



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



Test Center Name	
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.

1. Options shown in green color with a tick icon are correct.

2. Chosen option on the right of the question indicates the option selected by the candidate.

Section : RRB JE, DMS, CMA, CS, MS CBT-1

Q.1 In the reaction $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$, 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 HariharanQ.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

Q.6 After fertilisation, the zygote divides multiple times to form which structure within the ovule?

Ans ☒ 1. Style

☒ 2. Embryo

☒ 3. Seed

☒ 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 ☒ 1. 11

☒ 2. 14

☒ 3. 12

☒ 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 ☒ 1. ZW - SP

☒ 2. NK - GD

☒ 3. RV - KJ

☒ 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 ☒ 1. 31 December 2017

☒ 2. 31 December 2016

☒ 3. 31 December 2014

☒ 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 ☒ 1. Accounts 1 to 6: Transaction in commodities and services and transfers

☒ 2. Accounts A to F: Transaction in goods, services, and capital

☒ 3. Accounts I to VI: Transaction in commodities, revenue, and capital

☒ 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?

Ans ☒ 1. Magnesium

☒ 2. Zinc

☒ 3. Copper

☒ 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?

Ans ☒ 1. Father's brother

☒ 2. Brother's son

☒ 3. Father's brother's son

☒ 4. Father's son

Q.1 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
- ☒ 1. Spores are produced by flowers, and they grow into seeds.
 - ☒ 2. Spores are a form of vegetative propagation in angiosperms only.
 - ☒ 3. Spores are produced by non-flowering plants like ferns and mosses, and they grow into new plants.
 - ☒ 4. Spores are formed through sexual reproduction in plants.

Q.1 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
- ☒ 1. 40
 - ☒ 2. 42
 - ☒ 3. 38
 - ☒ 4. 44

Q.1 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
- ☒ 1. WZC 47
 - ☒ 2. ZZC 43
 - ☒ 3. WGC 43
 - ☒ 4. WZC 43

Q.1 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
- ☒ 1. $\frac{177}{13}$
 - ☒ 2. $\frac{179}{9}$
 - ☒ 3. $\frac{180}{11}$
 - ☒ 4. $\frac{183}{8}$

Q.1 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
- ☒ 1. # = FUU, % = KDZ
 - ☒ 2. # = FYU, % = KDO
 - ☒ 3. # = FYU, % = KDZ
 - ☒ 4. # = FYU, % = NDZ

Q.1 Double displacement reactions usually occur in:

- Ans
- ☒ 1. aqueous solution
 - ☒ 2. all three states
 - ☒ 3. gaseous state
 - ☒ 4. solid state

Q.1 The selling price of 25 books is equal to the cost price of 41 books. Find the loss or gain percentage.

Ans ☒ 1. $\frac{100}{16}\%$ loss

☒ 2. 64 % gain

☒ 3. $\frac{100}{16}\%$ gain

☒ 4. 64 % loss

Q.2 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, P, Q, R, S and T, are sitting around a circular table facing the centre. Who is sitting second to the left of T?

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.

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 sufficient to answer the question.

☒ 3. Data in statements I and II together are not sufficient to answer the question.

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

Q.2 At which of the following places is the tomb of Sher Shah located?

1

Ans ☒ 1. Patna

☒ 2. Lahore

☒ 3. Agra

☒ 4. Sasaram

Q.2 Refer to the given number, symbol series and answer the question that follows.

2 Counting to be done from left to right only.

(Left) 2 3 \$ 7 5 & 6 % 3 \$ # 9 @) 7 + 6 ? > ? 4 7 5 \$ (Right)

How many such numbers are there each of which is immediately preceded by a symbol and also immediately followed by another symbol?

Ans ☒ 1. 5

☒ 2. 6

☒ 3. 4

☒ 4. 7

Q.2 Who among the following is the leader of the house in the Lok Sabha?

3

Ans ☒ 1. Opposition Leader

☒ 2. Prime Minister

☒ 3. President of India

☒ 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 Which of the following is the correct formula for the first member of the alkene series?

5

Ans ✗ 1. C_5H_{10}

✓ 2. C_2H_4

✗ 3. C_3H_6

✗ 4. C_4H_8

Q.2 Which of the following ratio is smallest?

6

Ans ✗ 1. 17 : 39

✓ 2. 10 : 36

✗ 3. 15 : 33

✗ 4. 23 : 48

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

7

GNK IPM KRO MTQ ?

Ans ✓ 1. OVS

✗ 2. OUR

✗ 3. OUS

✗ 4. OVR

Q.2 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)?

8

Ans ✗ 1. 473

✗ 2. 471

✓ 3. 480

✗ 4. 481

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

9

Ans ✗ 1. 5820

✓ 2. 1940

✗ 3. 3880

✗ 4. 970

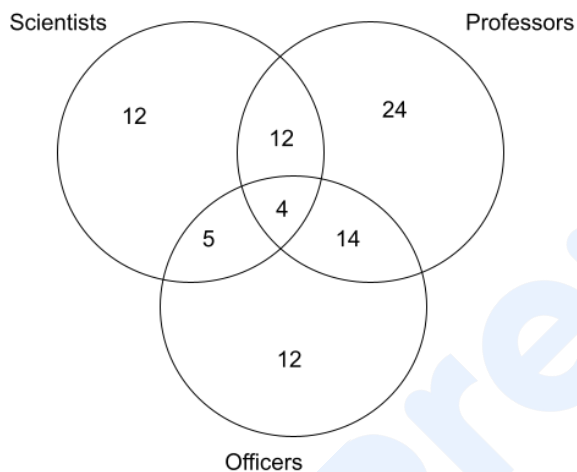
Q.3 Which of the following helps a developing embryo to expel waste products in case of humans?

- 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

Q.3 What is the role of the stigma in the process of fertilisation?

5

Ans ☒ 1. Fusing with the egg cell

☒ 2. Producing pollen

☒ 3. Developing into a seed

☒ 4. Serving as the site where pollen lands

Q.3 Covalent molecules have low melting and boiling point because:

6

Ans ☒ 1. they have strong electrostatic intermolecular forces

☒ 2. they have weak intermolecular forces

☒ 3. they are generally gaseous in nature

☒ 4. they have strong bonds within the molecule

Q.3 If the ratio of four angles of a quadrilateral is $\angle A : \angle B : \angle C : \angle D :$

7

Ans ☒ 1. 60°

☒ 2. 90°

☒ 3. 50°

☒ 4. 40°

Q.3 What is the median of the following data?

8

50, 48, 40, 73, 29, 14, 89, 14, 51, 76, 78

Ans ☒ 1. 50.5

☒ 2. 49.5

☒ 3. 50

☒ 4. 51

Q.3 Which of the following statements is/are correct about the PM Vishwakarma Yojana?

9

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 ☒ 1. 2 only

☒ 2. 3 only

☒ 3. 1 only

☒ 4. 1, 2 and 3

Q.4 $\frac{(a^5 \times b^9 \times c^1)}{(a^6 \times b^3 \times c^8)}$ in simplified form is:

0

Ans ☒ 1. $(a^{-10}) \times (b^{-5}) \times (c^{-8})$

☒ 2. $(a^{-1}) \times (b^6) \times (c^{-7})$

☒ 3. $(a^{-5}) \times (b^3) \times (c^{-6})$

☒ 4. $(a^4) \times (b^{-10}) \times (c^1)$

Q.4 If 'M' is the smallest perfect square number, which is exactly divisible by 12, 15 and 18,
1 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 Refer to the following number and symbol series and answer the question that follows.
2 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 If $\sin\theta = \frac{12}{13}$, then what is the value of $26 \sin\theta - 10 \sec\theta$?
3

Ans ☒ 1. 0

☒ 2. 1

☒ 3. 2

☒ 4. -2

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

Ans ☒ 1. R^2

☒ 2. $R/2$

☒ 3. $2R$

☒ 4. R

Q.4 Find the total time taken by boat to travel upstream and downstream, if the distance
5 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 Write the expanded form of $(4a + 6b + 9c)^2$.
6

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 Resistance is the property of a material that _____.
7

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

8

305 251 206 170 143 ?

Ans ☒ 1. 130

☒ 2. 125

☒ 3. 120

☒ 4. 115

Q.4 Who among the following secured a gold medal for India at the Paris Paralympics 2024?

9

Ans ☒ 1. Sachin Khilari

☒ 2. Hokato Hotozhe Sema

☒ 3. Pranav Soorma

☒ 4. Navdeep Singh

Q.5 Evaluate: $16 + 18 \div 3 - 3 \times 3$

0

Ans ☒ 1. 15

☒ 2. 12

☒ 3. 16

☒ 4. 13

Q.5 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)

1

Ans ☒ 1. 2 km to the east

☒ 2. 1 km to the east

☒ 3. 4 km to the east

☒ 4. 3 km to the east

Q.5 In which of the following scenarios does the focal length of a concave mirror vary?

2

Ans ☒ 1. When placed in air

☒ 2. When placed in water

☒ 3. Focal length does not vary in any media

☒ 4. When placed in a vacuum

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

3

Ans ☒ 1. $9a^2 + 25b^2 + 49c^2 + 34ab + 70bc + 42ac$

☒ 2. $9a^2 + 25b^2 + 49c^2 + 30ab + 70bc + 52ac$

☒ 3. $9a^2 + 25b^2 + 49c^2 + 30ab + 70bc + 42ac$

☒ 4. $9a^2 + 25b^2 + 49c^2 + 30ab + 65bc + 42ac$

Q.5 Why might surgical family planning methods be risky if not done correctly?

4

Ans ☒ 1. They can increase fertility.

☒ 2. They can lead to infections or complications.

☒ 3. They may cause hormonal side effects.

☒ 4. They might prevent ovulation.

Q.5 Which of the following best describes a combination reaction?

5

- Ans ☐ 1. A reaction where a product releases gas
- ☒ 2. Two elements combine to form a compound
- ☐ 3. Ions exchange between two compounds
- ☐ 4. A compound breaks down into simpler substances

Q.5 What is the thread-like structure in Rhizopus?

6

- Ans ☐ 1. Sporangia
- ☐ 2. Spores
- ☐ 3. Blobs
- ☒ 4. Hyphae

Q.5 Why does a compass needle get deflected when brought near a bar magnet?

7

- Ans ☒ 1. The compass needle is a small bar magnet.
- ☐ 2. The compass needle is non-magnetic.
- ☐ 3. The compass needle has electric charge.
- ☐ 4. The compass needle is made of iron.

Q.5 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

8

- Ans ☐ 1. 39
- ☐ 2. 38
- ☐ 3. 41
- ☒ 4. 40

Q.5 Which of the following is NOT a private sector company in India?

9

- Ans ☐ 1. Dabur
- ☐ 2. Tata Iron and Steel Company
- ☒ 3. Bharat Heavy Electricals Limited
- ☐ 4. Bajaj Auto Limited

Q.6 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?

0

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

Q.6 What was the venue of the 57th ASEAN Foreign Ministers' Meeting?

1

- Ans ☐ 1. Jakarta, Indonesia
- ☐ 2. Kuala Lumpur, Malaysia
- ☒ 3. Vientiane, Lao People's Democratic Republic
- ☐ 4. Naypyidaw, Myanmar

Q.6 The Great Stupa at Sanchi is an important site in which religion?

2

- Ans
- ☒ 1. Buddhism
 - ☐ 2. Hinduism
 - ☐ 3. Jainism
 - ☐ 4. Islam

Q.6 In the case of a thin lens, how are the centres of curvature typically positioned relative to the optical centre?

3

- Ans
- ☐ 1. They are closer to the edge than to the optical centre.
 - ☐ 2. They are located on the lens surface itself.
 - ☐ 3. They coincide with the optical centre.
 - ☒ 4. They are equidistant from the optical centre.

Q.6 If x is inversely proportional to y, and y = 7 when x = 5, find the value of x, when y = 90.

4

- Ans
- ☐ 1. $\frac{8}{19}$
 - ☐ 2. $\frac{9}{21}$
 - ☒ 3. $\frac{7}{18}$
 - ☐ 4. $\frac{7}{19}$

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

5

29 11 29 15 29 19 29 23 29 ?

- Ans
- ☐ 1. 31
 - ☐ 2. 25
 - ☐ 3. 29
 - ☒ 4. 27

Q.6 Which of the following chemical equations is balanced?

6

- Ans
- ☐ 1. $\text{H}_2 + 2\text{O}_2 \rightarrow 2\text{H}_2\text{O}$
 - ☐ 2. $\text{H}_2\text{O} + \text{O}_2 \rightarrow \text{H}_2\text{O}_2$
 - ☐ 3. $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
 - ☒ 4. $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$

Q.6 The knowledge of which two subjects played key role in formulating laws of Inheritance?

7

- Ans
- ☐ 1. Maths and History
 - ☐ 2. Philosophy and Science
 - ☐ 3. Geography and Philosophy
 - ☒ 4. Maths and Science

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

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 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 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 A cylindrical rod has an outer curved surface area of 4500 cm^2 . 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 Write the expanded form of $(3a + 6b + 5c)^2$.
3

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 '×' are interchanged?

5

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

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?

6

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,
8 '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. Lucknow

Q.8 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 The current through a resistor is:

2

- 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 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

3

- Ans**
- ☒ 1. 5600
 - ☒ 2. 10080
 - ☒ 3. 7840
 - ☒ 4. 3360

Q.8 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.)

4

- Ans**
- ☒ 1. VY-CI
 - ☒ 2. SV-ZF
 - ☒ 3. HK-OU
 - ☒ 4. FI-NS

Q.8 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?

5

(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 The Moplah Rebellion of 1921 took place in which of the following regions?

6

- Ans**
- ☒ 1. Assam
 - ☒ 2. Kerala
 - ☒ 3. Punjab
 - ☒ 4. Bengal

Q.8 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 ☒ 1. Four

☐ 2. Three

☐ 3. Two

☐ 4. One

Q.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 ☐ 1. Two

☒ 2. Three

☐ 3. One

☐ 4. Four

Q.8 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 ☐ 1. 10,000

☐ 2. 5000

☒ 3. 12,000

☐ 4. 7500

Q.9 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 ☐ 1. 2, 1, 3, 4

☐ 2. 1, 2, 4, 3

☒ 3. 2, 1, 4, 3

☐ 4. 1, 2, 3, 4

Q.9 Which of the following is true regarding the bud development process in Hydra?

Ans ☐ 1. Formation of spore

☒ 2. Cell divisions at one site

☐ 3. Splitting of nucleus

☐ 4. Splitting of cytoplasm

Q.9 If x varies inversely as $y^3 - 1$ and is equal to 7 when $y = 2$, find x when $y = 6$.

Ans ☐ 1. $\frac{49}{216}$

☒ 2. $\frac{49}{215}$

☐ 3. $\frac{51}{215}$

☐ 4. $\frac{50}{216}$

Q.9 In which case will a lens produce a magnification of exactly 1?

3

Ans ☒ 1. When the object is placed at twice the focal length

☐ 2. When the object is placed at the focal point

☐ 3. When the object is placed between centre of curvature and focal point

☐ 4. When the object is at infinity

Q.9 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?

4

Ans ☐ 1. 9958

☐ 2. 10046

☒ 3. 10000

☐ 4. 10038

Q.9 Which of the following is related to Article 84 of the Constitution?

5

Ans ☐ 1. Disqualification for membership

☒ 2. Qualification for membership of Parliament

☐ 3. Annual Financial Statement

☐ 4. Ordinance making Power of President

Q.9 Which of the following reactions leads to the production of bleaching powder?

6

Ans ☐ 1. $\text{CaCO}_3 + \text{HCl} \rightarrow \text{CaCl}_2 + \text{CO}_2 + \text{H}_2\text{O}$

☐ 2. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$

☐ 3. $\text{Ca(OH)}_2 + \text{CO}_2 \rightarrow \text{CaCO}_3 + \text{H}_2\text{O}$

☒ 4. $\text{Ca(OH)}_2 + \text{Cl}_2 \rightarrow \text{CaOCl}_2 + \text{H}_2\text{O}$

Q.9 Select the option in which the triads share the same relationship as that shared by the given triads.

7

HAND - ANDH - NDHA
BIRD - IRDB - RDBI

Ans ☐ 1. DUCK - CKDU - CUKD

☐ 2. FROG - ROGF - ROFG

☒ 3. ROSE - OSER - SERO

☐ 4. CUBE - CEBU - BUEC

Q.9 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

8

Ans ☐ 1. 3375

☒ 2. 10125

☐ 3. 7875

☐ 4. 5625

Q.9 In a row of people all facing north, Shakshi is 11th from the left end. Ravi is 12th from the left end. Ravi is exactly between Shakshi and Ron. If Ron is 14th from the right end of the row, how many people are there in the row?

9

Ans ☐ 1. 25

☒ 2. 26

☐ 3. 27

☐ 4. 28

Q.1 What is the final product of sexual reproduction in plants?

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Ans ☒ 1. Fruits

☒ 2. Leaves

☒ 3. Seeds

☒ 4. Flowers

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