"/> 3. 13
	<input type="checkbox"/> 4. 11

Q.9 1	15 is related to 35 following a certain logic. Following the same logic, 21 is related to 49. To which of the given options is 27 related, following the same logic? (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.)
Ans	<input checked="" type="checkbox"/> 1. 63
	<input type="checkbox"/> 2. 69
	<input type="checkbox"/> 3. 65
	<input type="checkbox"/> 4. 51

Q.9 2	If $A:B = 1 : 3$, $B:C = 4 : 3$ and $C : D = 6 : 7$, then $A:B:C:D$ is
Ans	<input type="checkbox"/> 1. 6:24:18:21
	<input type="checkbox"/> 2. 8:24:16:21
	<input type="checkbox"/> 3. 8:22:18:21
	<input checked="" type="checkbox"/> 4. 8:24:18:21

Q.9 3	Which of the following rights is NOT part of the Right to Life under Article 21 of the Indian Constitution?
Ans	<input type="checkbox"/> 1. Right to Privacy
	<input type="checkbox"/> 2. Right to Free Legal Aid
	<input checked="" type="checkbox"/> 3. Right to Property
	<input type="checkbox"/> 4. Right to Livelihood

Q.9 4	Which of the following Articles of the Indian Constitution states that there shall be a Legislative Assembly for the National Capital Territory and the seats in such Assembly shall be filled by members chosen by direct election from territorial constituencies in the National Capital Territory?
Ans	<input type="checkbox"/> 1. Article 239 B
	<input checked="" type="checkbox"/> 2. Article 239 AA
	<input type="checkbox"/> 3. Article 239 AB
	<input type="checkbox"/> 4. Article 239A

Q.9 5	What should come in place of the question mark (?) in the given series based on the English alphabetical order? FMK HOM JQO LSQ ?
Ans	<input type="checkbox"/> 1. NUR
	<input type="checkbox"/> 2. NVR
	<input type="checkbox"/> 3. NVS
	<input checked="" type="checkbox"/> 4. NUS

Q.9 6	Which of the following statements is INCORRECT about the Annual Financial Statement 2024-25? 1) The Budget 2024-25 will focus on four castes. 2) 1 crore farmers across the country will be initiated into natural farming, supported by certification and branding in the next 2 years. 3) 20,000 need-based bio-input resource centres to be established. 4) 1,000 Industrial Training Institutes will be upgraded in hub and spoke arrangements with outcome orientation.
Ans	<input type="checkbox"/> 1. 1 only
	<input checked="" type="checkbox"/> 2. 3 only
	<input type="checkbox"/> 3. 4 only
	<input type="checkbox"/> 4. 2 only

Q.9 7	Kapil Parmar created history by securing India's first-ever medal in which game at the Paralympic Games 2024?
Ans	<input checked="" type="checkbox"/> 1. Judo
	<input type="checkbox"/> 2. Shooting
	<input type="checkbox"/> 3. Fencing
	<input type="checkbox"/> 4. Table Tennis

Q.9 8	Mendel studied traits such as flower colour and seed shape in pea plants. These traits are called as:
Ans	<input type="checkbox"/> 1. genetic codes
	<input type="checkbox"/> 2. dominant characteristics
	<input type="checkbox"/> 3. progeny units
	<input checked="" type="checkbox"/> 4. visible characters

Q.9 9	The sum of the ages of Ram and Ramesh is 48 years. Four years ago the age of Ram was three times the age of Ramesh. What will be the age of Ramesh five years from now?
Ans	<input type="checkbox"/> 1. 18 years
	<input type="checkbox"/> 2. 21 years
	<input checked="" type="checkbox"/> 3. 19 years
	<input type="checkbox"/> 4. 14 years

Q.1 00	Amit purchased 10 kg of rice at the rate of ₹35 per kg and 39 kg of rice at ₹44 per kg. He sold the mixture at the rate of ₹42 per kg. Find his loss (in ₹).
Ans	<input type="checkbox"/> 1. 3
	<input type="checkbox"/> 2. 13
	<input checked="" type="checkbox"/> 3. 8
	<input type="checkbox"/> 4. 16



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



Test Center Name	Our Little Angels Home
Test Date	17/12/2024
Test Time	4:30 PM - 6:00 PM
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.

- Options shown in green color with a tick icon are correct.
- 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 At which of the following points does each firm employ labour?

- Ans 1. Each firm employs labour up to the point where the marginal revenue product of labour minus the wage rate.
2. Each firm employs labour up to the point where the marginal revenue product of labour equals the wage rate.
3. Each firm employs labour up to the point where the marginal cost of labour equals the wage rate.
4. Each firm employs labour up to the point where the marginal revenue product of labour multiplies the wage rate.

Q.2 In which of the following cases did the Supreme Court of India enunciate the 'Doctrine of Basic Structure'?

- Ans 1. Golaknath case
2. AK Gopalan case
3. Menka Gandhi case
4. Keshvanand Bharti case

Q.3 Which of the following materials will have the least resistance at room temperature?

- Ans 1. Nichrome
2. Aluminum
3. Iron
4. Copper

Q.4 Which Article of the Indian Constitution permits the Supreme Court to review its judgement or order?

- Ans 1. Article 137
2. Article 138
3. Article 132
4. Article 135

Q.5 What is the role of chlorine gas in the preparation of bleaching powder?

- Ans 1. It is used as a catalyst for the reaction.
2. It reacts with dry slaked lime to form bleaching powder.
3. It is used to neutralise calcium hydroxide.
4. It reacts with water to produce hydrogen peroxide.

Q.6 What should come in place of the question mark (?) in the given series?

86 78 64 56 42 34 ?

- Ans 1. 20
2. 22
3. 26
4. 28

Q.7 In which year was 'Heirloom Treasures: The Cultural Tapestry of India: A Compilation of Selected Articles from India Beckons: Volume 1,' by Arunima Hoskote, published?

- Ans 1. 2021
2. 2018
3. 2019
4. 2020

Q.8 Pooja and Ritu invest in a business in the ratio 4 : 1. If total profit is Rs. 1480, then what is difference between the profit (in Rs.) of Pooja and Ritu?

- Ans 1. 988
2. 938
3. 888
4. 788

Q.9 A car rental company rents small cars at \$50 per day and large cars at \$80 per day. If a total of 13 cars were rented for \$920 in one day, how many large cars were rented?

- Ans 1. 4
2. 11
3. 9
4. 6

Q.10 India has reduced the windfall tax on crude oil to ₹_____ per metric tonne from ₹4,600, effective 17 August 2024.

- Ans 1. 1,800
2. 3,600
3. 2,600
4. 2,100

Q.11 If two parallel lines are cut by a transversal, and one pair of the corres



- Ans 1. 35
2. 45
3. 40
4. 30

Q.12 A homologous series is a group of organic compounds that have:

- Ans 1. the same structural formula
 2. the same functional group but differ by a CH_2 group
 3. the same molecular formula
 4. no relation to each other

Q.13 When an aqueous solution of potassium iodide reacts with lead nitrate, what type of product is formed?

- Ans 1. Lead iodide (precipitate)
 2. Sodium nitrate
 3. Lead chloride
 4. Lead nitrate

Q.14 What is the mean of the following distribution?

Marks	13	23	51	61	96
No. of Students	51	34	62	87	17

- Ans 1. 72
 2. 37
 3. 46
 4. 34

Q.15 The angle of elevation of a tower from a point which is at a distance o of the tower. (use $\sqrt{3} = 1.73$)

- Ans 1. 68 m
 2. 56.37 m
 3. 76.12 m
 4. 48 m

Q.16 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 ::?

: GJM :: FIL : %

- Ans 1. # = YAD, % = ORU
 2. # = XAD, % = ORP
 3. # = XAD, % = ORU
 4. # = XAD, % = MRU

Q.17 The LCM of two numbers is seven times of their HCF. If the product of two numbers is 448, then find the difference between LCM and HCF.

- Ans 1. 54
 2. 42
 3. 30
 4. 48

Q.18 Suman invested a sum of ₹3500 at 20% per annum compound interest, compounded annually. If she received an amount of ₹6048 after n years, the value of n is:

- Ans 1. 2
 2. 3
 3. 4
 4. 2.6

Q.19 If the distance between A and B is 1089 Km. From A, Vishal goes to B with speed 104 km/h and return to A with the speed 125 km/h. Find the average speed of Vishal. (rounded off to two decimal place)

- Ans 1. 117.44 km/h
 2. 113.54 km/h
 3. 111.79 km/h
 4. 120.89 km/h

Q.20 The measure of how much a material resists the flow of charges is known as:

- Ans 1. current
 2. resistivity
 3. power generated
 4. potential difference

Q.21 O, P, Q, R, S and T are sitting around a circular table facing the centre. P sits second to the left of T. Q is the immediate neighbour of P and R. S is not the immediate neighbour of R. Who sits to the immediate left of R?

- Ans 1. S
 2. Q
 3. O
 4. T

Q.22 What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged?

$$11 + 37 - 5 \times 40 \div 24 = ?$$

- Ans 1. -22
 2. -21
 3. -25
 4. -23

Q.23 Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 3 February 2024 to 4 April 2024

- Ans 1. 35
 2. 33
 3. 34
 4. 36

Q.24 A man sold an article for ₹687 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 ₹1145, then what is the value of d?

- Ans 1. 16
 2. 19
 3. 23
 4. 20

Q.25 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 @ 4 + = 3 1 # 3 @ \$ 9 8 * 9 4 2 8 7 6 5 (Right)
How many such symbols are there, each of which is immediately preceded by and also immediately followed by a number?

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

Q.26 Which of the following factors is primarily responsible for survival of species?

- Ans 1. Variations
 2. Temperature
 3. Niche
 4. Mutation

Q.27 Which team clinched the Irani Cup title for the season 2024-25?

- Ans 1. Karnataka
 2. Mumbai
 3. Railways
 4. Rest of India

Q.28 In a certain code, 'copy book pencil' is coded as 'fd rl sg', 'pencil crayon eraser' is coded as 'bz xw rl', and 'crayon copy pen' is coded as 'xw sg xo'. What is the code for 'book' in that language?

(Note: All the codes are two letter coded only.)

- Ans 1. sg
 2. fd
 3. xo
 4. rl

Q.29 What is the name of the famous temple complex in Tamil Nadu, known for its Dravidian architecture and 1,000-pillar hall?

- Ans 1. Brihadeeswarar Temple
 2. Kanchipuram Temple
 3. Jagannath Temple
 4. Meenakshi Temple

Q.30 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 1. HLK
 2. DGF
 3. SWV
 4. OSR

Q.31 The pH of acid rain is:

- Ans 1. equal to 7
 2. less than 5.6
 3. more than 7
 4. more than 5.6 but less than 7

Q.32 A and B can do a piece of work in 4 days and 46 days, respectively. The number of days [Correct to one decimal place] required to complete the work if both A and B work together is:

- Ans 1. 6.9
 2. 3.6
 3. 6.8
 4. 5.5

Q.33 Which of the following options is INCORRECT with relation to the given statement?

The magnetic field lines of a bar magnet may be drawn using:

- Ans 1. another bar magnet
 2. iron filings
 3. a magnetic compass
 4. wood particles

Q.34 Find the value of $1.356 + 4.25 \times 8 - 3.562 \times 6 + 7.5 \times 4$.

- Ans 1. 43.012
 2. 43.984
 3. 42.237
 4. 41.625

Q.35 In a certain code language,
'A + B' means 'A is the son of B',
'A - B' means 'A is the brother of B',
'A × B' means 'A is the wife of B' and
'A ÷ B' means 'A is the father of B'.

How is S related to H if 'S - D + F ÷ G × H'?

- Ans 1. Wife's Brother
 2. Father
 3. Brother
 4. Wife's Father

Q.36 Which of the following is NOT a method of pollination?

- Ans 1. Self-pollination
 2. Wind pollination
 3. Water pollination
 4. Asexual pollination

Q.37 What should come in place of the question mark (?) in the given series based on the English alphabetical order?

FDW LJC RPI XVO ?

- Ans 1. BDU
 2. DBU
 3. BUD
 4. DUB

Q.38 Which part of the Bryophyllum plant develops new plants via vegetative propagation?

- Ans 1. Stems
 2. Leaves
 3. Flowers
 4. Roots

Q.39 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 boxes, V, W, X, Y and Z, have different weights. Which box among them is the second heaviest?

Statements:

(I) Y is heavier than W. Only three boxes are lighter than Z.

(II) X is heavier than W. X is heavier than V.

- Ans** 1. Data in statement I alone is sufficient to answer the question while data in statement II is not.
2. Data in statements I and II together are not sufficient to answer the question.
3. Data in statement II alone is sufficient to answer the question while data in statement I is not.
4. Data in statements I and II together are sufficient to answer the question.

Q.40 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.)

6-18-72-102; 8-20-80-110

- Ans** 1. 4-16-64-84
2. 9-21-84-94
3. 7-19-76-106
4. 11-22-88-116

Q.41 A tube like structure grows down from the pollen grain to the style and reaches the ovule. This pollen tube is responsible for:

- Ans** 1. carrying carbon dioxide to the female germ cell in the ovary
2. carrying nutrition to the female germ cell in the ovary
3. carrying the male germ cell to the female germ cell in the ovary
4. carrying oxygen to the female germ cell in the ovary

Q.42 Contraception is one of the main goals of which health care programme?

- Ans** 1. Mental Health Programme
2. Indradhanush Immunisation Programme
3. Reproductive Health Programme
4. Pulse Polio Programme

Q.43 The average age of 40 boys in a class is 18 years. One boy, aged 26 years left the class, and two new boys joined the class. If the average age of all boys now in the class remains 18 years, then find the average age of the two newcomers.

- Ans** 1. 24 years
2. 20 years
3. 22 years
4. 21 years

Q.44 What was the venue of the 13th Ministerial Conference of the World Trade Organization in 2024?

- Ans** 1. New Delhi, India
2. Abu Dhabi, United Arab Emirates
3. London, England
4. Paris, France

Q.45 YT21 is related to TO19 in a certain way based on the English alphabetical order. In the same way, PL17 is related to KG15. To which of the following is KF13 related, following the same logic?

(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.)

- Ans
- 1. AE11
 - 2. FT17
 - 3. FO11
 - 4. FA11

Q.46 Oxidation of metals in the presence of acids or moisture is called:

- Ans
- 1. neutralisation
 - 2. corrosion
 - 3. rancidity
 - 4. rusting

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

- Ans
- 1. OY-VX
 - 2. CM-JL
 - 3. GQ-NP
 - 4. LV-TU

Q.48 Yeast reproduces through which asexual mode of reproduction?

- Ans
- 1. Budding
 - 2. Fusion
 - 3. Vegetative propagation
 - 4. Fission

Q.49 How can you experimentally determine the focal length of a concave mirror?

- Ans
- 1. Measure the angle of reflection.
 - 2. Measure the distance between the mirror and the image of a distant object formed by it.
 - 3. Measure the diameter of the mirror.
 - 4. Measure the distance between the pole and the centre of curvature.

Q.50 What is the difference between the hypotenuse and the base of an isos



- Ans
- 1. 12.4 m
 - 2. 11.9 m
 - 3. 10.9 m
 - 4. 11.2 m

Q.51 In a convex mirror, the principal focus is located _____.

- Ans
- 1. at the pole of the mirror
 - 2. in front of the mirror
 - 3. at the centre of curvature
 - 4. behind the mirror

Q.52 What is the median of the following data?
17, 54, 51, 64, 13, 39, 23, 40, 78, 66, 96

- Ans 1. 51.5
 2. 51
 3. 52
 4. 50.5

Q.53 Among five people named A, B, C, D and E, each has a certain age. C is twice the age of A. A is three times the age of D. D is one fifth the age of B. The age of B is 45. If E is equal the age of C, what is the age of E?

- Ans 1. 58
 2. 54
 3. 52
 4. 56

Q.54 Two taps can fill a cistern in 2 hours and 46 hours respectively. A third tap can empty it in 46 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?

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

Q.55 The first President of the Indian National Congress was _____.

- Ans 1. Ras Behari Bose
 2. Gopal Krishna Gokhale
 3. Dada Bhai Naoroji
 4. Womesh Chandra Banerjee

Q.56 Which scientist(s) established the laws of Inheritance?

- Ans 1. Watson and Crick
 2. Gregor Johann Mendel
 3. Charles Darwin
 4. Thomas Hunt Morgan

Q.57 Which of the following statements are correct with respect to Arunachal Himalaya?
Statement 1: These extend from the east of the Bhutan Himalayas up to the Diphu pass in the east.
Statement 2: The general direction of the mountain range is from southwest to northeast.
Statement 3: Some of the important mountain peaks of the region are K2 and Annapurna.
Statement 4: These ranges are dissected by fast-flowing rivers from the north to the south, forming deep gorges.

- Ans 1. Statements 1, 2 and 4 are correct.
 2. Only statements 2 and 3 are correct.
 3. Statements 2, 3 and 4 are correct.
 4. Statements 1, 2 and 3 are correct.

Q.58 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

CYU XTP SOK NJF ?

- Ans 1. ERT
 2. IEA
 3. EAI
 4. IAI

Q.59 What is the name (acronym) of the software developed by ISRO, through its Vikram Sarabhai Space Centre (VSSC), a Computational Fluid Dynamics (CFD) tool aimed at facilitating aerodynamic design and analysis for aerospace vehicles?

- Ans 1. PraVaHa
 2. PraNaMa
 3. PraYoGa
 4. PraViNa

Q.60 ₹3300 were divided among P, Q and R, such that 4 times of P = 7 times of Q = 2 times of R. Find the share of R.

- Ans 1. ₹2028
 2. ₹2024
 3. ₹2046
 4. ₹1848

Q.61 Mayank starts from Point A and drives 18 km towards east. He then takes a right turn, drives 19 km, turns right and drives 21 km. He then takes a right turn and drives 25 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° turns only unless specified.)

- Ans 1. 5 km to the south
 2. 8 km to the south
 3. 6 km to the south
 4. 4 km to the south

Q.62 The population of a town in 1974 was 222900. If its population increased in two successive decades by 50% in each decade, the population of the town in 1994 was:

- Ans 1. 501521
 2. 501525
 3. 501520
 4. 501526

Q.63 A number when increased by 50 %, gives 3120. The number is:

- Ans 1. 2080
 2. 1040
 3. 4160
 4. 6240

Q.64 Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusion(s) logically follow(s) from the statements.

Statements: All hens are juices. Some juices are nests. All pins are nests.

Conclusions:

(I): Some pins are hens.

(II): Some pins are juices

Ans 1. Neither conclusion (I) nor (II) follows.

2. Only conclusion (I) follows.

3. Only conclusion (II) follows.

4. Both conclusions (I) and (II) follow.

Q.65 Select the option in which the numbers share the same relationship as that shared by the given pairs of numbers.

(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.)

185, 113

170, 98

Ans 1. 165, 103

2. 112, 50

3. 146, 74

4. 136, 62

Q.66 What is the angle formed between two lateral faces of a triangular glass prism called?

Ans 1. Angle of incidence

2. Angle of refraction

3. Angle of deviation

4. Angle of the prism

Q.67 The solution of the system of the given linear equations is:

$2x + 3y - z = 5$, $x - 2y + 4z = -2$, $3x + y + 2z = 7$

Ans 1. $x = \frac{-44}{7}$, $y = \frac{-27}{7}$, $z = 4$

2. $x = \frac{44}{7}$, $y = \frac{-27}{7}$, $z = -8$

3. $x = \frac{-44}{7}$, $y = \frac{27}{7}$, $z = -4$

4. $x = \frac{44}{7}$, $y = \frac{-27}{7}$, $z = -4$

Q.68 The Indian Constitution guarantees Fundamental Rights to its citizens under which of the following Articles?

Ans 1. Only Articles 12 to 35

2. Only Articles 14 to 32

3. Only Articles 12 to 30

4. Only Articles 15 to 35

Q.69 If the resistance of a conductor is doubled while the current remains the same, how will the heat produced per unit time change?

- Ans
- 1. It will quadruple.
 - 2. It will be halved.
 - 3. It will remain the same.
 - 4. It will double.

Q.70 The average price of three items of furniture is Rs 15765. If their prices are in the ratio 3:5:7, the price of the costliest item (in Rs) is

- Ans
- 1. 22071
 - 2. 3153
 - 3. 7357
 - 4. 5255

Q.71 If x is inversely proportional to y, and y = 5 when x = 2, find the value of x, when y = 41.

- Ans
- 1. $\frac{11}{42}$
 - 2. $\frac{12}{44}$
 - 3. $\frac{10}{42}$
 - 4. $\frac{10}{41}$

Q.72 Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

WJT : ZNO
KAK : NEF

- Ans
- 1. LBL : OEG
 - 2. TFV : WJR
 - 3. MTK : PXG
 - 4. NKH : QOC

Q.73 Leishmania reproduces by:

- Ans
- 1. binary fission in any plane
 - 2. binary fission in only vertical planes
 - 3. binary fission in two equal halves
 - 4. binary fission in a definite plane

Q.74 What should come in place of the question mark (?) in the given series?

68 76 86 98 112 ?

- Ans
- 1. 122
 - 2. 125
 - 3. 128
 - 4. 132

Q.75 Who among the following was the ruler of Gujarat when Humayun attacked the kingdom in 1532?

- Ans 1. Bahadur Shah
 2. Sikandar Shah
 3. Muzaffar Shah II
 4. Zafar Khan Muzaffar

Q.76 A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it is numbered 2 and so on, till the topmost floor is numbered 6.

Only four people live between D and F. C lives on an even numbered floor but not on floor number 2. E lives immediately below A but above D.
How many people live below B?

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

Q.77 Which of the following steps is the first step in balancing a chemical equation?

- Ans 1. Balancing oxygen atoms
 2. Adding coefficients randomly
 3. Balancing hydrogen atoms
 4. Writing the skeleton equation

Q.78 In a certain code language, 'actor singer dancer' is coded as 'ma ph st', 'dancer doctor engineer' is coded as 'cd le ma' and 'engineer actor cricketer' is coded as 'st bq cd'.
(All the codes are two-letter codes only.)
What is the code for 'actor' in that language?

- Ans 1. ma
 2. bq
 3. st
 4. cd

Q.79 Evaluate: $32 \div 12 \times 3 - 2 \times 4$

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

Q.80 Which of the following is correct with regard to resistances in a series circuit?

- Ans 1. Total resistance is less than any individual resistance.
 2. Total resistance is equal to the product of all resistances.
 3. Total resistance is inversely proportional to each resistance.
 4. Total resistance is equal to the sum of all individual resistances.

Q.81 Anamika travels a distance of 183 km with speed of 61 km/h and 225 km with 45 km/h by her car. Find the average speed (in km/h) of Anamika.

- Ans 1. 51
 2. 59
 3. 54
 4. 56

Q.82 AB and CD are parallel straight lines and HI is the transversal intersecting AB at E and CD at F. G is a point between the lines AB and CD but not on HI, such that $m\angle EGF = 65^\circ$. If $\frac{2}{5} \times m\angle BEG = \frac{3}{5} \times m\angle DFG$, and $m\angle DFG = \frac{1}{3} \times m\angle DFE$, what is the measure of $\angle FEG$?

- Ans
- 1. 62°
 - 2. 63°
 - 3. 52°
 - 4. 69°

Q.83 Where does the image form when an object is positioned at the centre of curvature of a concave mirror?

- Ans
- 1. At the pole
 - 2. At infinity
 - 3. At the centre of curvature
 - 4. At the focal point

Q.84 When Plaster of Paris is mixed with water, it undergoes which of the following changes?

- Ans
- 1. It produces a gas.
 - 2. It loses all its water molecules.
 - 3. It changes to gypsum.
 - 4. It dissolves completely.

Q.85 What is the average of all the natural numbers from 1 to 97?

- Ans
- 1. 49
 - 2. 48.5
 - 3. 50
 - 4. 49.5

Q.86 Find the cost (in ₹) of digging a cuboidal pit 9 m long, 5 m broad and 4 m deep at the rate of ₹20 per m^3 .

- Ans
- 1. 3,900
 - 2. 3,800
 - 3. 3,700
 - 4. 3,600

Q.87 $\frac{(a^9 \times b^3 \times c^6)}{(a^{10} \times b^6 \times c^3)}$ in simplified form is:

- Ans
- 1. $(a^1) \times (b^6) \times (c^{-9})$
 - 2. $(a^1) \times (b^1) \times (c^5)$
 - 3. $(a^{-1}) \times (b^{-3}) \times (c^3)$
 - 4. $(a^{-7}) \times (b^{-9}) \times (c^4)$

Q.88 What happens when zinc (Zn) reacts with hydrochloric acid (HCl)?

- Ans
- 1. Zinc is reduced.
 - 2. Hydrogen is oxidised.
 - 3. Zinc is oxidised.
 - 4. Both Zinc and Hydrogen are oxidised.

Q.89 What will come in the place of the question mark (?) in the following equation if '+' and '-' are interchanged and '+' and 'x' are interchanged?

$$17 + 9 - 3 \times 3 \div 7 = ?$$

- Ans 1. 49
 2. 40
 3. 43
 4. 47

Q.90 Refer to the given number, symbol series and answer the question that follows.

Counting to be done from left to right only.

(Left) 6 # 1 * 8 & 7 & 5 4 Ω 3 % 9 6 @ 2 \$ 9 £ 3 (Right)

How many such symbols are there each of which is immediately preceded by an odd number but NOT immediately followed by an even number?

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

Q.91 Which of the following waterways is located on the Tapi river?

- Ans 1. NW-100
 2. NW-10
 3. NW-91
 4. NW-1

Q.92 Which of the following is an example of a decomposition reaction that occurs due to the application of electric current?

- Ans 1. Heating calcium carbonate
 2. Electrolysis of water
 3. Decomposition of sodium bicarbonate by heat
 4. Decomposition of potassium permanganate by heat

Q.93 NATO will establish a new land command in _____ near the Russian border in 2025 to oversee northern European land operations during potential conflicts.

- Ans 1. Turkmenistan
 2. Finland
 3. Ukraine
 4. Kyrgyzstan

Q.94 As the concentration of hydronium ions increases, the pH value _____.

- Ans 1. decreases and then increases
 2. decreases
 3. remains the same
 4. increases

Q.95 A trader claims to sell rice at a profit of 74%, but also dishonestly uses a weight which is 9% less than what is mentioned on it. Find the total percentage of profit earned by the trader. (Round the answer to the nearest whole number.)

- Ans 1. 94%
 2. 89%
 3. 91%
 4. 87%

Q.96 A trader lost 10% by selling a shirt for ₹840. He will gain x%' by selling it for ₹1540, the value of x is:

- Ans 1. 65
 2. 80
 3. 55
 4. 75

Q.97 Rose flower pollen has reached Sunflower stigma through pollination. The pollen will be rejected by the stigma because:

- Ans 1. pollen was not of sunflower
 2. pollen was of rose flower
 3. stigma has nothing to do with pollen
 4. pollen has nothing to do with stigma

Q.98 What is the unit of electric power commonly used to measure household energy consumption?

- Ans 1. Joules
 2. Kilowatt-hours
 3. Watts
 4. Amperes

Q.99 Seven boxes, I, J, K, L, W, X and Y, are kept one over the other but not necessarily in the same order. Only K is kept above W. Only two boxes are kept between W and J. Only L is kept below I. J is not kept immediately below Y. How many boxes are kept between X and L?

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

Q.10 What is the purpose of using devices like Copper-T in family planning?

- 0
Ans 1. To act as a physical barrier to sperm
 2. To alter hormonal levels in women
 3. To prevent fertilised eggs from implanting in the uterus
 4. To block sperm transfer in males

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



Test Center Name	iON Digital Zone IDZ Karmanghat
Test Date	18/12/2024
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.

- Options shown in green color with a tick icon are correct.
- 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 In ΔPQR and ΔXYZ , $PQ = 5$ cm, $QR = 6$ cm, $PR = 7$ cm, XY

- Ans
- 1. $\Delta PQR \cong \Delta YXZ$
 - 2. $\Delta PRQ \cong \Delta XYZ$
 - 3. $\Delta PQR \cong \Delta XYZ$
 - 4. $\Delta QPR \cong \Delta XYZ$

Q.2 Himani travels a distance of 352 km with speed of 32 km/h and 330 km with 30 km/h by her car. Find the average speed (in km/h) of Himani.

- Ans
- 1. 26
 - 2. 21
 - 3. 39
 - 4. 31

Q.3 RUON is related to VYSR in a certain way based on the English alphabetical order. In the same way, HKED is related to LOIH. To which of the given options is TWQP related, following the same logic?

- Ans
- 1. XAUT
 - 2. XATU
 - 3. AXUT
 - 4. AXTU

Q.4 Which of the following statements is/are correct?

- 1) Nari Shakti Vandan Adhiniyam was introduced in 2023.
- 2) Nari Shakti Vandan Adhiniyam ensures 33% reserved seats for women in the Parliament, Legislative Assemblies and Delhi Assembly.
- 3) Nari Shakti Vandan Adhiniyam will be in force for 10 years only.

- Ans
- 1. 1 only
 - 2. 1 and 2
 - 3. 1 and 3
 - 4. 2 and 3

Q.5	If 1 is added to each odd digit and 1 is subtracted from each even digit in the number 8436152, then what will be the difference between the last and the first digits from the left in the number thus formed?
Ans	<input type="checkbox"/> 1. 3
	<input type="checkbox"/> 2. 5
	<input checked="" type="checkbox"/> 3. 6
	<input type="checkbox"/> 4. 4

Q.6	What would happen to dead plants and animals if decomposers were absent from an ecosystem?
Ans	<input checked="" type="checkbox"/> 1. They would persist, and the natural replenishment of soil would be hindered.
	<input type="checkbox"/> 2. They would quickly turn into soil.
	<input type="checkbox"/> 3. They would be eaten by consumers.
	<input type="checkbox"/> 4. They would become producers.

Q.7	What should come in place of the question mark (?) in the given series? 64 61.7 59.4 57.1 ? 52.5
Ans	<input checked="" type="checkbox"/> 1. 54.8
	<input type="checkbox"/> 2. 53.1
	<input type="checkbox"/> 3. 55.4
	<input type="checkbox"/> 4. 56.7

Q.8	For which mission of ISRO has the International Astronautical Federation (IAF) awarded ISRO the World Space Award?
Ans	<input checked="" type="checkbox"/> 1. Chandrayaan-3
	<input type="checkbox"/> 2. Aditya-L1
	<input type="checkbox"/> 3. Venus Mission
	<input type="checkbox"/> 4. Chandrayaan-2

Q.9	With which of the following pricing approaches is a product's price equal to its marginal cost?
Ans	<input type="checkbox"/> 1. Mark-up pricing
	<input type="checkbox"/> 2. Factor pricing
	<input checked="" type="checkbox"/> 3. Marginal cost pricing
	<input type="checkbox"/> 4. Price discrimination

Q.1	Article 51 A (b) of the Indian Constitution states that it is the duty of the citizens 'to cherish and follow the noble ideals that inspired the _____'.
Ans	<input checked="" type="checkbox"/> 1. national struggle for freedom
	<input type="checkbox"/> 2. global values and principles
	<input type="checkbox"/> 3. political ideas of various parties
	<input type="checkbox"/> 4. customs and traditions of India

Q.1	This question is based on the five, three-digit numbers given below. 1 (Left) 473 987 324 529 648 (Right) (Example: 697 – First digit = 6, second digit = 9 and third digit = 7) NOTE: All the operations to be performed from left to right. The position of how many numbers will remain unchanged if all these numbers are arranged in ascending order?
Ans	<input checked="" type="checkbox"/> 1. None
	<input type="checkbox"/> 2. Three
	<input type="checkbox"/> 3. Two
	<input type="checkbox"/> 4. One

Q.1 2	The potential difference versus current plot for a conducting wire is a straight line. The slope of this line gives us the:
Ans	<input type="checkbox"/> 1. current flowing through the wire
	<input type="checkbox"/> 2. voltage across the wire
	<input type="checkbox"/> 3. number of electrons in the wire
	<input checked="" type="checkbox"/> 4. resistance of the wire

Q.1 3	Which of the following reactions is an example of a precipitation reaction?
Ans	<input type="checkbox"/> 1. $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
	<input type="checkbox"/> 2. $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$
	<input type="checkbox"/> 3. $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
	<input checked="" type="checkbox"/> 4. $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{NaNO}_3 + \text{AgCl}$

Q.1 4	In which year did the amount of ozone begin to drop sharply in the atmosphere?
Ans	<input type="checkbox"/> 1. 1950
	<input checked="" type="checkbox"/> 2. 1980
	<input type="checkbox"/> 3. 1960
	<input type="checkbox"/> 4. 1970

Q.1 5	Two pipes can fill a tank in 34 hours and 94 hours, respectively. The time (in hours) required to fill the tank when both pipes are opened simultaneously is:
Ans	<input type="checkbox"/> 1. $\frac{797}{29}$
	<input type="checkbox"/> 2. $\frac{798}{31}$
	<input checked="" type="checkbox"/> 3. $\frac{799}{32}$
	<input type="checkbox"/> 4. $\frac{796}{30}$

Q.1 6	Seven boxes, E, F, G, H, T, U and V, are kept one over the other, but not necessarily in the same order. Only two boxes are kept below E. Only one box is kept above T. Only one box is kept between T and U. G is kept immediately below F. V is kept at some place below H. How many boxes are kept between H and F?
Ans	<input checked="" type="checkbox"/> 1. Four
	<input type="checkbox"/> 2. Two
	<input type="checkbox"/> 3. Three
	<input type="checkbox"/> 4. One

Q.1 7	What is the reason for CFC free refrigerators being manufactured for use throughout the world?
Ans	<input type="checkbox"/> 1. CFC makes refrigeration a tough process.
	<input checked="" type="checkbox"/> 2. CFC is a synthetic chemical which depletes the ozone layer.
	<input type="checkbox"/> 3. CFC is tough to handle for the refrigeration industry.
	<input type="checkbox"/> 4. CFC is cheap for use in refrigerators.

Q.1 The sum of 8 numbers is 336. Find their average number.
8

Ans 1. 40
 2. 42
 3. 43
 4. 41

Q.1 Select the option in which the numbers share the same relationship as that shared by 9 and 12.
 (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.)

96, 12
184, 23

Ans 1. 130, 16
 2. 144, 18
 3. 156, 19
 4. 180, 20

Q.2 If the mean of the following data is 61, then the value of X is:
0

xi	55	60	70	95
fi	48	X	31	23

Ans 1. 790
 2. 799
 3. 773
 4. 796

Q.2 A man walks to a viewpoint and returns to the starting point by his car maintaining constant speed and thus takes a total time of 6 hours 45 minutes. He would have gained 2 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?
1

Ans 1. 8 hours 30 minutes
 2. 9 hours 15 minutes
 3. 8 hours 45 minutes
 4. 7 hours 45 minutes

Q.2 The climate of the Thar desert is best described as _____.
2

Ans 1. tropical rainforest
 2. temperate
 3. humid subtropical
 4. arid

Q.2 B is the father of A. C is the brother of A. D is the wife of C and E is the son of D. How is B related to E?
3

Ans 1. Father's father
 2. Father's brother
 3. Father
 4. Brother

Q.2
4 B, C, E, F and H have different heights. B is taller than C but shorter than H. H is taller than E but shorter than F. E is taller than C but shorter than B. How many people are shorter than B?

Ans 1. One

2. Two

3. Three

4. Four

Q.2
5 What architectural style is the Meenakshi Amman Temple known for?

Ans 1. Indo-Saracenic

2. Gothic

3. Roman

4. Dravidian

Q.2
6 What is the median of the following data?
78, 33, 59, 56, 61, 36, 48, 42, 97, 57, 62

Ans 1. 57.5

2. 56.5

3. 58

4. 57

Q.2
7 What term can be used for substances that are broken down by biological processes?

Ans 1. Non-biodegradable

2. Compostable

3. Biodegradable

4. Recyclable

Q.2
8 What is the smallest 4-digit number which, when divided by 12, 16, and 20, gives a remainder of 9?

Ans 1. 1049

2. 1209

3. 1217

4. 1017

Q.2
9 Sakshi invested a sum of ₹8900 at 10% per annum compound interest, compounded annually. If she received an amount of ₹10769 after n years, the value of n is:

Ans 1. 1.60000002384186

2. 2.4

3. 3

4. 2

Q.3
0 Which synthetic chemicals are responsible for the depletion of ozone in the atmosphere?

Ans 1. Nitrogen oxides

2. Chlorofluorocarbons (CFCs)

3. Methane

4. Carbon dioxide

Q.3
1 Which of the following substances will take the longest time to degrade naturally in the environment?

Ans 1. Leaves

2. Leather

3. Paper

4. Cardboard box

Q.3
2 Which attribute of a paper cup makes it better than a plastic cup for our environment?

Ans 1. Non-biodegradable

2. Not disposable

3. Disposable

4. Biodegradable

Q.3
3 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.)

19-57-114-134; 21-63-126-146

Ans 1. 18-54-108-118

2. 17-51-102-112

3. 16-48-96-116

4. 20-60-120-180

Q.3
4 The first ruler of Delhi Sultanate was:

Ans 1. Alauddin Khalji

2. Iltutmish

3. Balban

4. Qutb-ud-din Aibak

Q.3
5 Refer to the following number, symbol series and answer the question. Counting to be done from left to right only.

(Left) 9 8 & & © € % 8 \$ 9 8 2 # 5 2 7 7 1 5 £ € % (Right)

How many such numbers are there each of which is immediately preceded by a symbol and also immediately followed by a symbol?

Ans 1. 2

2. 1

3. 0

4. 3

Q.3
6 A and B complete a work in 18 days. If A alone can do it in 54 days then, B alone can do in _____(days).

Ans 1. 28

2. 29

3. 27

4. 26

Q.3 7	If a substance has a pH of 11, which of the following statements is true?
Ans	<input type="checkbox"/> 1. It is neutral and does not change the litmus colour.
	<input type="checkbox"/> 2. It is acidic and does not change the colour of the litmus paper.
	<input checked="" type="checkbox"/> 3. It is basic and can turn red litmus paper blue.
	<input type="checkbox"/> 4. It is acidic and can turn blue litmus paper red.

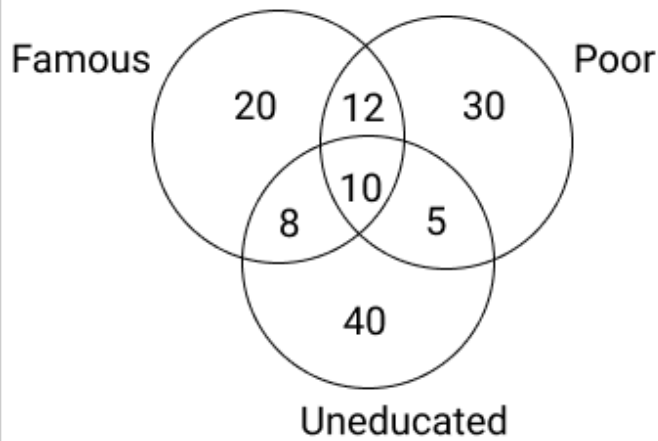
Q.3 8	If three resistors of 6 Ω, 3 Ω and 2 Ω are connected in parallel, the total equivalent resistance is _____.
Ans	<input type="checkbox"/> 1. 2 Ω
	<input checked="" type="checkbox"/> 2. 1 Ω
	<input type="checkbox"/> 3. 0.5 Ω
	<input type="checkbox"/> 4. 11 Ω

Q.3 9	When two elements react to form a compound, it can be classified as:
Ans	<input type="checkbox"/> 1. double displacement
	<input type="checkbox"/> 2. displacement
	<input checked="" type="checkbox"/> 3. combination
	<input type="checkbox"/> 4. decomposition

Q.4 0	Who was appointed as the new head coach of the junior men's hockey team in August 2024?
Ans	<input type="checkbox"/> 1. Shankar Lakshman
	<input type="checkbox"/> 2. Prithipal Singh
	<input type="checkbox"/> 3. Harmanpreet Singh
	<input checked="" type="checkbox"/> 4. PR Sreejesh

Q.4 1	If $A = 7.5^\circ$, what is the value of $\left(12.8 \times \frac{1}{\sqrt{3}} \cot 4A + 7.2 \tan 6A\right)$
Ans	<input type="checkbox"/> 1. 12
	<input checked="" type="checkbox"/> 2. 20
	<input type="checkbox"/> 3. 10
	<input type="checkbox"/> 4. 8

Q.4 Study the given diagram carefully and answer the questions. The numbers in different sections indicate the number of persons. How many persons are both poor and uneducated but not famous ?
 2 uneducated but not famous ?
 (NOTE: You have to take the given data to be true even if they seem to be at variance from commonly known facts.)



Ans ✓ 1. 5

✗ 2. 8

✗ 3. 12

✗ 4. 30

Q.4 Why is monitoring pH crucial for understanding the impacts of acid rain on soil and water ecosystems?
 3

Ans ✗ 1. Acid rain increases the pH of soil and water bodies.

✗ 2. Acid rain does not affect soil and water ecosystems.

✗ 3. Acid rain only makes the water taste sour.

✓ 4. Acid rain decreases the pH, harming aquatic life and soil nutrient availability.

Q.4 If the length of a wire-shaped resistor is doubled, the resistivity:
 4

Ans ✗ 1. is halved

✓ 2. remains the same

✗ 3. is doubled

✗ 4. is quadrupled

Q.4 Write the expanded form of $(6a + 2b + 7c)^2$.
 5

Ans ✗ 1. $36a^2 + 4b^2 + 49c^2 + 28ab + 28bc + 84ac$

✓ 2. $36a^2 + 4b^2 + 49c^2 + 24ab + 28bc + 84ac$

✗ 3. $36a^2 + 4b^2 + 49c^2 + 24ab + 28bc + 94ac$

✗ 4. $36a^2 + 4b^2 + 49c^2 + 24ab + 23bc + 84ac$

Q.4 When was the Indian Remote Sensing Satellite System (IRS) established?
 6

Ans ✗ 1. 1959

✗ 2. 1983

✓ 3. 1988

✗ 4. 1972

Q.4 7	Fleming's Right-Hand Rule is applicable in the case of _____.
Ans	<input type="checkbox"/> 1. fuse wires
	<input checked="" type="checkbox"/> 2. electric generators
	<input type="checkbox"/> 3. electric kettles
	<input type="checkbox"/> 4. electric motors

Q.4 8	What should come in place of the question mark (?) in the given series? 18 24 34 40 50 ?
Ans	<input checked="" type="checkbox"/> 1. 56
	<input type="checkbox"/> 2. 58
	<input type="checkbox"/> 3. 57
	<input type="checkbox"/> 4. 55

Q.4 9	A copper wire has a resistance of 10 Ω. If it is replaced with a wire of the same material and length but twice the cross-sectional area, its resistance will be _____.
Ans	<input checked="" type="checkbox"/> 1. 5 Ω
	<input type="checkbox"/> 2. 10 Ω
	<input type="checkbox"/> 3. 2.5 Ω
	<input type="checkbox"/> 4. 20 Ω

Q.5 0	A trader lost 10% by selling a shirt for ₹850. He will gain x%' by selling it for ₹1360, the value of x is:
Ans	<input type="checkbox"/> 1. 59
	<input type="checkbox"/> 2. 34
	<input type="checkbox"/> 3. 54
	<input checked="" type="checkbox"/> 4. 44

Q.5 1	In a certain code language, 'guns and roses' is coded as 'li mh ca', 'for the roses' is coded as 'mh bo ph' and 'guns for colours' is coded as 'ca bo qu'. What is the code for 'roses' in that language?
Ans	<input type="checkbox"/> 1. li
	<input checked="" type="checkbox"/> 2. mh
	<input type="checkbox"/> 3. ca
	<input type="checkbox"/> 4. bo

Q.5 2	Which of the following can be broken down by biological processes?
Ans	<input type="checkbox"/> 1. Aluminium foil
	<input type="checkbox"/> 2. Milk packets
	<input type="checkbox"/> 3. Plastic bottles
	<input checked="" type="checkbox"/> 4. Vegetable peels

Q.5 3	$\frac{(a^1 \times b^7 \times c^7)}{(a^1 \times b^2 \times c^{10})}$ in simplified form is:
Ans	<input type="checkbox"/> 1. $(a^2) \times (b^4) \times (c^{-5})$
	<input type="checkbox"/> 2. $(a^4) \times (b^2) \times (c^2)$
	<input checked="" type="checkbox"/> 3. $(a^0) \times (b^5) \times (c^{-3})$
	<input type="checkbox"/> 4. $(a^{-8}) \times (b^{-5}) \times (c^{-9})$

Q.5 In which direction does the force act on a conductor placed in a magnetic field in an electric motor?
4

Ans 1. In the direction of the current

2. Perpendicular to both the current and magnetic field

3. Opposite to the magnetic field

4. Along the magnetic field

Q.5 Two numbers are in the ratio 5 : 8. If the first number is increased by 13 and the second number is decreased by 6, then the ratio becomes 4 : 6. What is the sum of the original two numbers?
5

Ans 1. 650

2. 681

3. 663

4. 665

Q.5 In the reaction $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$, the substance reduced is:
6

Ans 1. H_2

2. H_2O

3. Cu

4. CuO

Q.5 Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 14 February 2024 to 15 April 2024
7

Ans 1. 35

2. 36

3. 34

4. 33

Q.5 If the mean proportional of P and 100 is 50, then find the value of P.
8

Ans 1. 22

2. 25

3. 24

4. 28

Q.5 How many of the following Union territories were created after State Reorganisation Act passed in 1956?
9

Ans 1. 4

2. 7

3. 5

4. 6

Q.6 Which of the following represents a combination reaction?
0

Ans 1. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$

2. $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$

3. $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{AgCl} + \text{NaNO}_3$

4. $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$

Q.6
1 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?
JCF25, KDG34, LEH43, MFI52, ?

Ans 1. NGJ60

2. NGJ61

3. NGI60

4. NGI61

Q.6
2 The average price of three items of furniture is Rs 16455. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

Ans 1. 5485

2. 9873

3. 7679

4. 3291

Q.6
3 By selling an article at $\frac{5}{14}$ of its actual selling price, Hitesh incurs a lo

Ans 1. 79.2%

2. 81.9%

3. 80.7%

4. 81.2%

Q.6
4 Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

NCG : SFF

SQO : XTN

Ans 1. IUD : NXA

2. REV : WHW

3. QHX : VKV

4. MKY : RNX

Q.6
5 A solution has a pH of 12. Which ion concentration is higher in this solution?

Ans 1. Both H^+ and OH^- are equal

2. More number S^{2-} ions and more Cl^-

3. Only OH^-

4. Only H^+

Q.6
6 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?

Ans 1. MK – PN

2. EC – HF

3. IG – LJ

4. TR – XV

Q.6 7	The cost of a washing machine is 25% less than the cost of a TV. If the cost of the washing machine increases by 82% and that of the TV decreases by 16%, then what is the change in the total cost of 8 washing machines and 9 TVs?
Ans	<input type="checkbox"/> 1. Decrease by 21%
	<input type="checkbox"/> 2. Increase by 20%
	<input checked="" type="checkbox"/> 3. Increase by 23.2%
	<input type="checkbox"/> 4. Decrease by 24%

Q.6 8	The curved surface area of a cone is 5544 cm^2 , and the diameter is 10 cm. Find the radius of the cone.
Ans	<input type="checkbox"/> 1. 23,550
	<input type="checkbox"/> 2. 27,270
	<input type="checkbox"/> 3. 25,530
	<input checked="" type="checkbox"/> 4. 27,720

Q.6 9	Why do iron filings arrange themselves in a pattern around a bar magnet?
Ans	<input checked="" type="checkbox"/> 1. Because of the magnetic field
	<input type="checkbox"/> 2. Due to electric charge
	<input type="checkbox"/> 3. Due to gravitational force
	<input type="checkbox"/> 4. Because they are heavy

Q.7 0	What happens to the resistance of most conductors as their temperature increases?
Ans	<input checked="" type="checkbox"/> 1. It increases.
	<input type="checkbox"/> 2. It becomes zero.
	<input type="checkbox"/> 3. It decreases.
	<input type="checkbox"/> 4. It remains the same.

Q.7 1	What role do green plants and certain bacteria play in an ecosystem?
Ans	<input type="checkbox"/> 1. Decomposers
	<input type="checkbox"/> 2. Parasites
	<input checked="" type="checkbox"/> 3. Producers
	<input type="checkbox"/> 4. Consumers

Q.7 2	Which of the following will cause the greatest increase in power dissipation for a given resistor?
Ans	<input type="checkbox"/> 1. Halving the resistance
	<input type="checkbox"/> 2. Doubling the resistance
	<input checked="" type="checkbox"/> 3. Doubling the voltage across the resistor
	<input type="checkbox"/> 4. Halving the current through the resistor

Q.7 3	₹5400 were divided among P, Q and R, such that 6 times of P = 3 times of Q = 8 times of R. Find the share of R.
Ans	<input type="checkbox"/> 1. ₹947
	<input type="checkbox"/> 2. ₹1235
	<input type="checkbox"/> 3. ₹1245
	<input checked="" type="checkbox"/> 4. ₹1080

Q.7 4	A number when increased by 50 %, gives 2850. The number is:
Ans	<input type="checkbox"/> 1. 5700
	<input checked="" type="checkbox"/> 2. 1900
	<input type="checkbox"/> 3. 950
	<input type="checkbox"/> 4. 3800

Q.7 5	Which ion is responsible for the acidic properties of acids?
Ans	<input checked="" type="checkbox"/> 1. H^+
	<input type="checkbox"/> 2. OH^-
	<input type="checkbox"/> 3. Cl^-
	<input type="checkbox"/> 4. Na^+

Q.7 6	The average marks of some students in a class is 75. When five students are included, the average becomes 78 and the marks of those five students are 80, 85, 89, 81 and 82. Find the total number of students.
Ans	<input type="checkbox"/> 1. 8
	<input checked="" type="checkbox"/> 2. 9
	<input type="checkbox"/> 3. 10
	<input type="checkbox"/> 4. 6

Q.7 7	Which of the following can be minimised through the implementation of proper sewage treatment?
Ans	<input type="checkbox"/> 1. Air pollution
	<input type="checkbox"/> 2. Noise pollution
	<input checked="" type="checkbox"/> 3. Water pollution
	<input type="checkbox"/> 4. Soil pollution

Q.7 8	Evaluate: $33 \div 9 \times 3 - 2 \times 4$
Ans	<input type="checkbox"/> 1. 5
	<input checked="" type="checkbox"/> 2. 3
	<input type="checkbox"/> 3. 2
	<input type="checkbox"/> 4. 6

Q.7 9	Write the expanded form of $(9a + 6b + 4c)^2$.
Ans	<input type="checkbox"/> 1. $81a^2 + 36b^2 + 16c^2 + 108ab + 48bc + 82ac$
	<input checked="" type="checkbox"/> 2. $81a^2 + 36b^2 + 16c^2 + 108ab + 48bc + 72ac$
	<input type="checkbox"/> 3. $81a^2 + 36b^2 + 16c^2 + 112ab + 48bc + 72ac$
	<input type="checkbox"/> 4. $81a^2 + 36b^2 + 16c^2 + 108ab + 43bc + 72ac$

Q.8 0	The centres of two circles with radii 28 cm and 20 cm are 50 cm apart. What is the length (in cm) of the transverse common tangent?
Ans	<input type="checkbox"/> 1. 16
	<input type="checkbox"/> 2. 13
	<input type="checkbox"/> 3. 15
	<input checked="" type="checkbox"/> 4. 14

Q.8 1	The ratio between HCF and LCM of two numbers 62 and 217 is 1 : 14. Find the LCM.
Ans	<input type="checkbox"/> 1. 402
	<input type="checkbox"/> 2. 430
	<input type="checkbox"/> 3. 439
	<input checked="" type="checkbox"/> 4. 434

Q.8 2	Which of the following combinations would produce a precipitate?
Ans	<input type="checkbox"/> 1. NaCl + KNO ₃
	<input type="checkbox"/> 2. NaOH + Na ₂ SO ₄
	<input type="checkbox"/> 3. NaOH + NaCl
	<input checked="" type="checkbox"/> 4. NaOH + FeCl ₃

Q.8 3	Each of P, Q, R, S, T, U and V has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. Q has the exam on Saturday. Only four people have exams after U. R has the exam immediately before T but not on Monday. S has the exam after P but before U. How many people have exams between R and V?
Ans	<input type="checkbox"/> 1. Four
	<input checked="" type="checkbox"/> 2. Two
	<input type="checkbox"/> 3. Five
	<input type="checkbox"/> 4. Three

Q.8 4	Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete? FIS38, RUE70, DGQ102, PSC134, ?
Ans	<input checked="" type="checkbox"/> 1. BEO166
	<input type="checkbox"/> 2. BOQ166
	<input type="checkbox"/> 3. BOW165
	<input type="checkbox"/> 4. BOE166

Q.8 5	In a certain code language, 'fan light door' is coded as 'dy ph mt', 'door window mat' is coded as 'lp ph st', 'mat fan glass' is coded as 'st bq dy'. What is the code for 'fan' in that language? (Note: All the codes are two-letter coded only.)
Ans	<input type="checkbox"/> 1. mt
	<input checked="" type="checkbox"/> 2. dy
	<input type="checkbox"/> 3. bq
	<input type="checkbox"/> 4. ph

Q.8 6	Who among the following women started the Women's Indian Association in 1917?
Ans	<input type="checkbox"/> 1. Sarojini Naidu
	<input checked="" type="checkbox"/> 2. Annie Besant
	<input type="checkbox"/> 3. Madam Bhikaji Cama
	<input type="checkbox"/> 4. Usha Mehta

Q.8 7	A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question. Five people, A, B, C, D and E, have different weights each. Who is the heaviest? (I) A is heavier than C but lighter than D. (II) B is not the heaviest and E is not the lightest.
Ans	<input type="checkbox"/> 1. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.
	<input checked="" type="checkbox"/> 2. Both Statements I and II put together are not sufficient to answer the question.
	<input type="checkbox"/> 3. Both Statements I and II put together (and not independently) are sufficient to answer the question.
	<input type="checkbox"/> 4. Data in Statement I alone is sufficient to answer the question, while data in Statement II is not.

Q.8 8	Which country gave the name 'Dana' to the cyclone that hit India from the Bay of Bengal?
Ans	<input type="checkbox"/> 1. The Maldives
	<input type="checkbox"/> 2. The United Arab Emirates
	<input type="checkbox"/> 3. Oman
	<input checked="" type="checkbox"/> 4. Saudi Arabia

Q.8 9	Tapan starts from Point A and drives 8 km towards the south. He then takes a right turn, drives 5 km, turns right and drives 12 km. He then takes a right turn and drives 9 km. He takes a final right 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 type="checkbox"/> 1. 5 km to the west
	<input checked="" type="checkbox"/> 2. 4 km to the west
	<input type="checkbox"/> 3. 7 km to the west
	<input type="checkbox"/> 4. 6 km to the west

Q.9 0	Write the expanded form of $(5a + 4b + 9c)^2$.
Ans	<input type="checkbox"/> 1. $25a^2 + 16b^2 + 81c^2 + 40ab + 67bc + 90ac$
	<input type="checkbox"/> 2. $25a^2 + 16b^2 + 81c^2 + 40ab + 72bc + 100ac$
	<input type="checkbox"/> 3. $25a^2 + 16b^2 + 81c^2 + 44ab + 72bc + 90ac$
	<input checked="" type="checkbox"/> 4. $25a^2 + 16b^2 + 81c^2 + 40ab + 72bc + 90ac$

Q.9 1	According to experimental results, when does the magnitude of the force on a current-carrying conductor in a magnetic field become the highest?
Ans	<input type="checkbox"/> 1. When the current is opposite to the magnetic field
	<input type="checkbox"/> 2. When the current is parallel to the magnetic field
	<input type="checkbox"/> 3. When the current flows at any angle to the magnetic field
	<input checked="" type="checkbox"/> 4. When the current is perpendicular to the magnetic field

Q.9 2	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 :: ? #: GOK :: HPL : %
Ans	<input type="checkbox"/> 1. # = EMJ, % = JRN
	<input type="checkbox"/> 2. # = EMI, % = JRM
	<input checked="" type="checkbox"/> 3. # = EMI, % = JRN
	<input type="checkbox"/> 4. # = EMI, % = JSN

Q.9 3	The author of the famous novel 'Midnight's Children' is:
Ans	<input checked="" type="checkbox"/> 1. Salman Rushdie <input type="checkbox"/> 2. Khushwant Singh <input type="checkbox"/> 3. Shashi Tharoor <input type="checkbox"/> 4. Ruskin Bond

Q.9 4	When lead nitrate is heated, it decomposes to form lead monoxide (PbO), nitrogen dioxide (NO ₂), and oxygen (O ₂). The brown gas seen during the reaction is:
Ans	<input type="checkbox"/> 1. nitric oxide (NO) <input type="checkbox"/> 2. lead monoxide (PbO) <input checked="" type="checkbox"/> 3. nitrogen dioxide (NO ₂) <input type="checkbox"/> 4. oxygen (O ₂)

Q.9 5	What was the venue of the North Atlantic treaty Organization (NATO) Summit in July 2024?
Ans	<input type="checkbox"/> 1. London, England <input type="checkbox"/> 2. Paris, France <input checked="" type="checkbox"/> 3. Washington, D.C., United States <input type="checkbox"/> 4. New York, United States

Q.9 6	What will come in the place of the question mark (?) in the following equation, if '+' and '-' are interchanged and 'x' and '÷' are interchanged? 34 ÷ 33 × 22 + 19 - 40 = ?
Ans	<input type="checkbox"/> 1. 74 <input type="checkbox"/> 2. 73 <input type="checkbox"/> 3. 70 <input checked="" type="checkbox"/> 4. 72

Q.9 7	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 checked="" type="checkbox"/> 1. WAIO <input type="checkbox"/> 2. MQZE <input type="checkbox"/> 3. GKTY <input type="checkbox"/> 4. OSBG

Q.9 8	Which of the following articles empowers the President to make regulations for the peace, progress and good government of the union territories?
Ans	<input checked="" type="checkbox"/> 1. Article 240 <input type="checkbox"/> 2. Article 243 <input type="checkbox"/> 3. Article 239 <input type="checkbox"/> 4. Article 244

Q.9 9	A, B, C, D, E, F and G are sitting around a circular table facing the centre. B sits third to the right of F. D sits fourth to the left of B. C is neither the immediate neighbour of B nor D. A sits third to the right of C. E is not the immediate neighbour of D. How many people sit between E and G, when counted from the left of E?
Ans	<input type="checkbox"/> 1. None <input type="checkbox"/> 2. One <input type="checkbox"/> 3. Two <input checked="" type="checkbox"/> 4. Three

Q.1 A shopkeeper sells an item for ₹770.7 after giving two successive discounts of 58% and 80% on its marked price. Had he not given any discount, he would have earned a profit of 25%. What is the cost price (in ₹) of the item?

Ans 1. 7353

2. 7322

3. 7340

4. 7315

2024/12/20-08:19:37



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



Test Center Name	iON Digital Zone iDZ Luthergeri
Test Date	18/12/2024
Test Time	12:45 PM - 2:15 PM
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.

- Options shown in green color with a tick icon are correct.
- 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 In the month of July in India, at what latitude is the Inter-Tropical Convergence Zone typically situated?

Ans 1. Near the equator

2. Between 5°N and 10°N

3. Around 20°N-25°N

4. South of the equator

Q.2 Why do stars appear to twinkle when viewed from the Earth?

Ans 1. Reflection in the atmosphere

2. Diffraction by clouds

3. Refraction in the Earth's atmosphere

4. Scattering by particles

Q.3 What was the venue of G20 Agriculture Ministerial Meeting in 2024?

Ans 1. Paris, France

2. Ottawa, Canada

3. Brussels, Belgium

4. Cuiaba, Brazil

Q.4 What is the process of fusion of the male and female gametes called in plants?

Ans 1. Fertilisation

2. Pollination

3. Propagation

4. Germination

Q.5 The average price of three items of furniture is Rs 16890. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

Ans 1. 5630

2. 10134

3. 7882

4. 3378

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

GUY ZNR SGK LZD ?

Ans 1. SEW

2. ESW

3. SWE

4. EWS

Q.7 Why is variation in plants important for their survival and evolution?

Ans 1. It ensures that all plants produce identical offspring.

2. It reduces competition among plants.

3. It helps plants to grow taller and stronger.

4. It allows plants to adapt to changing environmental conditions.

Q.8 If at same rate of interest, in 2 years, the simple interest is ₹56 and compound interest is ₹58, then what is the principal (in ₹)?

Ans 1. 387

2. 385

3. 392

4. 396

Q.9 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 ::?

: UOK :: HBX : %

Ans 1. # = PJF, % = MGO

2. # = PJF, % = MGC

3. # = TJF, % = MGC

4. # = PJF, % = NGC

Q.1 A solution has a pH of 8. If it is diluted with an equal volume of water, what will happen to its pH?

Ans 1. It will become neutral.

2. The pH will increase.

3. The pH will decrease.

4. The pH will remain the same.

Q.1 Baking soda, commonly used in households, is also known by its chemical name:

Ans 1. magnesium hydroxide

2. sodium bicarbonate

3. calcium carbonate

4. sodium carbonate

Q.1 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans 1. SP-LF

2. VS-OI

3. FC-YS

4. HF-AU

Q.1 3	Which of the following metals will displace copper from copper sulfate solution?
Ans	<input type="checkbox"/> 1. Platinum
	<input checked="" type="checkbox"/> 2. Iron
	<input type="checkbox"/> 3. Gold
	<input type="checkbox"/> 4. Silver

Q.1 4	Which process ensures half the amount of DNA in reproductive cells as compared to non-reproductive cells?
Ans	<input type="checkbox"/> 1. Cytokinesis
	<input type="checkbox"/> 2. Amitosis
	<input type="checkbox"/> 3. Mitosis
	<input checked="" type="checkbox"/> 4. Meiosis

Q.1 5	If A's salary is 72 % more than that of B, then how much percent is B's salary less than that of A (correct to 2 decimal places)?
Ans	<input type="checkbox"/> 1. 44.19%
	<input type="checkbox"/> 2. 44.24%
	<input checked="" type="checkbox"/> 3. 41.86%
	<input type="checkbox"/> 4. 45.3%

Q.1 6	Washing soda is represented by $\text{Na}_2\text{CO}_3 \cdot x\text{H}_2\text{O}$. The value of 'x' is equal to:
Ans	<input type="checkbox"/> 1. 6
	<input checked="" type="checkbox"/> 2. 10
	<input type="checkbox"/> 3. 8
	<input type="checkbox"/> 4. 2

Q.1 7	Select the pair which follows the same pattern as that followed by the two set of pairs given below. Both pairs follow the same pattern. PMN : RPI VHS : XKN
Ans	<input type="checkbox"/> 1. TIH : VMC
	<input type="checkbox"/> 2. JPQ : LSM
	<input type="checkbox"/> 3. PTV : RWR
	<input checked="" type="checkbox"/> 4. NFF : PIA

Q.1 8	In Amoeba, the splitting during fission can occur _____.
Ans	<input type="checkbox"/> 1. only along a fixed plane
	<input type="checkbox"/> 2. only in one specific plane
	<input type="checkbox"/> 3. in a definite orientation related to a structure
	<input checked="" type="checkbox"/> 4. in any plane

Q.1 9	The Citizenship Amendment Act was enacted in 2019 and was operationalised after the rules for it were notified by the Ministry of Home Affairs on _____.
Ans	<input type="checkbox"/> 1. 11 March 2020
	<input type="checkbox"/> 2. 11 March 2022
	<input type="checkbox"/> 3. 11 March 2023
	<input checked="" type="checkbox"/> 4. 11 March 2024

Q.2 B, C, E, F and H have different heights. Only C is taller than B. E is taller than H. Only
0 two people have heights between F and C. How many people have heights between H and B?

Ans 1. Four

2. One

3. Two

4. Three

Q.2 Consider a pencil dipped in water in a glass beaker. If the water is replaced by kerosene
1 or turpentine, will the pencil appear displaced to the same extent?

Ans 1. No, the pencil will appear straight.

2. Yes, the displacement will be the same.

3. Yes, it will be more displaced than in water.

4. No, the displacement will vary.

Q.2 Which of the following dynasties did NOT participate in tripartite struggle over
2 Kannauj?

Ans 1. The Palas

2. The Cholas

3. The Gurjara-Pratiharas

4. The Rashtrakutas

Q.2 The total surface area of a solid hemisphere is 191 cm^2 . Its radius (in cm) is:
3

$$\text{Take } \pi = \frac{22}{7}$$

Ans 1. $\sqrt{\frac{1345}{66}}$

2. $\sqrt{\frac{1347}{132}}$

3. $\sqrt{\frac{1337}{66}}$

4. $\sqrt{\frac{1347}{66}}$

Q.2 5 is related to 26 following a certain logic. Following the same logic, 12 is related to 145.
4 To which of the following is 13 related, following the same logic?

(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.)

Ans 1. 162

2. 172

3. 170

4. 168

Q.2
5 People having acidity problems are treated with antacids that contain which of the following?

Ans 1. Lime water

2. Milk of magnesia

3. Quick lime

4. Hydrochloric acid

Q.2
6 What is the general form of a combination reaction?

Ans 1. $A \rightarrow B + C$

2. $AB \rightarrow A + B$

3. $AB + CD \rightarrow AC + BD$

4. $A + B \rightarrow AB$

Q.2
7 If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 7381564, how many digits will appear more than once in the new number thus formed?

Ans 1. Two

2. None

3. Three

4. One

Q.2
8 The greatest common divisor (GCD) and least common multiple (LCM) of two numbers are 12 and 480, respectively, and the numbers are in the ratio of 5 : 8. Find the difference between the two numbers.

Ans 1. 42

2. 36

3. 12

4. 24

Q.2
9 Find the value of $2.\overline{38} \div 0.\overline{54}$.

Ans 1. $3\frac{17}{21}$

2. $5\frac{26}{51}$

3. $4\frac{19}{49}$

4. $6\frac{29}{57}$

Q.3
0 The average price of three items of furniture is Rs 16830. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

Ans 1. 3366

2. 5610

3. 7854

4. 10098

Q.3
1 A trader claims to sell flour at a profit of 35%, but also dishonestly uses a weight which is 16% less than what is mentioned on it. Find the total percentage of profit earned by the trader. (Round the answer to the nearest whole number.)

Ans 1. 60%

2. 61%

3. 63%

4. 56%

Q.3
2 In a certain code language,
'mountains hills rocks' is coded as 'dy ph mt',
'rocks valleys rivers' is coded as 'lp ph st' and
'rivers mountains forests' is coded as 'st bq dy'.
(All the codes are two-letter codes only.)
What is the code for 'valleys' in that language?

Ans 1. st

2. ph

3. lp

4. dy

Q.3
3 If a 3210 m long train crosses a pole in 107 seconds, then find the time (in seconds) taken by the train to cross a 150 m long platform.

Ans 1. 110

2. 114

3. 112

4. 106

Q.3
4 Which of the following Constitutional amendments inserts the Special officer for linguistic minorities, who is known as the Commissioner for Linguistic Minorities in India (CLM), to investigate all the matters relating to the safeguards provided for the linguistic minorities in India under the Constitution and report to the President?

Ans 1. 7th Constitutional Amendment Act, 1956

2. 2nd Constitutional Amendment Act, 1952

3. 11th Constitutional Amendment Act, 1965

4. 10th Constitutional Amendment Act, 1960

Q.3
5 Which of the following devices operates based on the heating effect of electric current?

Ans 1. Electric motor

2. Transformer

3. Generator

4. Electric iron

Q.3
6 In which year was 'Indian Culture: A Compendium of Indian History, Culture and Heritage' published?

Ans 1. 2023

2. 2021

3. 2022

4. 2020

Q.3 In a certain code language,
7 'A + B means 'A is the son of B',
'A - B means 'A is the brother of B',
'A × B means 'A is the wife of B' and
'A ÷ B means 'A is the father of B'.
How is S related to H if 'S + D × F ÷ G - H'?

Ans 1. Husband

2. Brother

3. Father

4. Son

Q.3 What should come in place of the question mark (?) in the given series?
8 29 38 51 68 89 ?

Ans 1. 114

2. 116

3. 115

4. 113

Q.3 Which state hosted the 61st edition of the Indian National Chess Championship in
9 2024?

Ans 1. Karnataka

2. Himachal Pradesh

3. Tamil Nadu

4. Haryana

Q.4 In a series circuit, if one of the resistors is removed or broken, the current in the circuit
0 will _____.

Ans 1. decrease

2. increase

3. become zero

4. stay the same

Q.4 What is the shape of the magnetic field lines inside a solenoid?
1

Ans 1. Elliptical

2. Straight and parallel

3. Randomly oriented

4. Circular

Q.4 Which of the following articles deals with elections to the House of the People and to
2 the legislative assemblies of state to be on the basis of adult suffrage?

Ans 1. 318

2. 352

3. 340

4. 326

Q.4 If the mean proportional of P and 125 is 100, then find the value of P.
3

Ans 1. 82

2. 77

3. 80

4. 79

Q.4 4	A number when increased by 50 %, gives 2880. The number is:
Ans	<input checked="" type="checkbox"/> 1. 1920 <input type="checkbox"/> 2. 960 <input type="checkbox"/> 3. 3840 <input type="checkbox"/> 4. 5760

Q.4 5	Refer to the given number, symbol series and answer the question that follows. Counting to be done from left to right only. (Left) \$ 7 & 4 2 & % 4 6 @ 8 Ω 9 # 6 * £ 5 = 2 (Right) How many such symbols are there each of which is immediately preceded by an odd number and immediately followed by an even number?
Ans	<input checked="" type="checkbox"/> 1. Three <input type="checkbox"/> 2. Two <input type="checkbox"/> 3. Four <input type="checkbox"/> 4. One

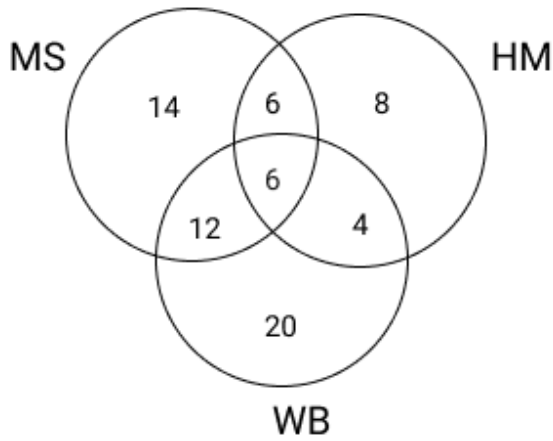
Q.4 6	A man sold an article for ₹360 by first giving a d% discount on its marked price, and then another discount having the same nominal value (in ₹). If the marked price of the article is ₹2250, then what is the value of d?
Ans	<input type="checkbox"/> 1. 45 <input type="checkbox"/> 2. 41 <input type="checkbox"/> 3. 38 <input checked="" type="checkbox"/> 4. 42

Q.4 7	Which two numbers should be interchanged to make the following equation correct? $58 + (36 \times 4) \div 3 + 6 \times 8 - 12 = 86$ (Note: Interchange should be done of the entire number and not individual digits of a given number.)
Ans	<input type="checkbox"/> 1. 12 and 8 <input checked="" type="checkbox"/> 2. 36 and 12 <input type="checkbox"/> 3. 3 and 6 <input type="checkbox"/> 4. 4 and 3

Q.4 8	A and B can do a piece of work in 2 days and 42 days, respectively. The number of days [Correct to one decimal place] required to complete the work if both A and B work together is:
Ans	<input type="checkbox"/> 1. 3.3 <input checked="" type="checkbox"/> 2. 1.9 <input type="checkbox"/> 3. 1.3 <input type="checkbox"/> 4. 5.1

Q.4 9	If 546 apples were distributed among Neeraj, Vidya, and Mohan in the ratio of 2:3:4, then the number of apples received by Neeraj is:
Ans	<input type="checkbox"/> 1. 202 <input checked="" type="checkbox"/> 2. 182 <input type="checkbox"/> 3. 172 <input type="checkbox"/> 4. 192

Q.5 Study the given diagram carefully and answer the question that follows. The numbers in different sections indicate the number of persons who own the given brands of car. How many person own both MS and WB but not HM?
(NOTE: You have to take the given data to be true even if they seem to be at variance from commonly known facts.)



Ans 1. 34

2. 8

3. 12

4. 18

Q.5 What are the units of inheritance, which Mendel referred to as 'factors,' now called?
1

Ans 1. Chromosomes

2. DNA

3. Genes

4. Traits

Q.5 The magnetic field inside a solenoid:
2

Ans 1. is the same at all points

2. is maximum at the centre and minimum at the edge

3. is zero at the centre

4. varies with distance from the edge

Q.5 Which of the following modes of asexual reproduction is used by unicellular organisms exclusively?
3

Ans 1. Fragmentation

2. Binary fission

3. Regeneration

4. Sporulation

Q.5 Pankaj starts from Point A and drives 12 km towards east. He then takes a left turn, drives 18 km, turns left and drives 19 km. He then takes a left turn and drives 21 km. He takes a final left turn, drives 7 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 1. 5 km to the north

2. 1 km to the north

3. 3 km to the north

4. 4 km to the north

Q.5 A, B and C invest sum in the ratio 76 : 37 : 52 respectively. If they earned total profit of ₹3850 at the end of year, then what is the difference between share of B and C?

Ans 1. ₹203

2. ₹350

3. ₹305

4. ₹360

Q.5 Which law of refraction states that light bends due to a change in speed when passing from one medium to another?

Ans 1. Snell's law

2. Fermat's principle

3. Huygens' principle

4. Law of reflection

Q.5 Which of the following statements is correct about equilibrium?

7

Ans 1. Equilibrium is the situation where there is less tendency for change.

2. Equilibrium is the situation where there is more tendency for change.

3. Equilibrium is the situation where there is no tendency for any change.

4. Equilibrium is the situation where there is a tendency for change.

Q.5 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

8

GEC BZX WUS RPN ?

Ans 1. MKI

2. MKJ

3. MJK

4. MIK

Q.5 $\frac{(a^4 \times b^3 \times c^4)}{(a^9 \times b^4 \times c^8)}$ in simplified form is:

9

Ans 1. $(a^7) \times (b^9) \times (c^8)$

2. $(a^{-5}) \times (b^{-1}) \times (c^{-4})$

3. $(a^7) \times (b^8) \times (c^{-9})$

4. $(a^{-9}) \times (b^{-2}) \times (c^{-2})$

Q.6 Which major Indian port has become the first to operate under a Public-Private Partnership (PPP) model?

0

Ans 1. Paradip Port

2. Jawaharlal Nehru Port

3. Mundra Port

4. New Mangaluru Port

Q.6 1	The age of some students is given in years as 22, 23, 26, 28, 24, 29, 23, 27, 25 and 21. The median age (in years) of the students is:
Ans	<input type="checkbox"/> 1. 1.25
	<input type="checkbox"/> 2. 23.5
	<input type="checkbox"/> 3. 24
	<input checked="" type="checkbox"/> 4. 24.5

Q.6 2	Mahatma Gandhi started his famous 'Salt march' accompanied by _____ of his trusted volunteers.
Ans	<input type="checkbox"/> 1. 39
	<input type="checkbox"/> 2. 94
	<input checked="" type="checkbox"/> 3. 78
	<input type="checkbox"/> 4. 51

Q.6 3	Two taps can fill a cistern in 2 hours and 51 hours respectively. A third tap can empty it in 51 hours. How long (in hours) will it take to fill the empty cistern, if all of them are opened together?
Ans	<input type="checkbox"/> 1. 5
	<input type="checkbox"/> 2. 4
	<input type="checkbox"/> 3. 3
	<input checked="" type="checkbox"/> 4. 2

Q.6 4	What should come in place of the question mark (?) in the given series? 4 24 120 480 ? 2880
Ans	<input checked="" type="checkbox"/> 1. 1440
	<input type="checkbox"/> 2. 1080
	<input type="checkbox"/> 3. 1220
	<input type="checkbox"/> 4. 1360

Q.6 5	Twelve years ago, the age of Reena's mother was three times the age of Reena. Two years hence, the mother's age will be 2 times the age of Reena. Find the ratio of the present ages of Reena and her mother.
Ans	<input type="checkbox"/> 1. 5 : 9
	<input type="checkbox"/> 2. 27 : 13
	<input checked="" type="checkbox"/> 3. 13 : 27
	<input type="checkbox"/> 4. 9 : 11

Q.6 6	When a solution contains an equal number of H ⁺ and OH ⁻ ions, then the pH of the solution is:
Ans	<input type="checkbox"/> 1. pH < 3
	<input type="checkbox"/> 2. pH > 3 but < 5
	<input checked="" type="checkbox"/> 3. pH = 7
	<input type="checkbox"/> 4. pH > 12

Q.6 7	Which among the following organisms reproduce by regeneration method?
Ans	<input type="checkbox"/> 1. Rhizopus
	<input type="checkbox"/> 2. Yeast
	<input type="checkbox"/> 3. Bryophyllum
	<input checked="" type="checkbox"/> 4. Planaria

Q.6 8	Seven people, B, D, E, F, P, Q and R, are sitting in a row, facing north. Only three people sit between R and E. F sits to the immediate left of E. No one sits to the right of B. Only two people sit between B and F. P sits to the immediate right of Q. How many people sit between D and P?
Ans	<input type="checkbox"/> 1. Four
	<input type="checkbox"/> 2. Three
	<input type="checkbox"/> 3. One
	<input checked="" type="checkbox"/> 4. Two

Q.6 9	Solve the following linear equation. $2x - y + z = 8, x + y - z = 10, x + y + 2z = 12$
Ans	<input type="checkbox"/> 1. $x = \frac{2}{3}, y = -6, z = \frac{14}{3}$
	<input type="checkbox"/> 2. $x = -6, y = \frac{-14}{3}, z = \frac{1}{3}$
	<input checked="" type="checkbox"/> 3. $x = 6, y = \frac{14}{3}, z = \frac{2}{3}$
	<input type="checkbox"/> 4. $x = \frac{-1}{3}, y = 6, z = \frac{14}{3}$

Q.7 0	119 is related to 205 following a certain logic. Following the same logic, 145 is related to 231. To which of the given options is 132 related, following the same logic? (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.)
Ans	<input type="checkbox"/> 1. 228
	<input type="checkbox"/> 2. 215
	<input type="checkbox"/> 3. 221
	<input checked="" type="checkbox"/> 4. 218

Q.7 1	The larger of two supplementary angles is 22° more than the smaller. The smaller angle (in degree) is:
Ans	<input type="checkbox"/> 1. 84
	<input checked="" type="checkbox"/> 2. 79
	<input type="checkbox"/> 3. 88
	<input type="checkbox"/> 4. 86

Q.7 2	The marks scored by 10 students are given below. 18, 13, 14, 18, 14, 17, 15, 11, 13, 18 The mode of the data is:
Ans	<input type="checkbox"/> 1. 14
	<input type="checkbox"/> 2. 11
	<input checked="" type="checkbox"/> 3. 18
	<input type="checkbox"/> 4. 13

Q.7 3	Why is asexual reproduction advantageous for single-celled organisms?
Ans	<input type="checkbox"/> 1. It requires a mate.
	<input checked="" type="checkbox"/> 2. It allows rapid reproduction in favourable conditions.
	<input type="checkbox"/> 3. It prevents overcrowding.
	<input type="checkbox"/> 4. It increases genetic variability.

Q.7 4	A shopkeeper bought an article for ₹740. At what price (in ₹) should he sell the article to make 30% profit?
Ans	<input type="checkbox"/> 1. 950
	<input type="checkbox"/> 2. 518
	<input type="checkbox"/> 3. 974
	<input checked="" type="checkbox"/> 4. 962

Q.7 5	Which of the following is an example of regeneration in plants?
Ans	<input type="checkbox"/> 1. Binary fission in bacteria
	<input type="checkbox"/> 2. Budding in hydra
	<input checked="" type="checkbox"/> 3. Growth of a new plant from a cutting
	<input type="checkbox"/> 4. Reproduction in humans

Q.7 6	The sirens of three companies sound together initially and then continue to sound at intervals of 12 minutes, 16 minutes, and 20 minutes, respectively. Over a period of 16 hours and 12 minutes from the time they first sound together, how many times will they sound simultaneously?
Ans	<input type="checkbox"/> 1. 3 times
	<input checked="" type="checkbox"/> 2. 5 times
	<input type="checkbox"/> 3. 4 times
	<input type="checkbox"/> 4. 6 times

Q.7 7	Which city of India organised the World Sustainable Development Summit 2024?
Ans	<input type="checkbox"/> 1. Jaipur
	<input type="checkbox"/> 2. Mumbai
	<input type="checkbox"/> 3. Hyderabad
	<input checked="" type="checkbox"/> 4. New Delhi

Q.7 8	Which reactants are used to prepare bleaching powder?
Ans	<input type="checkbox"/> 1. Chlorine and water
	<input type="checkbox"/> 2. Lime and sulphuric acid
	<input checked="" type="checkbox"/> 3. Chlorine gas and dry calcium hydroxide
	<input type="checkbox"/> 4. Calcium hydroxide and hydrochloric acid

Q.7 9	If the distance between A and B is 530 Km. From A, Namit goes to B with speed 37 km/h and return to A with the speed 77 km/h. Find the average speed of Namit.(rounded off to two decimal place)
Ans	<input type="checkbox"/> 1. 44.54 km/h
	<input type="checkbox"/> 2. 46.51 km/h
	<input checked="" type="checkbox"/> 3. 49.98 km/h
	<input type="checkbox"/> 4. 44.47 km/h

Q.8 0	What does the thumb represent in Fleming's Right-Hand Rule?
Ans	<input type="checkbox"/> 1. Direction of magnetic field
	<input type="checkbox"/> 2. Direction of induced current
	<input checked="" type="checkbox"/> 3. Direction of motion
	<input type="checkbox"/> 4. Direction of voltage

Q.8 1	A concave mirror can form a real, inverted and magnified image when the object is placed _____.
Ans	<input checked="" type="checkbox"/> 1. between the focus and the centre of curvature <input type="checkbox"/> 2. beyond the centre of curvature <input type="checkbox"/> 3. between the pole and the focus <input type="checkbox"/> 4. at the pole

Q.8 2	G, H, I, J, K, L and M live on seven different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on, till the topmost floor is numbered 7. H lives on an even numbered floor but not on the second floor. Only three people live between H and M. J lives on one of the floors below H but immediately above M. G lives on one of floors below J. Only three people live between G and K. L lives on one of the floors above J but below I. Who lives on the fifth floor?
Ans	<input type="checkbox"/> 1. L <input type="checkbox"/> 2. H <input checked="" type="checkbox"/> 3. K <input type="checkbox"/> 4. M

Q.8 3	The product of the reaction between ethanol and acetic acid is:
Ans	<input type="checkbox"/> 1. acetate <input type="checkbox"/> 2. ethanal <input type="checkbox"/> 3. methanol <input checked="" type="checkbox"/> 4. ester

Q.8 4	Seven boxes, A, B, C, D, X, Y and Z, are kept one over the other but not necessarily in the same order. Only three boxes are kept above B. Only one box is kept between C and B. Only three boxes are kept between C and Y. Y is kept at some place above B. Z is kept immediately below Y. A is kept at one of the places above X. D is not kept immediately above or below C. Which box is kept at the lowermost position?
Ans	<input type="checkbox"/> 1. B <input type="checkbox"/> 2. C <input checked="" type="checkbox"/> 3. X <input type="checkbox"/> 4. Z

Q.8 5	According to Mendel, which trait appeared in F1 progeny on crossing tall pea plants with short pea plants?
Ans	<input type="checkbox"/> 1. Short <input checked="" type="checkbox"/> 2. Tall <input type="checkbox"/> 3. Medium <input type="checkbox"/> 4. Dwarf

Q.8 6	In a certain code language, 'pillow blanket bed' is coded as 'ma ph st', 'bed window door' is coded as 'cd le ma' and 'door pillow wall' is coded as 'st bq cd'. (All the codes are two-letter codes only.) What is the code for 'wall' in that language?
Ans	<input checked="" type="checkbox"/> 1. bq <input type="checkbox"/> 2. le <input type="checkbox"/> 3. st <input type="checkbox"/> 4. cd

Q.8 7	Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group? (Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)
Ans	<input type="checkbox"/> 1. GM – DJ
	<input type="checkbox"/> 2. QW – NT
	<input checked="" type="checkbox"/> 3. TY – PU
	<input type="checkbox"/> 4. EK – BH

Q.8 8	The current ages of A and B add up to 36 years. Four years ago, the age of A was three times than that of B. What is the current age of A?
Ans	<input type="checkbox"/> 1. 30 years
	<input checked="" type="checkbox"/> 2. 25 years
	<input type="checkbox"/> 3. 20 years
	<input type="checkbox"/> 4. 35 years

Q.8 9	In the context of Buddhist architecture, what is a 'chaitya'?
Ans	<input type="checkbox"/> 1. A type of stupa
	<input type="checkbox"/> 2. A residential space for monks
	<input type="checkbox"/> 3. A decorative column
	<input checked="" type="checkbox"/> 4. A hall for prayer and assembly

Q.9 0	Who launched 'Create in India Challenge-Season One' in New Delhi on 22 August 2024, the run-up to the World Audio Visual and Entertainment Summit?
Ans	<input checked="" type="checkbox"/> 1. Ashwini Vaishnaw
	<input type="checkbox"/> 2. Narendra Modi
	<input type="checkbox"/> 3. Nitin Gadkari
	<input type="checkbox"/> 4. Amit Shah

Q.9 1	Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only. (Left) 5 # * 7 9 % 2 & 1 > 6 @ 3 ^ 4 \$ > 8 (Right) How many such number are there which are immediately preceded by a number and also immediately followed by another number?
Ans	<input checked="" type="checkbox"/> 1. 0
	<input type="checkbox"/> 2. 1
	<input type="checkbox"/> 3. 2
	<input type="checkbox"/> 4. 3

Q.9 2	A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question. A, B, C, D and E are sitting in a straight line facing north. Who sits on the extreme left end? (I) D sits second to the right of C. (II) Exactly two people sit between B and D.
Ans	<input type="checkbox"/> 1. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.
	<input checked="" type="checkbox"/> 2. Both Statements I and II put together are not sufficient to answer the question.
	<input type="checkbox"/> 3. Both Statements I and II put together (and not independently) are sufficient to answer the question.
	<input type="checkbox"/> 4. Data in Statement I alone is sufficient to answer the question, while data in Statement II is not.

Q.9 3	Where did Dr. Jitendra Singh, Union Minister of State for Science and Technology, inaugurate India's first Demonstration Facility for Biopolymers in October 2024?
Ans	<input type="checkbox"/> 1. Hyderabad
	<input type="checkbox"/> 2. Bhopal
	<input type="checkbox"/> 3. Chennai
	<input checked="" type="checkbox"/> 4. Pune

Q.9 4	If the average of 9 numbers is 17 and one number is removed, the average of the remaining 8 numbers becomes 15. What is the value of the removed number?
Ans	<input type="checkbox"/> 1. 35
	<input type="checkbox"/> 2. 37
	<input checked="" type="checkbox"/> 3. 33
	<input type="checkbox"/> 4. 39

Q.9 5	In $\triangle ABC$, $DE \parallel AC$, where D and E are the points on sides AB and BC, respectively. If $BD = 8$ cm and $AD = 7$ cm, then what is the ratio of the area of $\triangle BDE$ to the trapezium ADEC?
Ans	<input type="checkbox"/> 1. 162:65
	<input type="checkbox"/> 2. 65:162
	<input checked="" type="checkbox"/> 3. 64:161
	<input type="checkbox"/> 4. 161:64

Q.9 6	Find the simple interest (in closest integral ₹) on ₹4000 at 5.25% per annum rate of interest for the period from 4 February 2024 to 5 April 2024
Ans	<input type="checkbox"/> 1. 36
	<input type="checkbox"/> 2. 33
	<input checked="" type="checkbox"/> 3. 35
	<input type="checkbox"/> 4. 34

Q.9 7	What is the resistivity (ρ) of a material?
Ans	<input type="checkbox"/> 1. The amount of current a material can carry
	<input type="checkbox"/> 2. The product of voltage and current
	<input type="checkbox"/> 3. The same as its resistance
	<input checked="" type="checkbox"/> 4. A measure of how strongly a material opposes the flow of electric current

Q.9 8	When sodium carbonate (Na_2CO_3) is dissolved in water, the resulting solution becomes:
Ans	<input type="checkbox"/> 1. neutral
	<input checked="" type="checkbox"/> 2. basic
	<input type="checkbox"/> 3. acidic
	<input type="checkbox"/> 4. highly reactive with sodium chloride

Q.9 9	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 :: ? # : NJR :: OKS : %
Ans	<input type="checkbox"/> 1. # = LHP, % = QMV
	<input type="checkbox"/> 2. # = LHO, % = QMU
	<input type="checkbox"/> 3. # = LHP, % = QNU
	<input checked="" type="checkbox"/> 4. # = LHP, % = QMU

Q.1 00	Find the value of $\sin^2 63^\circ + \sin^2 27^\circ + \cos^2 17^\circ + \cos^2 73^\circ + \cos^2 90^\circ$.
Ans	✓ 1. 2
	✗ 2. 0
	✗ 3. 1
	✗ 4. -1

2024/12/20-11:56:20



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



Test Center Name	iON Digital Zone iDZ Sivathapuram
Test Date	18/12/2024
Test Time	4:30 PM - 6:00 PM
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.

- Options shown in green color with a tick icon are correct.
- 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 If 'P' stands for 'x', 'Q' stands for '+', 'R' stands for '-' and 'S' stands for '+', what will come in place of the question mark (?) in the following equation?

$$35 S 49 R 6 P 3 P 2 S (72 Q 4) = ?$$

Ans 1. 50

2. 66

3. 84

4. 98

Q.2 Which of the following is an example of exothermic combination reaction?

Ans 1. Quick lime dissolved in water

2. Photosynthesis

3. Ammonium chloride dissolved in water

4. Respiration

Q.3 If 330 persons can complete the construction of a shopping complex in 50 days, how many persons are required to complete the same work in 30 days?

Ans 1. 505

2. 198

3. 450

4. 550

Q.4 A theater sold 500 tickets to a concert. The tickets for adults cost \$20 each, and the tickets for children cost \$12 each. If the total revenue was \$8,000, how many adult tickets were sold?

Ans 1. 300

2. 200

3. 350

4. 250

Q.5	If the interest earned during the 2nd year on a certain sum is ₹4719, and the rate of interest is 10% per annum compounded annually, then the sum is:
Ans	<input checked="" type="checkbox"/> 1. ₹42900 <input type="checkbox"/> 2. ₹42045 <input type="checkbox"/> 3. ₹42445 <input type="checkbox"/> 4. ₹41905

Q.6	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 checked="" type="checkbox"/> 1. ZWU <input type="checkbox"/> 2. IEB <input type="checkbox"/> 3. UQN <input type="checkbox"/> 4. NJG

Q.7	Each of P, Q, R, S, T, U and V has an exam on a different day of a week starting from Monday and ending on Sunday of the same week. Only five people have exams after P. Only three people have exams before T. Q has the exam immediately after V but before U. S does not have the exam on Monday. How many people have exams between Q and R?
Ans	<input checked="" type="checkbox"/> 1. Four <input type="checkbox"/> 2. Three <input type="checkbox"/> 3. Two <input type="checkbox"/> 4. One

Q.8	The Indian Space Research Organisation (ISRO) celebrated its 55 th foundation day on 15 August 2024 by launching which of the following satellites?
Ans	<input type="checkbox"/> 1. EOS-04 <input checked="" type="checkbox"/> 2. EOS-08 <input type="checkbox"/> 3. EOS-06 <input type="checkbox"/> 4. EOS-07

Q.9	Which of the following bacterial infections is considered a sexually transmitted disease (STD)?
Ans	<input type="checkbox"/> 1. Pneumonia <input checked="" type="checkbox"/> 2. Gonorrhoea <input type="checkbox"/> 3. Typhoid <input type="checkbox"/> 4. Tuberculosis

Q.1	What should come in place of the question mark (?) in the given series? 0 34 34 46 46 58 58 70 70 ?
Ans	<input type="checkbox"/> 1. 84 <input type="checkbox"/> 2. 88 <input type="checkbox"/> 3. 90 <input checked="" type="checkbox"/> 4. 82

Q.1	An electric refrigerator rated 400 W operates 8 hours/day. What is the cost of the energy to operate it for 30 days at ₹3.00 per kW h?
Ans	<input type="checkbox"/> 1. ₹400 <input checked="" type="checkbox"/> 2. ₹288 <input type="checkbox"/> 3. ₹36 <input type="checkbox"/> 4. ₹9.6

Q.1 2	Which of the following is NOT true about fragmentation?
Ans	<input checked="" type="checkbox"/> 1. It is a form of sexual reproduction.
	<input type="checkbox"/> 2. It involves breaking of the organism into parts.
	<input type="checkbox"/> 3. Each fragment can grow into a complete individual.
	<input type="checkbox"/> 4. It requires the organism to be multicellular.

Q.1 3	When sodium sulphate solution is added to barium chloride solution, precipitate of _____ is formed.
Ans	<input type="checkbox"/> 1. sodium chloride
	<input type="checkbox"/> 2. barium hydrogen sulphate
	<input type="checkbox"/> 3. sodium hydrogen sulphate
	<input checked="" type="checkbox"/> 4. barium sulphate

Q.1 4	What type of image does a concave lens form when an object is placed at infinity?
Ans	<input type="checkbox"/> 1. Virtual, erect and larger
	<input type="checkbox"/> 2. Real, inverted and same size
	<input checked="" type="checkbox"/> 3. Virtual, erect and point sized
	<input type="checkbox"/> 4. Real, erect and point sized

Q.1 5	The average of seven consecutive odd numbers is 41. What is the smallest of these numbers?
Ans	<input type="checkbox"/> 1. 39
	<input type="checkbox"/> 2. 33
	<input checked="" type="checkbox"/> 3. 35
	<input type="checkbox"/> 4. 37

Q.1 6	Chiang Mai city, the most polluted city in the world as of March 2024, is located in which country?
Ans	<input type="checkbox"/> 1. China
	<input type="checkbox"/> 2. Vietnam
	<input checked="" type="checkbox"/> 3. Thailand
	<input type="checkbox"/> 4. Japan

Q.1 7	The front face of a circular loop of a wire is the North Pole; the direction of current in this face of the loop will be:
Ans	<input type="checkbox"/> 1. clockwise
	<input type="checkbox"/> 2. towards south
	<input type="checkbox"/> 3. towards north
	<input checked="" type="checkbox"/> 4. anti-clockwise

Q.1 8	What does Family Planning aim at?
Ans	<input type="checkbox"/> 1. Population growth
	<input type="checkbox"/> 2. Preventing all pregnancies by recommending abortion
	<input checked="" type="checkbox"/> 3. Population control
	<input type="checkbox"/> 4. Increasing pollution

Q.1 9	The ratio of numbers of girls and boys participating in sports of a school is 1 : 5. If the number of girls is 239, determine the number of boys participating in the sports.
Ans	<input type="checkbox"/> 1. 1215
	<input type="checkbox"/> 2. 1225
	<input checked="" type="checkbox"/> 3. 1195
	<input type="checkbox"/> 4. 1170

Q.2 0	Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only. (Left) 3 & ^ 5 7 # 9 % 8 * 4 < 1 \$ 2 @ * 6 (Right) How many such symbols are there which are immediately preceded by a number and also immediately followed by another number?
Ans	<input checked="" type="checkbox"/> 1. 5
	<input type="checkbox"/> 2. 4
	<input type="checkbox"/> 3. 3
	<input type="checkbox"/> 4. 2

Q.2 1	Find the total time taken by boat to travel upstream and downstream, if the distance travel in each direction (upstream and downstream) is 495km. If speed of boat is 32 km/h and speed of current is 23 km/h.
Ans	<input type="checkbox"/> 1. 56 hours
	<input type="checkbox"/> 2. 72 hours
	<input checked="" type="checkbox"/> 3. 64 hours
	<input type="checkbox"/> 4. 62 hours

Q.2 2	Which of the following kinds of demand exists in the monopolistic competition for the product of an individual firm?
Ans	<input checked="" type="checkbox"/> 1. Relatively elastic
	<input type="checkbox"/> 2. Perfectly elastic
	<input type="checkbox"/> 3. Relatively inelastic
	<input type="checkbox"/> 4. Perfectly inelastic

Q.2 3	A rose plant with white flowers was planted in soil by stem cutting without any grafting. The new plant produced similar white flowers. What does it indicate?
Ans	<input type="checkbox"/> 1. Stem cutting is a type of sexual reproduction, so there was no variation.
	<input type="checkbox"/> 2. White flowers are the only type of variety available in rose.
	<input type="checkbox"/> 3. White flowers look good so gardeners plant such roses.
	<input checked="" type="checkbox"/> 4. Stem cutting is a type of asexual reproduction, so there was no variation.

Q.2 4	Neutralisation reaction is a type of:
Ans	<input checked="" type="checkbox"/> 1. double displacement reaction
	<input type="checkbox"/> 2. decomposition reaction
	<input type="checkbox"/> 3. displacement reaction
	<input type="checkbox"/> 4. combination reaction

Q.2 5	When washing soda is exposed to hot atmosphere for a long time, it:
Ans	<input type="checkbox"/> 1. gains water molecules and dissolves in them
	<input type="checkbox"/> 2. gains heat from the Sun and becomes dry
	<input checked="" type="checkbox"/> 3. loses water molecules and becomes powdery
	<input type="checkbox"/> 4. loses water molecules but remains in crystal form

Q.2 Evaluate: $33 \div 9 \times 3 - 2 \times 3$

6

Ans 1. 5

2. 8

3. 4

4. 7

Q.2 In a certain code language,

7

'A + B' means 'A is the son of B',
'A - B' means 'A is the brother of B',
'A × B' means 'A is the wife of B' and
'A ÷ B' means 'A is the father of B'.

How is S related to H if 'S - D × F + G ÷ H'?

Ans 1. Wife's brother

2. Wife's father

3. Brother's wife's father

4. Brother's wife's brother

Q.2 Find the mean of the following frequency distribution.

8

x	5	6	15	9	8
f	10	5	8	10	9

Ans 1. $8\frac{13}{21}$

2. $7\frac{13}{21}$

3. $9\frac{13}{21}$

4. $6\frac{13}{21}$

Q.2 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

9

HKN 7, CFI 13, XAD 19, SVY 25, NQT 31, ?

Ans 1. ILO 37

2. ILO 36

3. JLO 37

4. ILP 37

Q.3 In a certain code,

0

'butter milk ghee' is coded as 'dy la mt',
'biscuit ghee salad' is coded as 'bz qp la' and
'salad butter egg' is coded as 'st bz dy'.
All the codes are two-letter codes only.
What is ghee coded as?

Ans 1. qp

2. mt

3. la

4. bz

Q.3 1	Which of the following is the female germ cell in plants?
Ans	<input type="checkbox"/> 1. Cells in the centre of ovule
	<input type="checkbox"/> 2. Cell opposite to egg cell in an ovule
	<input checked="" type="checkbox"/> 3. Egg cell
	<input type="checkbox"/> 4. Cells outside the ovule

Q.3 2	What unique feature do the sex chromosomes in humans have compared to other chromosomes?
Ans	<input type="checkbox"/> 1. They are the largest chromosomes in the body.
	<input type="checkbox"/> 2. They are always perfectly paired.
	<input checked="" type="checkbox"/> 3. They are not always a perfect pair in males.
	<input type="checkbox"/> 4. They are identical in males and females.

Q.3 3	A company earns a profit (in ₹) that is distributed among the company's three partners in the ratio of 4 : 12 : 5. If the difference between the smallest and the largest shares is ₹20208, the total profit (in ₹) of the company is:
Ans	<input type="checkbox"/> 1. 53097
	<input checked="" type="checkbox"/> 2. 53046
	<input type="checkbox"/> 3. 53096
	<input type="checkbox"/> 4. 53060

Q.3 4	9 men can do a piece of work in 21 days. The number of men required to complete the same work in 3 days is:
Ans	<input checked="" type="checkbox"/> 1. 63
	<input type="checkbox"/> 2. 64
	<input type="checkbox"/> 3. 67
	<input type="checkbox"/> 4. 62

Q.3 5	In a displacement reaction, if a more reactive metal displaces a less reactive metal from its salt solution, what is the result?
Ans	<input type="checkbox"/> 1. The less reactive metal is displaced and the more reactive metal becomes a part of the compound
	<input checked="" type="checkbox"/> 2. Formation of an insoluble salt
	<input type="checkbox"/> 3. The less reactive metal is displaced and solidifies
	<input type="checkbox"/> 4. The more reactive metal remains unchanged

Q.3 6	Radha thinks of a number and subtracts $6\frac{3}{5}$ from it. She multiplies the she thought. Find the number.
Ans	<input checked="" type="checkbox"/> 1. 11
	<input type="checkbox"/> 2. 12
	<input type="checkbox"/> 3. 13
	<input type="checkbox"/> 4. 14

Q.3 7	If A's salary is 31 % more than that of B, then how much percent is B's salary less than that of A (correct to 2 decimal places)?
Ans	<input type="checkbox"/> 1. 21.74%
	<input checked="" type="checkbox"/> 2. 23.66%
	<input type="checkbox"/> 3. 27.46%
	<input type="checkbox"/> 4. 21.53%

Q.3 8	Which of the following is NOT a function of the Prime Minister in India?
Ans	<input type="checkbox"/> 1. Power to recommend for dissolution of the Parliament
	<input type="checkbox"/> 2. Removal of Ministers
	<input checked="" type="checkbox"/> 3. Appointment of Supreme Court judges
	<input type="checkbox"/> 4. Formation of the Council of Ministers

Q.3 9	An unsaturated carbohydrate that has a double bond is:
Ans	<input type="checkbox"/> 1. C ₃ H ₄
	<input type="checkbox"/> 2. C ₃ H ₈
	<input type="checkbox"/> 3. C ₂ H ₂
	<input checked="" type="checkbox"/> 4. C ₃ H ₆

Q.4 0	Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below. GHO : LGM HIN : MHL
Ans	<input type="checkbox"/> 1. JJS : JIR
	<input type="checkbox"/> 2. MIH : MHE
	<input checked="" type="checkbox"/> 3. NCL : SBJ
	<input type="checkbox"/> 4. ORK : OQM

Q.4 1	What happens when sodium hydroxide reacts with copper (II) sulfate solution?
Ans	<input checked="" type="checkbox"/> 1. Copper(II) hydroxide precipitates.
	<input type="checkbox"/> 2. Sodium sulfate is formed.
	<input type="checkbox"/> 3. No reaction occurs.
	<input type="checkbox"/> 4. Copper metal is deposited.

Q.4 2	Which of the following plants propagates through runners?
Ans	<input checked="" type="checkbox"/> 1. Strawberry
	<input type="checkbox"/> 2. Rose
	<input type="checkbox"/> 3. Jasmine
	<input type="checkbox"/> 4. Potato

Q.4 3	What was the venue of the 19 th annual meeting of the Secretaries of the Security Councils of the Shanghai Cooperation Organization (SCO)?
Ans	<input type="checkbox"/> 1. New Delhi, India
	<input checked="" type="checkbox"/> 2. Astana, Kazakhstan
	<input type="checkbox"/> 3. Kathmandu, Nepal
	<input type="checkbox"/> 4. Dhaka, Bangladesh

Q.4 4	Who made history by becoming the oldest Indian to swim across the English Channel in August 2024?
Ans	<input type="checkbox"/> 1. Srihari Nataraj
	<input checked="" type="checkbox"/> 2. Siddhartha Agarwal
	<input type="checkbox"/> 3. Virbhawal Khade
	<input type="checkbox"/> 4. Suyash Jadhav

Q.4 A pipe can fill a tank in 18 hours. Another pipe can empty the filled tank in 21 hours. If
5 both the pipes are opened simultaneously, then the time (in hours) in which the tank will be filled is:

Ans 1. 128

2. 127

3. 129

4. 126

Q.4 A trader lost 10% by selling a shirt for ₹850. He will gain x%' by selling it for ₹1530, the
6 value of x is:

Ans 1. 72

2. 52

3. 77

4. 62

Q.4 A man walks to a viewpoint and returns to the starting point by his car maintaining
7 constant speed and thus takes a total time of 9 hours 15 minutes. He would have gained 2 hours by driving both ways. How long would it have taken for him to walk both ways with same walking speed?

Ans 1. 12 hours 30 minutes

2. 11 hours 45 minutes

3. 11 hours 15 minutes

4. 10 hours 15 minutes

Q.4 According to clause (2) of Article 239A, any law created by the Parliament for
8 Puducherry shall NOT be considered an amendment to the Constitution for the purposes of which Article?

Ans 1. Article 368

2. Article 371

3. Article 356

4. Article 370

Q.4 Which of the following letter-clusters should replace # and % so that the pattern and
9 relationship followed between the letter-cluster pair on the left side of :: is the same as that on the right side of ::?
#: WZB :: BEG : %

Ans 1. # = FHJ, % = TWY

2. # = EMJ, % = TWY

3. # = EHJ, % = TWI

4. # = EHJ, % = TWY

Q.5 A gardener wants to grow potato plants. He had put a potato with buds (eyes) in the
0 soil. He succeeded to get a new potato plant because:

Ans 1. potatoes can be grown by root cuttings

2. vegetative propagation is by buds (eyes)

3. there are no other plant species in that area

4. there was no animal to eat the potato buds

Q.5 Simplify the given expression.

1

$(1 + \cos A) (\operatorname{cosec} A - \cot A)$

Ans 1. $\operatorname{cosec} A$

2. $\sec A$

3. $\tan A$

4. $\sin A$

Q.5 Nita is pregnant, but loves to eat junk food. Her doctor advised her to eat salads and fruits. The reason for this advice is:

Ans 1. junk food is costly in comparison to salad and fruits

2. the nutrients in the mother's blood nourishes the growing baby

3. junk food is tasty, but leads to obesity

4. the mother's blood has no role in the growth of a baby

Q.5 Find the simple interest (in closest integral ₹) on ₹3000 at 8% per annum rate of interest for the period from 23 February 2024 to 24 April 2024

Ans 1. 39

2. 41

3. 40

4. 38

Q.5 A milk man has 80 litres milk in one container and 68 litres milk in another container. Find the maximum capacity of a container, which can measure milk of either container exact number of times.

Ans 1. 4 litres

2. 2 litres

3. 5 litres

4. 6 litres

Q.5 In which year was 'Reflections on Mughal Art & Culture' published?

5

Ans 1. 2020

2. 2019

3. 2021

4. 2022

Q.5 The mean marks of the following distribution is:

6

Marks Obtained	No. of Students
28	8
12	12
57	18
85	13

Ans 1. 53

2. 39

3. 43

4. 49

Q.5 Hangul, also known as Kashmir Stag, can be found in _____.

7

Ans 1. Dachigam

2. Chandoli

3. Dudhwa

4. Campbell Bay

Q.5 Which UNESCO World Heritage Site is a cave complex with stunning paintings and sculptures, located in Maharashtra?

Ans 1. Ajanta Caves

2. Elephanta Caves

3. Bhimbetka Caves

4. Badami Caves

Q.5 A cube of side 5 cm is cut into smaller cubes of side 1 cm. What is the ratio of the total surface area of the larger cube and the sum of the total surfaces of all the smaller cubes?

Ans 1. 2 : 5

2. 1 : 5

3. 1 : 3

4. 2 : 3

Q.6 B, C, E, F and H have different heights. F is taller than E but shorter than B. E is taller than H. C is taller than H. More than two people are taller than C. How many people are taller than H?

Ans 1. One

2. Three

3. Two

4. Four

Q.6 Seven people, W, X, Y, Z, E, F and G, are sitting in a row, facing north. Only two people sit to the right of Y. Only two people sit between Y and F. Only two people sit between E and W. W sits to the immediate left of Y. Z sits to the immediate right of X. Who sits at the third position from the left end of the row?

Ans 1. W

2. Y

3. G

4. Z

Q.6 In a certain code language, 'pen pencil eraser' is coded as 'qp fq pw', 'pencil crayon box' is coded as 'bz er qp' and 'box pen board' is coded as 'er bq fg'. (All the codes are two-letter coded only.) What is the code for 'pencil' in that language?

Ans 1. er

2. bz

3. fq

4. qp

Q.6 When 268 is added to 6K8, the result is 9P6. What is the least possible value of K and P for which 9P6 is divisible by 3?

Ans 1. K=3; P=0

2. K=0; P=3

3. K=6; P=9

4. K=4; P=6

Q.6 4	A lens has _____ principal foci.
Ans	<input type="checkbox"/> 1. 4
	<input type="checkbox"/> 2. 3
	<input type="checkbox"/> 3. 1
	<input checked="" type="checkbox"/> 4. 2

Q.6 5	What should come in place of the question mark (?) in the given series? 85 94 108 127 151 ?
Ans	<input type="checkbox"/> 1. 170
	<input type="checkbox"/> 2. 175
	<input checked="" type="checkbox"/> 3. 180
	<input type="checkbox"/> 4. 185

Q.6 6	What should come in place of the question mark (?) in the given series based on the English alphabetical order? HFC JHE LJG NLI ?
Ans	<input type="checkbox"/> 1. PNL
	<input checked="" type="checkbox"/> 2. PNK
	<input type="checkbox"/> 3. PMK
	<input type="checkbox"/> 4. PML

Q.6 7	When hydrogen gas is passed through heated black copper (II) oxide, it:
Ans	<input checked="" type="checkbox"/> 1. reduces to form brownish copper metal
	<input type="checkbox"/> 2. reduces to form bluish copper solution
	<input type="checkbox"/> 3. oxidises to form brownish copper metal
	<input type="checkbox"/> 4. oxidises to form bluish copper solution

Q.6 8	Which of the following is NOT a property of a regular polygon?
Ans	<input type="checkbox"/> 1. All sides are of equal length.
	<input type="checkbox"/> 2. Angles at the centre by all sides are equal.
	<input type="checkbox"/> 3. The angle made by each side at the centre is 90° , if it is a regular polygon with four sides.
	<input checked="" type="checkbox"/> 4. The angle made by each side at the centre is 60° , if it is a regular polygon with eight sides.

Q.6 9	Article 24 of the Indian Constitution prohibits the employment of children below the age of _____ years in any factory, mine or other hazardous activities.
Ans	<input checked="" type="checkbox"/> 1. 14
	<input type="checkbox"/> 2. 16
	<input type="checkbox"/> 3. 12
	<input type="checkbox"/> 4. 18

Q.7 0	Who was the scientist credited with the discovery of electromagnetic induction?
Ans	<input type="checkbox"/> 1. Thomas Edison
	<input type="checkbox"/> 2. Isaac Newton
	<input checked="" type="checkbox"/> 3. Michael Faraday
	<input type="checkbox"/> 4. Nikola Tesla

Q.7 1	Rakesh starts from Point A and drives 21 km towards the west. He then takes a left turn, drives 23 km, turns left and drives 27 km. He then takes a left turn and drives 28 km. He takes a final left turn, drives 6 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 type="checkbox"/> 1. 4 km to the south
	<input checked="" type="checkbox"/> 2. 5 km to the south
	<input type="checkbox"/> 3. 3 km to the south
	<input type="checkbox"/> 4. 2 km to the south

Q.7 2	A man sold an article for ₹481 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 ₹1924, then what is the value of d?
Ans	<input type="checkbox"/> 1. 32
	<input type="checkbox"/> 2. 33
	<input type="checkbox"/> 3. 42.5
	<input checked="" type="checkbox"/> 4. 37.5

Q.7 3	By selling an article at $\frac{2}{5}$ of its actual selling price, Ramesh incurs a loss of _____
Ans	<input type="checkbox"/> 1. 83.4%
	<input type="checkbox"/> 2. 81.8%
	<input checked="" type="checkbox"/> 3. 80.6%
	<input type="checkbox"/> 4. 82.6%

Q.7 4	Two sets of numbers are given below. In each set of numbers, certain mathematical operation(s) on the first number results in the second number. Similarly, certain mathematical operation(s) on the second number results 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.) 4 - 8 - 16 - 32; 1 - 2 - 4 - 8
Ans	<input checked="" type="checkbox"/> 1. 5 - 10 - 20 - 40
	<input type="checkbox"/> 2. 12 - 24 - 28 - 56
	<input type="checkbox"/> 3. 6 - 12 - 24 - 28
	<input type="checkbox"/> 4. 3 - 6 - 12 - 20

Q.7 5	Which of the following states has the highest density of railway network as of 2019-20?
Ans	<input type="checkbox"/> 1. West Bengal
	<input type="checkbox"/> 2. Punjab
	<input type="checkbox"/> 3. Odisha
	<input checked="" type="checkbox"/> 4. Uttar Pradesh

Q.7 6	The Pala King of Bengal, Dharamapala was defeated by which of the following Rashtrakuta kings?
Ans	<input type="checkbox"/> 1. Krishna I
	<input type="checkbox"/> 2. Indra III
	<input type="checkbox"/> 3. Govinda III
	<input checked="" type="checkbox"/> 4. Dhruva Dharavarsha

Q.7 7	Refer to the following number, symbol series and answer the question. Counting to be done from left to right only. (Left) * 5 2 # # 2 2 7 & % 2 \$ & 1 3 \$ % \$ 5 4 \$ \$ (Right) How many such numbers are there each of which is immediately preceded by a number and also immediately followed by a number?
Ans	<input type="checkbox"/> 1. 3
	<input type="checkbox"/> 2. 0
	<input checked="" type="checkbox"/> 3. 1
	<input type="checkbox"/> 4. 2

Q.7 8	If 1 is added to each odd digit and 2 is subtracted from each even digit in the number 1534876, what will be the sum of the digits which are third from the left and third from the right?
Ans	<input checked="" type="checkbox"/> 1. 10
	<input type="checkbox"/> 2. 14
	<input type="checkbox"/> 3. 6
	<input type="checkbox"/> 4. 8

Q.7 9	Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below. UQY : WUV MDW : OHT
Ans	<input type="checkbox"/> 1. LHR : NKO
	<input type="checkbox"/> 2. NUM : PYK
	<input checked="" type="checkbox"/> 3. SOU : USR
	<input type="checkbox"/> 4. WTQ : YXO

Q.8 0	The Indigo Rebellion took place in _____ during 1859-1860.
Ans	<input type="checkbox"/> 1. Punjab
	<input type="checkbox"/> 2. Madras
	<input type="checkbox"/> 3. Bombay
	<input checked="" type="checkbox"/> 4. Bengal

Q.8 1	The genetic constitution of a child getting an X bearing sperm from the father will be:
Ans	<input type="checkbox"/> 1. 46+XY
	<input checked="" type="checkbox"/> 2. 44+XX
	<input type="checkbox"/> 3. 46+XX
	<input type="checkbox"/> 4. 44+XY

Q.8 2	AC is a chord of a circle. If X and Y are the two points, on the circum such that $\angle AXC = 58^\circ$, then what is the measure of $2\angle AYC$?
Ans	<input checked="" type="checkbox"/> 1. 116°
	<input type="checkbox"/> 2. 60°
	<input type="checkbox"/> 3. 58°
	<input type="checkbox"/> 4. 120°

Q.8 3	The chemical name for 'Plaster of Paris' is:
Ans	<input type="checkbox"/> 1. calcium sulphate dihydrate
	<input checked="" type="checkbox"/> 2. calcium sulphate hemihydrate
	<input type="checkbox"/> 3. calcium chloride hexahydrate
	<input type="checkbox"/> 4. calcium chloride semihydrate

Q.8 4	Which of the following is a safety device used to prevent excessive current from flowing in electrical circuits?
Ans	<input type="checkbox"/> 1. Capacitor
	<input type="checkbox"/> 2. Resistor
	<input checked="" type="checkbox"/> 3. Fuse
	<input type="checkbox"/> 4. Transformer

Q.8 5	Fleming's Left-Hand Rule is used to determine _____.
Ans	<input type="checkbox"/> 1. the magnitude of the force on a current-carrying conductor
	<input type="checkbox"/> 2. the amount of current flowing through the conductor
	<input checked="" type="checkbox"/> 3. the direction of force on a current-carrying conductor
	<input type="checkbox"/> 4. the strength of the magnetic field

Q.8 6	An electric fan becomes warm if used continuously for longer time. This happens due to:
Ans	<input checked="" type="checkbox"/> 1. heating effect of the current flowing through the fan
	<input type="checkbox"/> 2. the slow rotation of the fan
	<input type="checkbox"/> 3. the high temperature during the summer
	<input type="checkbox"/> 4. the fast rotation of the fan

Q.8 7	Who among the following was appointed as the Union Minister of Panchayati Raj in June 2024?
Ans	<input type="checkbox"/> 1. Shivraj Singh Chouhan
	<input checked="" type="checkbox"/> 2. Rajiv Ranjan Singh
	<input type="checkbox"/> 3. Piyush Goyal
	<input type="checkbox"/> 4. Jagat Prakash Nadda

Q.8 8	Ram takes 2 hours more than Ravi to walk 20 km. If Ram doubles his speed, then he is ahead of Ravi by one hour 20 minutes. Find the speed of Ravi (in km/hr).
Ans	<input type="checkbox"/> 1. $3\frac{2}{7}$
	<input type="checkbox"/> 2. 4
	<input type="checkbox"/> 3. 3
	<input checked="" type="checkbox"/> 4. $4\frac{2}{7}$

Q.8 9	Tarun ranked 21 st from the top and 12 th from the bottom in his class. How many students are there in his class?
Ans	<input type="checkbox"/> 1. 31
	<input checked="" type="checkbox"/> 2. 32
	<input type="checkbox"/> 3. 33
	<input type="checkbox"/> 4. 34

Q.9 0	Find the value of $0.\overline{36} + 0.\overline{723}$.
Ans	<input type="checkbox"/> 1. $1\frac{26}{33}$
	<input type="checkbox"/> 2. $1\frac{41}{495}$
	<input type="checkbox"/> 3. $1\frac{31}{330}$
	<input checked="" type="checkbox"/> 4. $1\frac{89}{990}$

Q.9 1	Below are given two sets of numbers. In each set of numbers, a certain mathematical operation on first number results in the second number. Similarly, certain mathematical operation on second number results in the third number and so on. Which of the given options follows the same set of operations as in question? (NOTE – A two/three digit number cannot be broken into individual digits for operations e.g. if 37 is followed by 10, the operation cannot be 3+7 as a two digit number cannot be broken into individual digits) $2 - 14 - 44 - 88$; $5 - 35 - 65 - 130$
Ans	<input checked="" type="checkbox"/> 1. $7 - 49 - 79 - 158$
	<input type="checkbox"/> 2. $11 - 121 - 152 - 162$
	<input type="checkbox"/> 3. $13 - 39 - 122 - 142$
	<input type="checkbox"/> 4. $14 - 64 - 94 - 144$

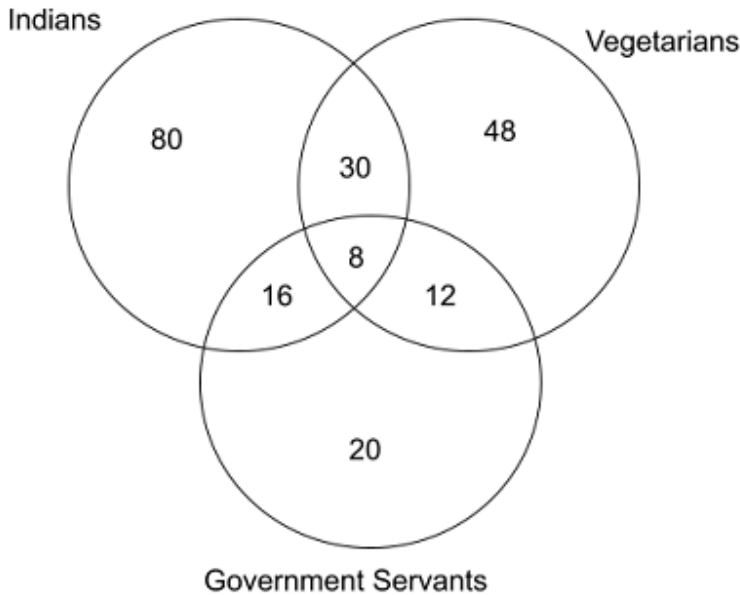
Q.9 2	What is the term for the band of colours produced when light is dispersed?
Ans	<input type="checkbox"/> 1. Reflection
	<input type="checkbox"/> 2. Refraction
	<input checked="" type="checkbox"/> 3. Spectrum
	<input type="checkbox"/> 4. Absorption

Q.9 3	A number when increased by 50 %, gives 2970. The number is:
Ans	<input checked="" type="checkbox"/> 1. 1980
	<input type="checkbox"/> 2. 3960
	<input type="checkbox"/> 3. 5940
	<input type="checkbox"/> 4. 990

Q.9 4	An object is placed at 30 cm from a convex mirror with a focal length of 15 cm. Calculate the image distance (v) using the mirror formula.
Ans	<input type="checkbox"/> 1. -10 cm
	<input checked="" type="checkbox"/> 2. 10 cm
	<input type="checkbox"/> 3. 15 cm
	<input type="checkbox"/> 4. -15 cm

Q.9 5	The reactants that are used for the production of bleaching powder are:
Ans	<input type="checkbox"/> 1. $\text{CaO} + \text{Cl}_2$
	<input type="checkbox"/> 2. $\text{CaOH} + \text{Cl}_2$
	<input checked="" type="checkbox"/> 3. $\text{Ca(OH)}_2 + \text{Cl}_2$
	<input type="checkbox"/> 4. $\text{CaO} + \text{Cl}$

Q.9 Study the given diagram carefully and answer the question that follows. The numbers in different sections indicate the number of persons.



How many such government servants are there who are Indians but not vegetarians?

- Ans 1. 12
2. 16
3. 30
4. 8

Q.9 The average price of three items of furniture is Rs 16860. If their prices are in the ratio 3:5:7, the price of the cheapest item (in Rs) is

- Ans 1. 5620
2. 3372
3. 10116
4. 7868

Q.9 A question is given, followed by two statements labelled I and II. Identify which of the statements is/are sufficient to answer the question.

A, B, C, D and E are sitting in a straight line facing North. Who sits on the extreme right end?





(I) Exactly three people sit between B and C.

(II) A sits immediately to the left of B.

- Ans 1. Both Statements I and II put together are not sufficient to answer the question.
2. Data in Statement II alone is sufficient to answer the question, while data in Statement I is not.
3. Data in Statement I alone is sufficient to answer the question, while data in Statement II is not.
4. Both Statements I and II put together (and not independently) are sufficient to answer the question.

Q.9 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. RXAE
2. NTWB
3. AGJO
4. SYBG

Q.1 00	What is the average of all the natural numbers from 1 to 94?
Ans	 1. 48.5
	 2. 47.5
	 3. 48
	 4. 47

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