



Previous Year Paper

18 Dec, 2024 Shift 3



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



Test Center Name	
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.

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 If 'P' stands for '×', 'Q' stands for '÷', 'R' stands for '-' and 'S' stands for '+', what will come in place of the question mark (?) in the following equation?

$$35 \text{ S } 49 \text{ R } 6 \text{ P } 3 \text{ P } 2 \text{ S } (72 \text{ Q } 4) = ?$$

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 ☒ 1. ₹42900
☐ 2. ₹42045
☐ 3. ₹42445
☐ 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 ☒ 1. ZWU
☐ 2. IEB
☐ 3. UQN
☐ 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 ☒ 1. Four
☐ 2. Three
☐ 3. Two
☐ 4. One

Q.8 The Indian Space Research Organisation (ISRO) celebrated its 55th foundation day on 15 August 2024 by launching which of the following satellites?

- Ans ☐ 1. EOS-04
☒ 2. EOS-08
☐ 3. EOS-06
☐ 4. EOS-07

Q.9 Which of the following bacterial infections is considered a sexually transmitted disease (STD)?

- Ans ☐ 1. Pneumonia
☒ 2. Gonorrhoea
☐ 3. Typhoid
☐ 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 ☐ 1. 84
☐ 2. 88
☐ 3. 90
☒ 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?

1

- Ans ☐ 1. ₹400
☒ 2. ₹288
☐ 3. ₹36
☐ 4. ₹9.6

Q.1 Which of the following is NOT true about fragmentation?

2

Ans ☒ 1. It is a form of sexual reproduction.

☐ 2. It involves breaking of the organism into parts.

☐ 3. Each fragment can grow into a complete individual.

☐ 4. It requires the organism to be multicellular.

Q.1 When sodium sulphate solution is added to barium chloride solution, precipitate of _____ is formed.

3

Ans ☐ 1. sodium chloride

☐ 2. barium hydrogen sulphate

☐ 3. sodium hydrogen sulphate

☒ 4. barium sulphate

Q.1 What type of image does a concave lens form when an object is placed at infinity?

4

Ans ☐ 1. Virtual, erect and larger

☐ 2. Real, inverted and same size

☒ 3. Virtual, erect and point sized

☐ 4. Real, erect and point sized

Q.1 The average of seven consecutive odd numbers is 41. What is the smallest of these numbers?

5

Ans ☐ 1. 39

☐ 2. 33

☒ 3. 35

☐ 4. 37

Q.1 Chiang Mai city, the most polluted city in the world as of March 2024, is located in which country?

6

Ans ☐ 1. China

☐ 2. Vietnam

☒ 3. Thailand

☐ 4. Japan

Q.1 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:

7

Ans ☐ 1. clockwise

☐ 2. towards south

☐ 3. towards north

☒ 4. anti-clockwise

Q.1 What does Family Planning aim at?

8

Ans ☐ 1. Population growth

☐ 2. Preventing all pregnancies by recommending abortion

☒ 3. Population control

☐ 4. Increasing pollution

Q.1 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 ☒ 1. 1215

☒ 2. 1225

☒ 3. 1195

☒ 4. 1170

Q.2 Refer to the following number and symbol series and answer the question that follows.
0 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 ☒ 1. 5

☒ 2. 4

☒ 3. 3

☒ 4. 2

Q.2 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 ☒ 1. 56 hours

☒ 2. 72 hours

☒ 3. 64 hours

☒ 4. 62 hours

Q.2 Which of the following kinds of demand exists in the monopolistic competition for the product of an individual firm?

Ans ☒ 1. Relatively elastic

☒ 2. Perfectly elastic

☒ 3. Relatively inelastic

☒ 4. Perfectly inelastic

Q.2 A rose plant with white flowers was planted in soil by stem cutting without any grafting.
3 The new plant produced similar white flowers. What does it indicate?

Ans ☒ 1. Stem cutting is a type of sexual reproduction, so there was no variation.

☒ 2. White flowers are the only type of variety available in rose.

☒ 3. White flowers look good so gardeners plant such roses.

☒ 4. Stem cutting is a type of asexual reproduction, so there was no variation.

Q.2 Neutralisation reaction is a type of:

4

Ans ☒ 1. double displacement reaction

☒ 2. decomposition reaction

☒ 3. displacement reaction

☒ 4. combination reaction

Q.2 When washing soda is exposed to hot atmosphere for a long time, it:

5

Ans ☒ 1. gains water molecules and dissolves in them

☒ 2. gains heat from the Sun and becomes dry

☒ 3. loses water molecules and becomes powdery

☒ 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 Which of the following is the female germ cell in plants?

1

Ans ☒ 1. Cells in the centre of ovule

☒ 2. Cell opposite to egg cell in an ovule

☒ 3. Egg cell

☒ 4. Cells outside the ovule

Q.3 What unique feature do the sex chromosomes in humans have compared to other chromosomes?

2

Ans ☒ 1. They are the largest chromosomes in the body.

☒ 2. They are always perfectly paired.

☒ 3. They are not always a perfect pair in males.

☒ 4. They are identical in males and females.

Q.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:

3

Ans ☒ 1. 53097

☒ 2. 53046

☒ 3. 53096

☒ 4. 53060

Q.3 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:

4

Ans ☒ 1. 63

☒ 2. 64

☒ 3. 67

☒ 4. 62

Q.3 In a displacement reaction, if a more reactive metal displaces a less reactive metal from its salt solution, what is the result?

5

Ans ☒ 1. The less reactive metal is displaced and the more reactive metal becomes a part of the compound

☒ 2. Formation of an insoluble salt

☒ 3. The less reactive metal is displaced and solidifies

☒ 4. The more reactive metal remains unchanged

Q.3 Radha thinks of a number and subtracts $6\frac{3}{5}$ from it. She multiplies the she thought. Find the number.

6

Ans ☒ 1. 11

☒ 2. 12

☒ 3. 13

☒ 4. 14

Q.3 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)?

7

Ans ☒ 1. 21.74%

☒ 2. 23.66%

☒ 3. 27.46%

☒ 4. 21.53%

Q.3 Which of the following is NOT a function of the Prime Minister in India?

8

Ans ☒ 1. Power to recommend for dissolution of the Parliament

☒ 2. Removal of Ministers

☒ 3. Appointment of Supreme Court judges

☒ 4. Formation of the Council of Ministers

Q.3 An unsaturated carbohydrate that has a double bond is:

9

Ans ☒ 1. C_3H_4

☒ 2. C_3H_8

☒ 3. C_2H_2

☒ 4. C_3H_6

Q.4 Select the letter-cluster pair that best represents a similar relationship to the one expressed in the pairs of letter-clusters given below.

0

GHO : LGM

HIN : MHL

Ans ☒ 1. JJS : JIR

☒ 2. MIH : MHE

☒ 3. NCL : SBJ

☒ 4. ORK : OQM

Q.4 What happens when sodium hydroxide reacts with copper (II) sulfate solution?

1

Ans ☒ 1. Copper(II) hydroxide precipitates.

☒ 2. Sodium sulfate is formed.

☒ 3. No reaction occurs.

☒ 4. Copper metal is deposited.

Q.4 Which of the following plants propagates through runners?

2

Ans ☒ 1. Strawberry

☒ 2. Rose

☒ 3. Jasmine

☒ 4. Potato

Q.4 What was the venue of the 19th annual meeting of the Secretaries of the Security Councils of the Shanghai Cooperation Organization (SCO)?

3

Ans ☒ 1. New Delhi, India

☒ 2. Astana, Kazakhstan

☒ 3. Kathmandu, Nepal

☒ 4. Dhaka, Bangladesh

Q.4 Who made history by becoming the oldest Indian to swim across the English Channel in August 2024?

4

Ans ☒ 1. Srihari Nataraj

☒ 2. Siddhartha Agarwal

☒ 3. Virdhawal Khade

☒ 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 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 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 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 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 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 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. 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?

- Ans** ☒ 1. 2020
- ☒ 2. 2019
- ☒ 3. 2021
- ☒ 4. 2022

Q.5 The mean marks of the following distribution is:

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 _____.

- Ans** ☒ 1. Dachigam
- ☒ 2. Chandoli
- ☒ 3. Dudhwa
- ☒ 4. Campbell Bay

Q.5 8	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 9	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 0	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 1	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 2	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 3	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 A lens has _____ principal foci.

4

Ans ☒ 1. 4

☒ 2. 3

☒ 3. 1

☒ 4. 2

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

5

85 94 108 127 151 ?

Ans ☒ 1. 170

☒ 2. 175

☒ 3. 180

☒ 4. 185

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

6

HFC JHE LJG NLI ?

Ans ☒ 1. PNL

☒ 2. PNK

☒ 3. PMK

☒ 4. PML

Q.6 When hydrogen gas is passed through heated black copper (II) oxide, it:

7

Ans ☒ 1. reduces to form brownish copper metal

☒ 2. reduces to form bluish copper solution

☒ 3. oxidises to form brownish copper metal

☒ 4. oxidises to form bluish copper solution

Q.6 Which of the following is NOT a property of a regular polygon?

8

Ans ☒ 1. All sides are of equal length.

☒ 2. Angles at the centre by all sides are equal.

☒ 3. The angle made by each side at the centre is 90° , if it is a regular polygon with four sides.

☒ 4. The angle made by each side at the centre is 60° , if it is a regular polygon with eight sides.

Q.6 Article 24 of the Indian Constitution prohibits the employment of children below the age of ____ years in any factory, mine or other hazardous activities.

9

Ans ☒ 1. 14

☒ 2. 16

☒ 3. 12

☒ 4. 18

Q.7 Who was the scientist credited with the discovery of electromagnetic induction?

0

Ans ☒ 1. Thomas Edison

☒ 2. Isaac Newton

☒ 3. Michael Faraday

☒ 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 ☐ 1. 4 km to the south

☒ 2. 5 km to the south

☐ 3. 3 km to the south

☐ 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 ☐ 1. 32

☐ 2. 33

☐ 3. 42.5

☒ 4. 37.5

Q.7 3 By selling an article at $\frac{2}{5}$ of its actual selling price, Ramesh incurs a lo

Ans ☐ 1. 83.4%

☐ 2. 81.8%

☒ 3. 80.6%

☐ 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 ☒ 1. 5 - 10 - 20 - 40

☐ 2. 12 - 24 - 28 - 56

☐ 3. 6 - 12 - 24 - 28

☐ 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 ☐ 1. West Bengal

☐ 2. Punjab

☐ 3. Odisha

☒ 4. Uttar Pradesh

Q.7 6 The Pala King of Bengal, Dharamapala was defeated by which of the following Rashtrakuta kings?

Ans ☐ 1. Krishna I

☐ 2. Indra III

☐ 3. Govinda III

☒ 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 ☒ 1. 3
- ☒ 2. 0
- ☒ 3. 1
- ☒ 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 ☒ 1. 10
- ☒ 2. 14
- ☒ 3. 6
- ☒ 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 ☒ 1. LHR : NKO
- ☒ 2. NUM : PYK
- ☒ 3. SOU : USR
- ☒ 4. WTQ : YXO

Q.8 0 The Indigo Rebellion took place in _____ during 1859-1860.

- Ans ☒ 1. Punjab
- ☒ 2. Madras
- ☒ 3. Bombay
- ☒ 4. Bengal

Q.8 1 The genetic constitution of a child getting an X bearing sperm from the father will be:

- Ans ☒ 1. 46+XY
- ☒ 2. 44+XX
- ☒ 3. 46+XX
- ☒ 4. 44+XY

Q.8 2 AC is a chord of a circle. If X and Y are the two points, on the circumference such that $\angle AXC = 58^\circ$, then what is the measure of $2\angle AYC$?

- Ans ☒ 1. 116°
- ☒ 2. 60°
- ☒ 3. 58°
- ☒ 4. 120°

Q.8 The chemical name for 'Plaster of Paris' is:
3

- Ans ☐ 1. calcium sulphate dihydrate
- ☒ 2. calcium sulphate hemihydrate
- ☐ 3. calcium chloride hexahydrate
- ☐ 4. calcium chloride semihydrate

Q.8 Which of the following is a safety device used to prevent excessive current from flowing in electrical circuits?
4

- Ans ☐ 1. Capacitor
- ☐ 2. Resistor
- ☒ 3. Fuse
- ☐ 4. Transformer

Q.8 Fleming's Left-Hand Rule is used to determine _____.
5

- Ans ☐ 1. the magnitude of the force on a current-carrying conductor
- ☐ 2. the amount of current flowing through the conductor
- ☒ 3. the direction of force on a current-carrying conductor
- ☐ 4. the strength of the magnetic field

Q.8 An electric fan becomes warm if used continuously for longer time. This happens due to:
6

- Ans ☒ 1. heating effect of the current flowing through the fan
- ☐ 2. the slow rotation of the fan
- ☐ 3. the high temperature during the summer
- ☐ 4. the fast rotation of the fan

Q.8 Who among the following was appointed as the Union Minister of Panchayati Raj in June 2024?
7

- Ans ☐ 1. Shivraj Singh Chouhan
- ☒ 2. Rajiv Ranjan Singh
- ☐ 3. Piyush Goyal
- ☐ 4. Jagat Prakash Nadda

Q.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).
8

- Ans ☐ 1. $3\frac{2}{7}$
- ☐ 2. 4
- ☐ 3. 3
- ☒ 4. $4\frac{2}{7}$

Q.8 Tarun ranked 21st from the top and 12th from the bottom in his class. How many students are there in his class?
9

- Ans ☐ 1. 31
- ☒ 2. 32
- ☐ 3. 33
- ☐ 4. 34

Q.9
0 Find the value of $0.\overline{36} + 0.\overline{723}$.

- Ans
- ☒ 1. $1\frac{26}{33}$
- ☒ 2. $1\frac{41}{495}$
- ☒ 3. $1\frac{31}{330}$
- ☒ 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
- ☒ 1. $7 - 49 - 79 - 158$
- ☒ 2. $11 - 121 - 152 - 162$
- ☒ 3. $13 - 39 - 122 - 142$
- ☒ 4. $14 - 64 - 94 - 144$

Q.9
2 What is the term for the band of colours produced when light is dispersed?

- Ans
- ☒ 1. Reflection
- ☒ 2. Refraction
- ☒ 3. Spectrum
- ☒ 4. Absorption

Q.9
3 A number when increased by 50 %, gives 2970. The number is:

- Ans
- ☒ 1. 1980
- ☒ 2. 3960
- ☒ 3. 5940
- ☒ 4. 990

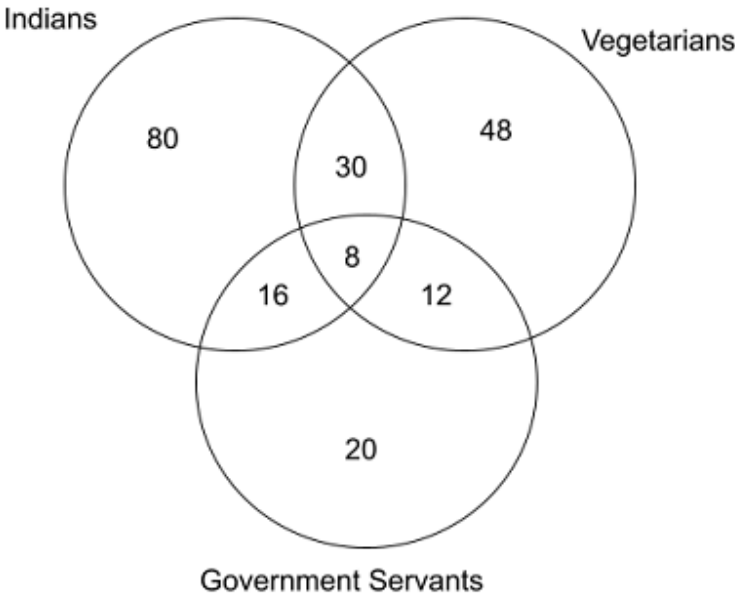
Q.9
4 An object is placed at 30 cm from a convex mirror with a focal length of 15 cm. Calculate the image distance (v) using the mirror formula.

- Ans
- ☒ 1. -10 cm
- ☒ 2. 10 cm
- ☒ 3. 15 cm
- ☒ 4. -15 cm

Q.9
5 The reactants that are used for the production of bleaching powder are:

- Ans
- ☒ 1. $\text{CaO} + \text{Cl}_2$
- ☒ 2. $\text{CaOH} + \text{Cl}_2$
- ☒ 3. $\text{Ca(OH)}_2 + \text{Cl}_2$
- ☒ 4. $\text{CaO} + \text{Cl}$

Q.9 Study the given diagram carefully and answer the question that follows. The numbers
6 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
7 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
8 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
9 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	What is the average of all the natural numbers from 1 to 94?	
00		
Ans	1. 48.5	
	2. 47.5	
	3. 48	
	4. 47	

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