रेलवे भर्ती बोर्ड / RAILWAY RECRUITMENT BOARDS

सीईएन - 05/25 - जेई, डीएमएस, सीएमए - CEN - 05/25 - JE, DMS, CMA

सत्यमेव जयते

Test Date	19/02/2026
Test Time	4:30 PM - 6:00 PM
Subject	RRB JE DMS CMA

*** 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**

Q.1 **Each of C, D, E, F, X, Y and Z has an exam on a different day of a week starting from Monday and ending on Sunday of the same week.**
Only two people have exams before D. Only one person has exam after C. Only three people have exams between D and Z. Only one person has exam between X and Y. F has exam immediately before X.
How many people have exam(s) between E and X?

Ans
✗ 1. One
✓ 2. Two
✗ 3. Four
✗ 4. Three

Q.2 **The LCM of $5^3 \times 8^2 \times 12$, $5^2 \times 12^2 \times 16$ and $8^3 \times 12^2 \times 16^2$ is:**

Ans
✓ 1. $221 \times 32 \times 53$
✗ 2. $219 \times 32 \times 53$
✗ 3. $220 \times 32 \times 53$
✗ 4. $222 \times 32 \times 53$

Q.3 Find the discriminant of the equation $\frac{x-3}{x-4} + \frac{x-6}{x-5} = \frac{5}{2}$.

Ans
✗ 1. −6
✗ 2. 6
✗ 3. 7
✓ 4. −7

Q.4 **Meena, Sunita, Kavita, Rina and Priti have different heights. Only two people are shorter than Kavita. Rina is taller than Priti but shorter than Sunita. Meena is the tallest.**
Who is the shortest?

Ans
✗ 1. Sunita
✗ 2. Rina
✗ 3. Meena
✓ 4. Priti

Q.5 What does Snell's law of refraction state about the ratio of the sine of the angle of incidence to the sine of the angle of refraction for a given colour and pair of media?

Ans

✗ 1. It varies with the normal.

✗ 2. It depends on the type of mirror.

✓ 3. It remains constant.

✗ 4. It changes with the angle of incidence.

Q.6 What is the volume (in cm^3) of a solid sphere whose radius is 2.1 cm (rounded off to two decimal places)? (Use $\pi = \frac{22}{7}$)

Ans

✗ 1. 36.80

✓ 2. 38.81

✗ 3. 32.80

✗ 4. 34.81

Q.7 Kartik starts from Point A and drives 11 km towards east. He then takes a right turn, drives 5 km, turns right and drives 14 km. He then takes a right turn and drives 11 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 degree turns only unless specified.)

Ans

✗ 1. 7 km to the south

✗ 2. 7 km to the north

✗ 3. 6 km to the north

✓ 4. 6 km to the south

Q.8 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.)

(24, 8, 96)
(28, 7, 98)

Ans

✗ 1. (48, 8, 144)

✗ 2. (52, 4, 102)

✗ 3. (44, 6, 134)

✓ 4. (32, 6, 96)

Q.9 Refer to the following letter and symbol series and answer the question that follows. Counting to be done from left to right only.

(Left) D K & Ω # E S Y C + * A B @ R T % U $ £ Q G (Right)

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

Ans

✗ 1. 3

✗ 2. 5

✓ 3. 4

✗ 4. 6

Q.10 An individual who is not a member of either House of Parliament may be appointed to the Council of Ministers; however, they must become a member of either House within a specified time frame of:

Ans

✗ 1. 03 Months

✗ 2. 09 Months

✗ 3. 12 Months

✓ 4. 06 Months

Q.11 **A scientist wants to demonstrate that dispersion depends on wavelength. She shines monochromatic red light through a prism. What does she observe and why?**

Ans

✔ 1. Only a single red ray emerges; no spectrum forms because there is only one wavelength

✘ 2. Red light is absorbed, so nothing emerges

✘ 3. Multiple red rays emerge, each at a different angle

✘ 4. A full spectrum appears, showing all colors

Q.12 **In April 2025, which two Indian cricketers were featured in the Wisden 2025 honours list?**

Ans

✘ 1. Ravichandran Ashwin and Jemimah Rodrigues

✘ 2. Ravindra Jadeja and Harmanpreet Kaur

✘ 3. Rohit Sharma and Renuka Thakur

✔ 4. Jasprit Bumrah and Smriti Mandhana

Q.13 **Water flows at the rate of 10 m/min from a cylindrical pipe 6 mm in diameter. How long will it take to fill up a conical vessel whose diameter at the base is 60 cm and depth 21 cm?**

Ans

✘ 1. 1 hour, 12 minutes

✘ 2. 1 hour, 6 minutes

✔ 3. 1 hour, 10 minutes

✘ 4. 1 hour, 20 minutes

Q.14 **Which crop should a farmer consider for cultivation if he wants to increase protein content in his harvest?**

Ans

✘ 1. Cereals

✘ 2. Oilseeds

✔ 3. Pulses

✘ 4. Vegetables and spices

Q.15 **In a certain code language,**
A + B means 'A is the mother of B',
A – B means 'A is the brother of B',
A x B means 'A is the wife of B',
A % B means 'A is the father of B' and
A # B means 'A is the daughter of B'.

How is E related to J if 'E % V + T # H % J'?

Ans

✘ 1. Daughter's son

✘ 2. Wife's father

✘ 3. Daughter's husband

✔ 4. Mother's father

Q.16 **In January 2025, India became the fourth nation in the world to successfully dock two satellites in space. What was the name of this mission?**

Ans

✘ 1. Mars Orbiter

✘ 2. Chandrayaan-3

✘ 3. Gaganyaan

✔ 4. SpaDeX

Q.17 **A student observes that a compass needle deflects when brought near a current-carrying wire. Using your understanding of magnetic fields, explain why this happens.**

Ans

✔ 1. A current-carrying wire creates a magnetic field that exerts a force on the compass needle.

✘ 2. The wire causes a gravitational effect moving the needle.

✘ 3. The wire heats up, causing air currents to move the needle.

✘ 4. The wire produces an electric force that acts on the compass needle.

Q.18 An electric iron uses a heating element made of an alloy instead of pure metal. Which property of alloys justifies this choice?

Ans
- ✔ 1. Alloys have higher resistivity and do not oxidise readily at high temperatures
- ✘ 2. Alloys are cheaper
- ✘ 3. Alloys are better conductors
- ✘ 4. Alloys have lower resistivity

Q.19 Which of the following letter-number clusters will replace the question mark (?) in the given series to make it logically complete?

SWC67, XBH56, CGM45, HLR34, ?

Ans
- ✔ 1. MQW23
- ✘ 2. MOW23
- ✘ 3. NQW23
- ✘ 4. MQX23

Q.20 The sum of the squares of two consecutive odd natural numbers is 3530. The sum of the numbers is:

Ans
- ✔ 1. 84
- ✘ 2. 80
- ✘ 3. 100
- ✘ 4. 98

Q.21 If x varies directly as y and inversely as z, and x = 16 when y = 40 and z = 3, then find x when y = 50 and z = 6.

Ans
- ✘ 1. 12
- ✔ 2. 10
- ✘ 3. 16
- ✘ 4. 15

Q.22 Assertion (A): If the median of the given data (provided in ascending order): 26, 29, 42, 53, x, x + 2, 70, 75, 82, 93, is 60 then the value of x is 59

Reason (R): When the number of observations (n) is even the median is the value of the $\frac{1}{2}$ (sum of middle terms) provided data is arranged in ascending order.

Ans
- ✘ 1. Assertion (A) is true but Reason (R) is false.
- ✔ 2. Both Assertion (A) and Reason are true and R is the correct explanation of A.
- ✘ 3. Both Assertion (A) and Reason are true and R is not the correct explanation of A.
- ✘ 4. Assertion (A) is false but Reason (R) is true.

Q.23 If Chandu covers 285 km in a boat in 45 hours against the stream while he takes 18 hours to cover the same distance downstream, then find the speed of the stream.

Ans
- ✔ 1. 4.75 km/h
- ✘ 2. 5.78 km/h
- ✘ 3. 5.16 km/h
- ✘ 4. 1.39 km/h

Q.24 P and Q together can fill a cistern with water in 24 hours. If P alone can fill the cistern with water in 96 hours, then in how many hours will Q alone fill three-fourth of the same cistern with water?

Ans
- ✘ 1. 49
- ✘ 2. 25
- ✔ 3. 24
- ✘ 4. 48

Q.25 The marks scored by 10 students are given below.

12, 12, 20, 12, 12, 17, 17, 18, 18, 13

The mode of the data is:

Ans
✔ 1. 12
✘ 2. 20
✘ 3. 17
✘ 4. 15

Q.26 Which of the following is the correct relationship between the number of carbon and hydrogen atoms in alkenes?

Ans
✘ 1. CnH2n+4
✘ 2. CnH2n+2
✘ 3. CnH2n-2
✔ 4. CnH2n

Q.27 Which process is used to convert zinc carbonate ore into zinc oxide before reduction?

Ans
✔ 1. Heating strongly in limited air
✘ 2. Heating with aluminium powder
✘ 3. Heating with carbon powder
✘ 4. Heating strongly in excess air

Q.28 Seven people, F, J, M, L, R, V and X, are sitting in a row, facing north.
Only two people sit between F and L. Only M sits to the right of J. Only one person sits between L and J. R sits at some place to the right of V but at some place to the left of X.
How many people sit to the left of R?

Ans
✘ 1. 4
✘ 2. 1
✘ 3. 3
✔ 4. 2

Q.29 Select the correct option regarding the following two statements labelled Assertion (A) and Reason (R).

Assertion (A): Excess accumulation of biodegradable waste can also create environmental problems.
Reason (R): Slow decomposition may lead to foul smell and spread of disease.

Ans
✔ 1. Both A and R are true, and R is the correct explanation of A
✘ 2. A is true, but R is false
✘ 3. Both A and R are true, but R is not the correct explanation of A
✘ 4. A is false, but R is true

Q.30 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 their 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.)
21, 274
34, 443

Ans
✘ 1. 27, 351
✔ 2. 26, 339
✘ 3. 24, 312
✘ 4. 29, 376

Q.31 A bi-convex lens forms a real, inverted image twice as large as the object. Where is the object located relative to the lens?

Ans

✔ 1. Between one focal length and twice the focal length from the lens

✘ 2. Beyond twice the focal length from the lens

✘ 3. At twice the focal length from the lens

✘ 4. At the focal length from the lens

Q.32 What is the rank of the Indian Air Force as per the Global Firepower Index, 2025?

Ans

✔ 1. Fourth

✘ 2. Fifth

✘ 3. Seventh

✘ 4. Sixth

Q.33 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 T. Only five people have exams before R. U has exam immediately before P. V has exam before U but on someday after S.
How many people have exams between V and Q?

Ans

✘ 1. One

✘ 2. Four

✔ 3. Three

✘ 4. Two

Q.34 Which peak marks the north-western end of the Great Himalaya?

Ans

✔ 1. Nanga Parbat

✘ 2. Mount Everest

✘ 3. Kanchenjunga

✘ 4. Namcha Barwa

Q.35 Why is mercury obtained from cinnabar ore through two heating steps instead of direct reduction?

Ans

✔ 1. Mercury sulphide must first change into oxide

✘ 2. Mercury metal reacts with oxygen on heating

✘ 3. Mercury oxide forms only in absence of air

✘ 4. Mercury sulphide melts before decomposition

Q.36 Refer to the following number and symbol series and answer the question that follows. Counting to be done from left to right only. (All numbers are single-digit numbers only)

(Left) 2 # @ 1 4 ^ 8 9 + 2 ? $ 3 ^ 7 * 9 8 (Right)

How many such symbols are there, each of which is immediately preceded by a number and also immediately followed by another number?

Ans

✘ 1. Five

✔ 2. Four

✘ 3. Three

✘ 4. Two

Q.37 India is ranked at what position among 142 Countries, in the World Justice Project(WJP) Rule of Law Index 2024, released on October 2024?

Ans

✘ 1. 14th

✘ 2. 10th

✔ 3. 79th

✘ 4. 52nd

Q.38 What should come in place of '?' in the given series?

115, 119, 127, 139, 155, ?

Ans
✗ 1. 171
✗ 2. 173
✗ 3. 177
✓ 4. 175

Q.39 A bright metal turns dull over time due to oxidation. What is this process called?

Ans
✓ 1. Corrosion
✗ 2. Sublimation
✗ 3. Filtration
✗ 4. Evaporation

Q.40 Mr. Y travelled 438 km, 820 km and 972 km at a speed of 6 km/hr, 20 km/hr and 27 km/hr, respectively. Find his average speed in km/hr.

Ans
✓ 1. $14\frac{13}{15}$
✗ 2. $14\frac{11}{15}$
✗ 3. $14\frac{14}{15}$
✗ 4. $14\frac{8}{15}$

Q.41 A and B can complete a work in 15 days and 10 days, respectively. They started doing the work together but after 4 days, B had to leave, and A completed the remaining work alone. The entire work was completed in _____ days.

Ans
✗ 1. 10
✓ 2. 9
✗ 3. 5
✗ 4. 6

Q.42 A question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements is sufficient to answer the question. Read both the statements and decide the appropriate answer.

Question: Ax, Bk, Cq, Dp and Ev are sitting around a circular table, facing the centre. Who sits to the immediate left of Cq?

Statements:
(I) Bk sits second to the left of Ev. Dp sits second to the right of Ev.
(II) Ax sits second to the right of Cq. Dp sits to the immediate left of Bk.

Ans
✗ 1. Data in Statement I alone is sufficient to answer the question, while data in statement II is not.
✗ 2. Both statements I and II together (and not statement I alone or statement II alone) 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.43 Baking soda ($NaHCO_3$) is commonly used in cooking. Which of the following statements about it is correct?

Ans
✗ 1. It is a strong base that turns red litmus blue.
✗ 2. It is acidic in nature and has pH < 7.
✗ 3. It does not react with water or acids.
✓ 4. It reacts with acids to release carbon dioxide gas.

Q.44 A large central vacuole is a characteristic feature of which of the following cells?

Ans
✗ 1. Protozoan cells
✗ 2. Bacterial cells
✓ 3. Plant cells
✗ 4. Animal cells

Q.45 What should come in place of '?' in the given series?

250 200 160 130 ?

Ans
✗ 1. 100
✗ 2. 120
✗ 3. 90
✓ 4. 110

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

12 ÷ 3 + 32 × 4 − 5 = ? + 3

Ans
✓ 1. 36
✗ 2. 34
✗ 3. 32
✗ 4. 38

Q.47 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 conclusions logically follow(s) from the statements.

Statements:
All chocolates are juices.
All juices are medicines.
No juice is a biscuit.

Conclusions:
(I): No medicine is a biscuit.
(II): No chocolate is a biscuit.

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

Q.48 If $6\sin Y + \cos Y = \sqrt{5}\sin Y$, then find the value of $\tan Y$.

Ans
✗ 1. $\frac{-6-\sqrt{5}}{41}$
✓ 2. $\frac{-6-\sqrt{5}}{31}$
✗ 3. $\frac{-7-\sqrt{5}}{31}$
✗ 4. $\frac{-6-\sqrt{5}}{36}$

Q.49 If 15% of A is equal to 20% of B and 10% of B is equal to 25% of C, what is the ratio of A : B : C?

Ans
- ✗ 1. 8:7:6
- ✓ 2. 20:15:6
- ✗ 3. 12:9:7
- ✗ 4. 22:17:11

Q.50 The average of the first 18 positive multiples of 8 is:

Ans
- ✓ 1. 76
- ✗ 2. 18
- ✗ 3. 8
- ✗ 4. 72

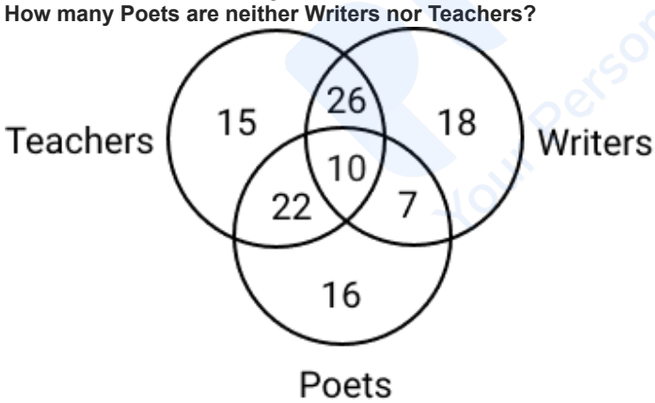
Q.51 QSTV is related to ZBCE in a certain way based on the English alphabetical order. In the same way, VXYA is related to EGHJ. To which of the following is XZAC related, following the same logic?

Ans
- ✗ 1. GHIL
- ✗ 2. GIIL
- ✗ 3. GJIR
- ✓ 4. GIJL

Q.52 Which of the following is the main reason for the flatness of the Great Indian Plains?

Ans
- ✗ 1. Wind erosion
- ✓ 2. River deposition
- ✗ 3. Tectonic uplift
- ✗ 4. Glacial erosion

Q.53 Study the given Venn diagram carefully and answer the question. The numbers in different sections indicate the number of persons. (NOTE: You have to take the given data to be true even if they seem to be at variance from commonly known facts.)
How many Poets are neither Writers nor Teachers?



Ans
- ✓ 1. 16
- ✗ 2. 22
- ✗ 3. 15
- ✗ 4. 10

Q.54 What is the main purpose of giving vaccinations to farm animals?

Ans
- ✓ 1. To protect them from major viral and bacterial diseases
- ✗ 2. To prevent attacks from external parasites
- ✗ 3. To increase milk production
- ✗ 4. To improve the quality of animal feed

Q.55 Refer to the two statements given below and choose the CORRECT option.

Statement A: Milch animals are reared primarily for the production of milk.

Statement B: Milch animals are mainly used for ploughing agricultural fields.

Ans
- ✔ 1. Statement A is correct but B is incorrect.
- ✘ 2. Both statements A and B are incorrect.
- ✘ 3. Statement A is incorrect but B is correct.
- ✘ 4. Both statements A and B are correct.

Q.56 The price of fuel decreases by 35%, 10% and 50% in three successive months, but increases by 40% in the fourth month. What is the percentage increase/decrease in the price of fuel in the fourth month as compared to its original price?

Ans
- ✘ 1. Increases by 64.45%
- ✘ 2. Increases by 56.75%
- ✔ 3. Decreases by 59.05%
- ✘ 4. Decreases by 63.97%

Q.57 What key difference set the Kheda Satyagraha apart from the Ahmedabad Mill Strike during the phase of heightened nationalist activity?

Ans
- ✘ 1. Emphasis on constitutional and legislative demands
- ✔ 2. Mobilisation of rural peasants versus organisation of urban workers
- ✘ 3. Reliance on petitions and appeals to colonial authorities
- ✘ 4. Common leadership under the same nationalist figures

Q.58 When an object is in free fall near the Earth's surface, which of the following physical quantities remains constant if air resistance is neglected?

Ans
- ✘ 1. Energy remains constant.
- ✘ 2. Momentum remains constant.
- ✔ 3. Acceleration due to gravity remains constant.
- ✘ 4. Velocity remains constant.

Q.59 Based on the 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 man out is not based on the number of consonants/vowels or their position in the letter cluster.)

Ans
- ✘ 1. USO
- ✘ 2. DBX
- ✘ 3. WUQ
- ✔ 4. MLG

Q.60 QL 2 is related to SG 16 in a certain way. In the same way, EI 6 is related to GD 20. To which of the following is PN 8 related, following the same logic?

Ans
- ✔ 1. RI 22
- ✘ 2. UJ 23
- ✘ 3. YU 11
- ✘ 4. JI 12

Q.61 If third proportional of 8 and 48 be x, then what is the value of x?

Ans
- ✘ 1. 289
- ✘ 2. 286
- ✔ 3. 288
- ✘ 4. 291

Q.62 A ball at rest is dropped from the top of a 20 m high building. Calculate the speed with which it hits the ground. (Take g = 10 m/s²)

Ans

✗ 1. 40 m/s

✗ 2. 14 m/s

✗ 3. 10 m/s

✓ 4. 20 m/s

Q.63 The Indian dancer Guru Vempati Chinna Satyam was related to which dance form, for which he was honoured with the Padma Bhushan in 1998?

Ans

✓ 1. Kuchipudi

✗ 2. Mohiniyattam

✗ 3. Manipuri

✗ 4. Kathakali

Q.64 Which type of spherical mirror has its reflecting surface curved inwards, facing towards the centre of the sphere?

Ans

✗ 1. Convex mirror

✗ 2. Plane mirror

✗ 3. Parabolic mirror

✓ 4. Concave mirror

Q.65 In a certain code,
'great people gathering' is coded as 'sc nj gy'
'great minds together' is coded as 'xg jp sc'
'read people minds' is coded as 'nj ys jp'
(all the codes are two letter coded only)
What is the code for 'together gathering'?

Ans

✗ 1. sc ys

✗ 2. gy ys

✗ 3. gy jp

✓ 4. xg gy

Q.66 This question is based on the following words.

OUT USE TUG RIP

How many letters are there between the second letter of the first word from the right and the second letter of the first word from the left as per the English alphabetical order?

Ans

✓ 1. 11

✗ 2. 12

✗ 3. 14

✗ 4. 10

Q.67 What is the correct sequence in which the oath of office binds a Union Minister?

Ans

✗ 1. Constitution → Justice → Integrity → Sovereignty

✗ 2. Integrity → Constitution → Sovereignty → Duty → Impartiality (justice without fear or favour)

✓ 3. Allegiance to the → Constitution, → Sovereignty and integrity → Faithful discharge of duties→ Impartiality

✗ 4. Allegiance → Sovereignty → Duty and Impartiality→ Faithful discharge

Q.68 **Refer to the two statements given below and choose the CORRECT option.**

Statement A: Poor storage conditions result in weight loss and discolouration of grains.

Statement B: Poor storage conditions enhance seed viability and grain texture.

Ans

✗ 1. Statement A is incorrect but B is correct.

✗ 2. Both statements A and B are correct.

✗ 3. Both statements A and B are incorrect.

✓ 4. Statement A is correct but B is incorrect.

Q.69 **A ball is placed at the edge of a table and left undisturbed. Which form of energy does the ball primarily possess due to its position, and what can happen if it is pushed off the table?**

Ans

✗ 1. The ball possesses chemical energy and will release it when it falls.

✗ 2. The ball possesses elastic potential energy due to its shape.

✓ 3. The ball possesses potential energy and will convert it to kinetic energy as it falls.

✗ 4. The ball possesses kinetic energy and will remain at rest unless a force acts on it.

Q.70 **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 their 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.)
36, 289
58, 465

Ans

✗ 1. 32, 256

✗ 2. 19, 183

✓ 3. 23, 185

✗ 4. 21, 168

Q.71 **Iron nails are coated with zinc to prevent rusting. Even if the zinc layer is scratched, rusting does not occur because —**

Ans

✓ 1. Zinc acts as a sacrificial anode and corrodes instead of iron.

✗ 2. Zinc reacts with moisture to form a protective film

✗ 3. Iron becomes stainless in the presence of zinc.

✗ 4. Zinc forms a hard oxide layer.

Q.72 **In what ratio must a fruit vendor mix two varieties of mangoes costing ₹60/kg and ₹68.40/kg, so that by selling the mixed variety of mangoes at ₹79.80/kg, he may gain 18.75%?**

Ans

✗ 1. 7 : 3

✗ 2. 6 : 1

✗ 3. 3 : 7

✓ 4. 1 : 6

Q.73 **The nucleus contains chromosomes, which appear as rod-shaped structures only when the cell is about to divide. These chromosomes are composed of _____.**

Ans

✗ 1. RNA and lipids

✗ 2. Amino acids and carbohydrates

✓ 3. DNA and proteins

✗ 4. Glucose and enzymes

Q.74 A dealer purchases 1,200 eggs at ₹4.50 each. During transit, 8% of the eggs break. The remaining eggs are sold at ₹6.00 each. Find the overall profit percentage.

Ans

✗ 1. $22\frac{1}{3}\%$

✗ 2. $21\frac{1}{3}\%$

✓ 3. $22\frac{2}{3}\%$

✗ 4. $21\frac{2}{3}\%$

Q.75 **Why are terrestrial food chains usually limited to 4–5 trophic levels?**

Ans

✗ 1. Plants produce less oxygen

✓ 2. Energy available decreases at higher trophic levels

✗ 3. Decomposers recycle all energy

✗ 4. Top predators eat less

Q.76 **By selling an article at 76% of its marked price, a trader makes a loss of 20%. What will be the profit percentage, if he sells it at 99% of its marked price?**

Ans

✗ 1. $1\frac{1}{19}\%$

✗ 2. $3\frac{3}{19}\%$

✓ 3. $4\frac{4}{19}\%$

✗ 4. $2\frac{2}{19}\%$

Q.77 **Match the following List-I (World Events) with List-II (Outcomes) and choose your answer from the code given below.**

World Events (List -I) Outcome (List-II)
1. United Nations Conference on the Human Environment, 1972 i) Millennium Development Goals (MDG)
2. Brundtland Report, 1987 ii) Adoption of Sustainable Development Goals (SDGs)
3. UN Millennium Summit, 2000 iii) Environmental Movement
4. UN Summit, 2015 iv) The word 'Sustainable Development' was introduced

Ans

✗ 1. 1(i), 2(iv), 3(iii), 4(ii)

✗ 2. 1(i), 2(ii), 3(iii), 4(iv)

✓ 3. 1(iii), 2(iv), 3(i), 4(ii)

✗ 4. 1(i), 2(ii), 3(iv), 4(iii)

Q.78 **Who was honored with the Padma Shri in 2025 for preserving the traditional Tanglia weaving art?**

Ans

✓ 1. Parmar Lavjibhai Nagjibhai

✗ 2. Vinayak Lohani

✗ 3. Pawan Goenka

✗ 4. Prashanth Prakash

Q.79 Simplify: $\frac{4}{5}+\left(\frac{1}{1+\frac{5}{8}}\right)-\frac{3}{5}$

Ans
✗ 1. $\frac{48}{65}$

✗ 2. $\frac{58}{63}$

✓ 3. $\frac{53}{65}$

✗ 4. $\frac{60}{71}$

Q.80 **Which measurable quantity remains the same when a liquid is transferred between containers?**

Ans
✓ 1. Volume of the liquid remains unchanged

✗ 2. Density of the liquid always increases

✗ 3. Mass of the liquid becomes zero

✗ 4. Shape of the liquid remains unchanged

Q.81 **During aerobic respiration, each pyruvate molecule is broken down to give _____ molecules of carbon dioxide.**

Ans
✗ 1. Two

✓ 2. Three

✗ 3. Four

✗ 4. One

Q.82 **The simplified value of 178 - 7 x (3 + 17) + 22 is:**

Ans
✗ 1. 66

✗ 2. 58

✗ 3. 67

✓ 4. 60

Q.83 **The length of a cuboid is three times its height, and the breadth is twice the height. If the height is (x^2 + 2) cm, find the lateral surface area of the cuboid at x = 2.**

Ans
✓ 1. 360 cm2

✗ 2. 420 cm2

✗ 3. 300 cm2

✗ 4. 240 cm2

Q.84 **A vending machine contains ₹1, 50 paise, and 25 paise coins. In one tray, the number of coins of these denominations is in the ratio 2:3:4, and their total value is ₹180. In another tray, the values of ₹1, 50 paise, and 25 paise coins are in the ratio 13:11:7, and the total number of coins in this tray is 378. How many 50-paise coins are there in total across both trays?**

Ans
✗ 1. 251

✗ 2. 250

✓ 3. 252

✗ 4. 253

Q.85 **Compare the products of complete and incomplete combustion of methane:**

Ans

✗ 1. Complete → CO + H_2O; Incomplete → CO_2 + H_2O

✓ 2. Complete → CO_2 + H_2O; Incomplete → CO + H_2O

✗ 3. Complete → CO_2 only; Incomplete → H_2O only

✗ 4. Complete → CO + H_2O; Incomplete → C + H_2O

Q.86 **In a certain code language,**
A + B means 'A is the son of B'
A – B means 'A is the sister of B'
A x B means 'A is the wife of B'
A ÷ B means 'A is the father of B'

Based on the above, how is C related to G if 'C x S + D ÷ F – G'?

Ans

✗ 1. Daughter

✗ 2. Wife

✓ 3. Brother's wife

✗ 4. Brother's daughter

Q.87 **Amit had invested same amount of sums at simple interest as well as compound interest, compounded annually. The time period of both the sums was 2 years and rate of interest too was the same 10% per annum. At the end, he found a difference of ₹45 in both the interests received. What were the sums (in ₹) invested in each case?**

Ans

✗ 1. 3,600

✗ 2. 3,750

✓ 3. 4,500

✗ 4. 4,850

Q.88 **In a certain code,**
'child plays game' is coded as 'ra so tu'
'adult plays work' is coded as 'ke so mi'
'game work activity' is coded as 'tu mi lo'

Q. What is the code for activity?

Ans

✓ 1. lo

✗ 2. ke

✗ 3. mi

✗ 4. tu

Q.89 **Why do muscle cells sometimes respire anaerobically during heavy exercise?**

Ans

✓ 1. Because the supply of oxygen is limited

✗ 2. Because lactic acid is required

✗ 3. Because the body wants to store energy

✗ 4. Because glucose is unavailable

Q.90 **Why does the temperature remain constant during melting of ice even on heating?**

Ans

✗ 1. Heat energy converts directly into work

✗ 2. Heat energy escapes from ice into the surroundings

✗ 3. Heat energy increases kinetic energy instantly

✓ 4. Heat energy is used to overcome particle attraction

Q.91 **Which metal releases the most heat when reacting with excess hydrochloric acid?**

Ans

✗ 1. Iron

✗ 2. Nickel

✗ 3. Zinc

✓ 4. Magnesium

Q.92 The Indian Home Rule League at Madras was founded by _____.

Ans

✗ 1. Subhas Chandra Bose

✓ 2. Annie Besant

✗ 3. Mahatma Gandhi

✗ 4. Bala Gangadhar Tilak

Q.93 What is the remainder when (x^2-4x+7) is divided by $(x-2)$?

Ans

✓ 1. 3

✗ 2. −1

✗ 3. 1

✗ 4. 7

Q.94 Who was the Chairman of the 'Committee to Review Policy for Public Enterprises', set up by the Government of India in 1984?

Ans

✗ 1. K. Kasturirangan

✗ 2. Subimal Dutt

✗ 3. S. S. Tarapore

✓ 4. Arjun Sengupta

Q.95 Mahesh has borrowed an amount of ₹420000 from a bank to start a business. How much simple interest (in ₹) will he pay at a rate of 6% per annum after 2 years?

Ans

✓ 1. 50400

✗ 2. 51400

✗ 3. 53400

✗ 4. 49400

Q.96 A car travels 120 meters north in 10 seconds and then instantly returns to its original position in the next 10 seconds. Which statement best describes the car's average velocity for the entire trip?

Ans

✓ 1. The average velocity is zero because the displacement is zero.

✗ 2. The average velocity is 6 m/s because the total distance is 240 m in 20 seconds.

✗ 3. The average velocity is 12 m/s because the car covered 120 m in 10 seconds.

✗ 4. The average velocity is 12 m/s because the total time is 10 seconds.

Q.97 The 'Middle-Income Trap' refers to _____.

Ans

✓ 1. Struggle to attain high income status

✗ 2. Over-reliance on foreign aid

✗ 3. Exclusive focus on agriculture

✗ 4. Rapid transition to high-income status

Q.98

The value of $\sqrt{\left(77+\sqrt{\left((12+\sqrt{\left(10+\sqrt{\left(32+\sqrt{(16)}\right)}\right)}\right)}\right)}$ is:

Ans

✗ 1. 13

✗ 2. 8

✗ 3. 11

✓ 4. 9

Q.99 Two circles, having their centres at A and at B, touch externally at a point M. From a point P on a tangent at M, tangents PQ and PR are drawn to the circles with points of contact Q and R, respectively. If AP = 13 cm and AM = 5 cm, find the value of PQ + PR − PM.

Ans

✔ 1. 12 cm

✘ 2. 10 cm

✘ 3. 13 cm

✘ 4. 14 cm

Q.100 During a sale 50% of the goods are sold at 19% profit, 20% of the remaining goods are sold at 40% profit and the still remaining goods are sold at a loss of 25%. If there is an overall profit of x%, then what is the value of x?

Ans

✘ 1. 2

✘ 2. 4

✘ 3. 5

✔ 4. 3.5

"