CUET-UG General Aptitude Test Sample Paper-13

Duration: 1 Hour **Maximum Marks: 250**

Instructions

- This paper contains a total of 50 Multiple Choice Questions.
- Each correct answer carries **+5 marks**.
- Each incorrect answer carries **-1 mark**.
- No negative marking for unattempted questions.

Q1. A retailer buys a refrigerator for ₹ 15,000. He marks it up by 40% and then offers a successive discount of 10% and 5%. What is his overall profit percentage?

(A) 19.7%

(B) 21.2%

(C) 18.5%

(D) 20.0%

Q2. A and B can complete a work in 12 days and 18 days respectively. They work together for 4 days, after which A leaves. C joins B and they finish the remaining work in 5 days. In how many days can C alone finish the entire work?

(A) 15 days

(B) 20 days

(C) 30 days

(D) 45 days

Q3. What is the smallest 5-digit number that is exactly divisible by 12, 15, and 18?

(A) 10080

(B) 10120

(C) 10020

(D) 10260

Q4. If $x + \frac{1}{x} = 5$, then the value of $x^3 + \frac{1}{x^3}$ is:

(A) 125

(B) 110

(C) 140

(D) 115

Q5. The ratio of the speeds of two trains is 7:8. If the second train runs 400 km in 4 hours, what is the speed of the first train?

(A) 70 km/h

(B) 87.5 km/h

(C) 80 km/h

(D) 90 km/h

Q6. A sum of money doubles itself in 8 years at Compound Interest. In how many years will it become 8 times itself at the same rate?

(A) 16 years

(B) 24 years

(C) 32 years

(D) 20 years

Q7. Find the value of $\sqrt{12 + \sqrt{12 + \sqrt{12 + \ldots \infty}}}$.

(A) 3

(B) 4

(C) 6

(D) 12

Q8. The average weight of 8 persons increases by 2.5 kg when a new person comes in place of one of them weighing 65 kg. What is the weight of the new person?

(A) 75 kg

(B) 85 kg

(C) 80 kg

(D) 70 kg

Q9. A sum was put at simple interest at a certain rate for 3 years. Had it been put at 2% higher rate, it would have fetched ₹ 360 more. Find the sum.

(A) ₹ 4000

(B) ₹ 5000

(C) ₹ 6000

(D) ₹ 8000

Q10. If $2^{x+4} - 2^{x+2} = 3$, then the value of x is:

(A) 0

(B) 2

(C) -2

(D) -1

Q11. A bag contains ₹ 1, 50 paise and 25 paise coins in the ratio 5:6:8. If the total amount is ₹ 420, find the number of 50 paise coins.

(A) 210

(B) 252

(C) 150

(D) 300

Q12. Two numbers are in the ratio 3:5. If 9 is subtracted from each, the new numbers are in the ratio 12:23. The smaller number is:

(A) 27

(B) 33

(C) 49

(D) 55

Q13. The HCF of two numbers is 11 and their LCM is 7700. If one of the numbers is 275, then the other is:

(A) 279

(B) 283

(C) 308

(D) 318

Q14. Simplify: $\frac{(0.6)^0-(0.1)^{-1}}{(\frac{3}{8})^{-1}\cdot(\frac{3}{2})^3+(-\frac{1}{3})^{-1}}$.

(A) $-\frac{3}{2}$

(B) $\frac{2}{3}$

(C) 1

(D) 0

Q15. If $3^{(x-y)} = 27$ and $3^{(x+y)} = 243$, then x is equal to:

(A) 0

(B) 2

(C) 4

(D) 6

Q16. A pipe can fill a tank in 15 hours. Due to a leak in the bottom, it is filled in 20 hours. If the tank is full, how much time will the leak take to empty it?

(A) 30 hrs

(B) 40 hrs

(C) 50 hrs

(D) 60 hrs

Q17. The difference between the squares of two consecutive odd integers is always divisible by:

(A) 3

(B) 6

(C) 7

(D) 8

Q18. The perimeter of a semi-circular protractor is 36 cm. Its diameter is:

(A) 10 cm

(B) 14 cm

(C) 12 cm

(D) 7 cm

Q19. If the radius of a sphere is doubled, what is the ratio of the volume of the new sphere to the original sphere?

(A) 2:1

(B) 4:1

(C) 8:1

(D) 16:1

Q20. A rectangular water tank is 8m high, 6m long, and 2.5m wide. How many litres of water can it hold?

(A) 120,000 L

(B) 12,000 L

(C) 1,200 L

(D) 60,000 L

Q21. The area of a triangle with base 12 cm and height 8 cm is:

(A) 48 sq cm

(B) 96 sq cm

(C) 24 sq cm

(D) 60 sq cm

Q22. A wire in the shape of a square enclosing an area of 484 sq cm is bent into the form of a circle. The area of the circle is:

(A) 462 sq cm

(B) 616 sq cm

(C) 524 sq cm

(D) 720 sq cm

Q23. If the angles of a triangle are in the ratio 2:3:4, find the largest angle.

(A) 60°

(B) 80°

(C) 100°

(D) 120°

Q24. Find the area of a rhombus whose diagonals are of lengths 10 cm and 8.2 cm.

(A) 41 sq cm

(B) 82 sq cm

(C) 20.5 sq cm

(D) 45 sq cm

Q25. In a certain code, 'RAINBOW' is written as 'SBJMCPX'. How is 'CLOUDY' written in that code?

(A) DMPVEZ

(B) DMPOVZ

(C) DNQVEZ

(D) ENQVFA

Q26. Pointing to a photograph, Vipul said, "She is the daughter of my grandfather's only son." How is Vipul related to the girl in the photograph?

(A) Father

(B) Brother

(C) Cousin

(D) Uncle

Q27. Statements: I. All cups are plates. II. Some plates are spoons. Conclusions: I. All cups are spoons. II. Some spoons are plates.

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither follows

Q28. Find the missing number in the series: 2, 6, 12, 20, 30, ?

(A) 40

(B) 42

(C) 44

(D) 46

Q29. In a row of 40 students, R is 11th from the right and there are 15 students between R and M. What is M's position from the left?

(A) 14th

(B) 15th

(C) 13th

(D) 16th

Q30. If 'A + B' means A is the father of B; 'A - B' means A is the sister of B. What does 'P + R - Q' mean?

(A) P is the father of Q

(B) P is the uncle of Q

(C) P is the brother of Q

(D) P is the son of Q

Q31. A person starts from point A and walks 3 km North, then turns Right and walks 4 km. How far is he from the starting point?

(A) 5 km

(B) 7 km

(C) 1 km

(D) 6 km

Q32. Looking at a portrait, a man said, "I have no brother or sister, but that man's father is my father's son." Whose portrait was it?

(A) His own

(B) His son's

(C) His father's

(D) His nephew's

Q33. Find the odd one out: 27, 64, 125, 144, 216.

(A) 64

(B) 125

(C) 144

(D) 216

Q34. If 'White' is called 'Blue', 'Blue' is called 'Red', 'Red' is called 'Yellow', what is the color of human blood?

(A) Red

(B) Blue

(C) Yellow

(D) White

Q35. If Tuesday falls on the 4th of a month, what day will it be on the 24th of the same month?

(A) Monday

(B) Tuesday

(C) Wednesday

(D) Thursday

Q36. Arrange the words in a logical sequence: 1. Grass 2. Curd 3. Milk 4. Cow 5. Butter.

(A) 4, 1, 3, 2, 5

(B) 1, 4, 3, 2, 5

(C) 4, 1, 2, 3, 5

(D) 1, 4, 2, 3, 5

Q37. Which number replaces the question mark? 3, 10, 29, 66, ?

(A) 127

(B) 131

(C) 104

(D) 125

Q38. Statements: Some kings are queens. All queens are beautiful. Conclusions: I. All kings are beautiful. II. Some kings are beautiful.

(A) Only I follows

(B) Only II follows

(C) Either I or II follows

(D) Neither follows

Q39. Six persons A, B, C, D, E, F are sitting in a circle. B is between F and D, E is between A and C, A is to the left of D. Who is between F and A?

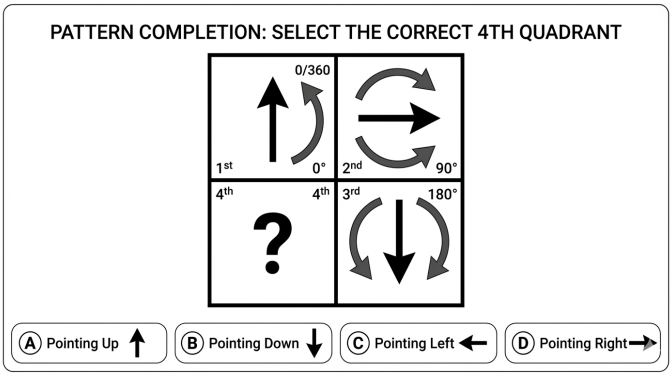
(A) E

(B) C

(C) D

(D) B

Q40. If a square is divided into four quadrants and three quadrants show a clockwise rotating arrow at 90°, 180°, and 270° respectively, what is the position of the arrow in the 4th quadrant?



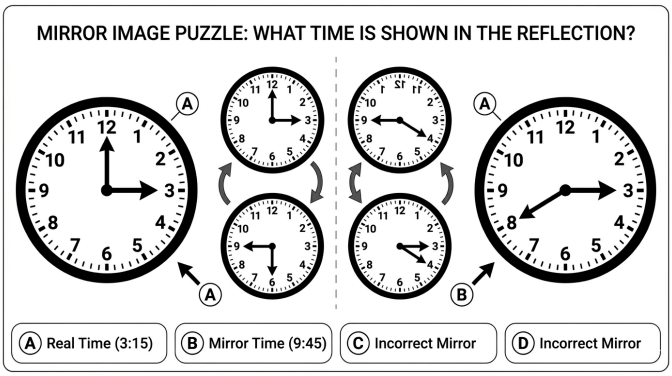
(A) Pointing Up

(B) Pointing Down

(C) Pointing Left

(D) Pointing Right

Q41. If a clock shows 3:15, what will be the time in the mirror?



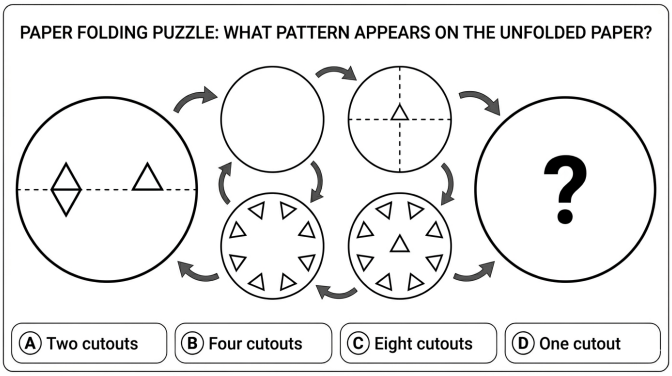
(A) 8:45

(B) 9:45

(C) 8:15

(D) 9:15

Q42. A circular paper is folded twice and a small triangle is cut out at the center. When unfolded, how many triangles will appear?



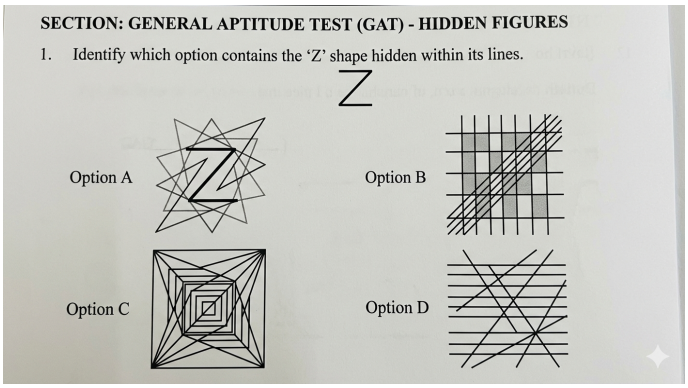
(A) 2

(B) 4

(C) 8

(D) 1

Q43. Identify which option contains the 'Z' shape hidden within its lines.



(A) Option A

(B) Option B

(C) Option C

(D) Option D

Q44. If the number 4 is on the top face of a standard dice, which number is at the bottom?

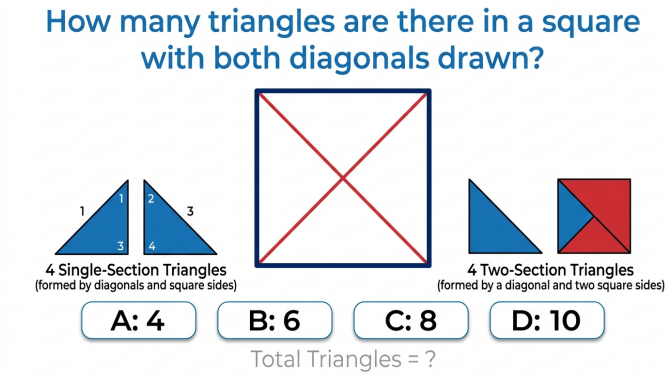
(A) 1

(B) 2

(C) 3

(D) 5

Q45. How many triangles are there in a square with both diagonals drawn?



(A) 4

(B) 6

(C) 8

(D) 10

Q46. Which city hosted the G20 Summit in 2023?

(A) Jakarta

(B) New Delhi

(C) Riyadh

(D) Brasilia

Q47. Article 32 of the Indian Constitution is related to:

(A) Right to Equality

(B) Right to Constitutional Remedies

(C) Fundamental Duties

(D) Directive Principles

Q48. Which of the following is a water-soluble vitamin?

(A) Vitamin A

(B) Vitamin D

(C) Vitamin C

(D) Vitamin K

Q49. The 'Project Tiger' was launched in India in the year:

(A) 1971

(B) 1973

(C) 1985

(D) 1992

Q50. The boundary line between India and China is known as:

(A) Radcliffe Line

(B) Durand Line

(C) McMahon Line

(D) Palk Strait

Detailed Solutions

Q1.

Solution

Concept: Profit percentage is calculated using the difference between Selling Price (SP) and Cost Price (CP). When successive discounts are applied, they are multiplied sequentially.

Solution: 1. Cost Price (CP) = ₹ 15,000

2. Marked Price after 40

$$MP = 15000 \times 1.40 = 21000$$

3. First discount of 10

$$21000 \times 0.90 = 18900$$

4. Second discount of 5

$$18900 \times 0.95 = 17955$$

5. Profit:

$$\text{Profit} = 17955 - 15000 = 2955$$

6. Profit percentage:

$$\frac{2955}{15000} \times 100 = 19.7\%$$

Final Answer: 19.7%

Answer: (A)

Q2.

Solution

Concept: Work problems are solved using efficiency (work per day). Total work is assumed as LCM of individual times.

Solution: 1. A's 1-day work = $\frac{1}{12}$ 2. B's 1-day work = $\frac{1}{18}$

3. Combined work of A and B:

$$\frac{1}{12} + \frac{1}{18} = \frac{5}{36}$$

4. Work done in 4 days:

$$4 \times \frac{5}{36} = \frac{20}{36} = \frac{5}{9}$$

5. Remaining work:

$$1 - \frac{5}{9} = \frac{4}{9}$$

6. B's 1-day work = $\frac{1}{18}$

7. Let C's 1-day work = x Then (B + C)'s work in 5 days:

$$5\left(\frac{1}{18} + x\right) = \frac{4}{9}$$

8. Solve:

$$\frac{1}{18} + x = \frac{4}{45}$$

$$x = \frac{4}{45} - \frac{1}{18}$$

LCM = 90:

$$x = \frac{8-5}{90} = \frac{3}{90} = \frac{1}{30}$$

So C alone takes:

30 days

Final Answer: 30 days

Answer: (C)

Q3.

Solution

Concept: To find the smallest number divisible by given numbers, we use LCM.

Solution: 1. Prime factorization:

$$12 = 2^2 \times 3, \quad 15 = 3 \times 5, \quad 18 = 2 \times 3^2$$

2. LCM:

$$LCM = 2^2 \times 3^2 \times 5 = 180$$

3. Smallest 5-digit number = 10000

4. Find nearest multiple of 180:

$$\frac{10000}{180} \approx 55.55$$

5. Next integer = 56

6. Required number:

$$56 \times 180 = 10080$$

Final Answer: 10080

Answer: (A)

Q4.

Solution

Concept: Use identity:

$$x^3 + \frac{1}{x^3} = \left(x + \frac{1}{x}\right)^3 - 3\left(x + \frac{1}{x}\right)$$

Solution: 1. Given:

$$x + \frac{1}{x} = 5$$

2. Apply identity:

$$x^3 + \frac{1}{x^3} = 5^3 - 3(5)$$

3. Compute:

$$125 - 15 = 110$$

Final Answer: 110

Answer: (B)

Q5.

Solution

Concept: Speed = Distance / Time. Ratio of speeds is used to scale values.

Solution: 1. Speed of second train:

$$\frac{400}{4} = 100 \text{ km/h}$$

2. Ratio of speeds (first : second) = 7 : 8
3. First train speed:

$$\frac{7}{8} \times 100 = 87.5 \text{ km/h}$$

Final Answer: 87.5 km/h

Answer: (B)

Q6.

Solution

Concept: In compound interest, growth is exponential. If an amount doubles, we use powers of 2 to determine future growth.

Solution: 1. Given: Money doubles in 8 years So growth factor in 8 years = 2
2. We need to find time when money becomes 8 times

$$8 = 2^3$$

3. So, 3 doublings are needed.
4. Each doubling takes 8 years:

$$3 \times 8 = 24 \text{ years}$$

Final Answer: 24 years

Answer: (B)

Q7.

Solution

Concept: Let the expression be x, then we form an equation and solve using algebraic substitution.

Solution: 1. Let:

$$x = \sqrt{12 + \sqrt{12 + \sqrt{12 + \cdots}}}$$

2. Then:

$$x = \sqrt{12 + x}$$

3. Square both sides:

$$x^2 = 12 + x$$

4. Rearrange:

$$x^2 - x - 12 = 0$$

5. Factor:

$$(x - 4)(x + 3) = 0$$

6. Positive value:

$$x = 4$$

Final Answer: 4

Answer: (B)

Q8.

Solution

Concept: Average change method: total increase = change in one replacement.

Solution: 1. Increase in average = 2.5 kg Number of persons = 8

2. Total increase in weight:

$$8 \times 2.5 = 20 \text{ kg}$$

3. Old person weight = 65 kg So new person weight:

$$65 + 20 = 85 \text{ kg}$$

Final Answer: 85 kg

Answer: (B)

Q9.

Solution

Concept: Difference in simple interest is directly proportional to rate difference.

Solution: 1. Difference in rate = 2Time = 3 years Extra interest = ₹ 360

2. Formula:

$$SI = \frac{P \times R \times T}{100}$$

3. Extra interest:

$$360 = \frac{P \times 2 \times 3}{100}$$

4. Solve:

$$360 = \frac{6P}{100}$$

$$P = \frac{360 \times 100}{6} = 6000$$

Final Answer: ₹ 6000

Answer: (C)

Q10.

Solution

Concept: Use factorization of powers of 2.

Solution: 1. Given:

$$2^{x+4} - 2^{x+2} = 3$$

2. Take common factor:

$$2^{x+2}(2^2 - 1) = 3$$

3. Simplify:

$$2^{x+2} \times 3 = 3$$

4. Divide both sides:

$$2^{x+2} = 1$$

5. So:

$$x + 2 = 0$$

$$x = -2$$

Final Answer: -2

Answer: (C)

Q11.

Solution

Concept: Use ratio method and convert all coins into a single unit (₹) to form an equation.

Solution: 1. Ratio of coins (₹ 1 : 50p : 25p) = 5 : 6 : 8

2. Let number of coins be:

$$5x,\ 6x,\ 8x$$

3. Total value: - ₹ 1 coins = $5x$ - 50p coins = $6x \times 0.5 = 3x$ - 25p coins = $8x \times 0.25 = 2x$

4. Total amount:

$$5x + 3x + 2x = 10x$$

5. Given total = ₹ 420:

$$10x = 420 \Rightarrow x = 42$$

6. Number of 50p coins:

$$6x = 6 \times 42 = 252$$

Final Answer: 252

Answer: (B)

Q12.

Solution

Concept: Form equations using ratio conditions and solve simultaneous equations.

Solution: 1. Let numbers be:

$$3x,\ 5x$$

2. After subtracting 9:

$$\frac{3x-9}{5x-9}=\frac{12}{23}$$

3. Cross multiply:

$$23(3x-9)=12(5x-9)$$

4. Expand:

$$69x-207=60x-108$$

5. Rearrange:

$$69x-60x=207-108$$

$$9x=99$$

$$x=11$$

6. Smaller number:

$$3x=33$$

Final Answer: 33

Answer: (B)

Q13.

Solution

Concept: Use relation:

$$\text{HCF} \times \text{LCM} = \text{Product of two numbers}$$

Solution: 1. Given:

$$HCF = 11,\ LCM = 7700$$

2. One number = 275
3. Let other number = x
4. Apply formula:

$$11 \times 7700 = 275 \times x$$

5. Solve:

$$84700 = 275x$$

$$x = 308$$

Final Answer: 308

Answer: (C)

Q14.

Solution

Concept: Use exponent rules and simplification of rational expressions step by step.

Solution: 1. Numerator:

$$(0.6)^0 = 1, \quad (0.1)^{-1} = 10$$

So numerator:

$$1 - 10 = -9$$

2. Denominator:

$$\left(\frac{3}{8}\right)^{-1} = \frac{8}{3}, \quad \left(\frac{3}{2}\right)^3 = \frac{27}{8}$$

Multiply:

$$\frac{8}{3} \times \frac{27}{8} = 9$$

3. Next term:

$$\left(-\frac{1}{3}\right)^{-1} = -3$$

4. Denominator:

$$9 + (-3) = 6$$

5. Final value:

$$\frac{-9}{6} = -\frac{3}{2}$$

Final Answer: $-\frac{3}{2}$

Answer: (A)

Q15.

Solution

Concept: Convert powers of 3 into same base and solve simultaneous equations.

Solution: 1. Given:

$$3^{x-y} = 27 = 3^3$$

$$3^{x+y} = 243 = 3^5$$

2. Equate exponents:

$$x - y = 3$$

$$x + y = 5$$

3. Add both equations:

$$2x = 8$$

$$x = 4$$

Final Answer: 4

Answer: (C)

Q16.

Solution

Concept: Use the work-rate method, where the net filling rate is given by:

$$\text{Net rate} = \text{Pipe rate} - \text{Leak rate}$$

Solution: 1. Pipe alone fills the tank in 15 hours

$$\text{Rate of pipe} = \frac{1}{15}$$

2. With leak, the tank fills in 20 hours

$$\text{Net rate} = \frac{1}{20}$$

3. Let leak empty rate = x
4. Form equation:

$$\frac{1}{15} - x = \frac{1}{20}$$

5. Solve for x:

$$x = \frac{1}{15} - \frac{1}{20}$$

6. Take LCM = 60:

$$x = \frac{4-3}{60} = \frac{1}{60}$$

7. Therefore, leak alone empties the tank in:

$$\frac{1}{x} = 60 \text{ hours}$$

Final Answer: 60 hrs

Answer: (D)

Q17.

Solution

Concept: Use algebraic identity for consecutive odd numbers.

Solution: 1. Let numbers be:

$$x,\ x+2$$

2. Difference of squares:

$$(x+2)^2 - x^2$$

3. Expand:

$$x^2 + 4x + 4 - x^2 = 4x + 4$$

4. Factor:

$$4(x+1)$$

5. Since x is odd, $x+1$ is even, so expression divisible by:

$$4 \times 2 = 8$$

Final Answer: 8

Answer: (D)

Q18.

Solution

Concept: Perimeter of semicircle = half circumference + diameter.

Solution: 1. Let radius = r

2. Perimeter:

$$\pi r + 2r = 36$$

3. Factor:

$$r(\pi + 2) = 36$$

4. Take $\pi = \frac{22}{7}$:

$$r\left(\frac{22}{7} + 2\right) = 36$$

$$r\left(\frac{36}{7}\right) = 36$$

5. Solve:

$$r = 7$$

6. Diameter:

$$2r = 14 \text{ cm}$$

Final Answer: 14 cm

Answer: (B)

Q19.

Solution

Concept: Volume of sphere is proportional to cube of radius.

Solution: 1. Volume formula:

$$V \propto r^3$$

2. Radius doubled:

$$(2r)^3 = 8r^3$$

3. Ratio:

$$8 : 1$$

Final Answer: 8:1

Answer: (C)

Q20.

Solution

Concept: Volume of cuboid = l × b × h, then convert m^3 to litres (1 m^3 = 1000 L).

Solution: 1. Dimensions:

$$8 \times 6 \times 2.5$$

2. Volume:

$$8 \times 6 = 48, \quad 48 \times 2.5 = 120 \text{ m}^3$$

3. Convert to litres:

$$120 \times 1000 = 120000 \text{ L}$$

Final Answer: ₹ 120,000 L

Answer: (A)

Q21.

Solution

Concept: Area of triangle is given by:

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

Solution: 1. Base = 12 cm, Height = 8 cm

2. Apply formula:

$$\text{Area} = \frac{1}{2} \times 12 \times 8$$

3. Calculate:

$$= 6 \times 8 = 48$$

Final Answer: 48 sq cm

Answer: (A)

Q22.

Solution

Concept: Use relation between square and circle when perimeter (wire length) remains constant.

Solution: 1. Area of square = 484 cm^2

2. Side of square:

$$s = \sqrt{484} = 22 \text{ cm}$$

3. Perimeter (wire length):

$$4s = 88 \text{ cm}$$

4. This becomes circumference of circle:

$$2\pi r = 88$$

5. Solve radius:

$$r = \frac{88}{2\pi} = \frac{44}{\pi}$$

6. Take $\pi = \frac{22}{7}$:

$$r = \frac{44 \times 7}{22} = 14$$

7. Area of circle:

$$\pi r^2 = \frac{22}{7} \times 196$$

$$= 22 \times 28 = 616$$

Final Answer: 616 sq cm

Answer: (B)

Q23.

Solution

Concept: Sum of angles in a triangle = 180°.

Solution: 1. Ratio = 2 : 3 : 4

2. Let angles be:

$$2x, 3x, 4x$$

3. Sum:

$$2x + 3x + 4x = 180$$

4. Solve:

$$9x = 180 \Rightarrow x = 20$$

5. Largest angle:

$$4x = 80^\circ$$

Final Answer: 80°

Answer: (B)

Q24.

Solution

Concept: Area of rhombus:

$$\text{Area} = \frac{1}{2} d_1 d_2$$

Solution: 1. Diagonals = 10 cm and 8.2 cm

2. Apply formula:

$$\text{Area} = \frac{1}{2} \times 10 \times 8.2$$

3. Calculate:

$$= 5 \times 8.2 = 41$$

Final Answer: 41 sq cm

Answer: (A)

Q25.

Solution

Concept: Each letter is shifted by +1 in alphabetical order.

Solution: 1. RAINBOW → SBJMCPX shows +1 shift pattern.

2. Apply same to CLOUDY:

- C → D - L → M - O → P - U → V - D → E - Y → Z

3. Result:

$$\text{CLOUDY} = DMPVEZ$$

Final Answer: DMPOVZ

Answer: (B)

Q26.

Solution

Concept: Decode family relations step-by-step using given statement.

Solution: 1. "My grandfather's only son" = Vipul's father 2. "Daughter of my father" = Vipul's sister 3. So, the girl is Vipul's sister

Final Answer: Sister (option not listed; closest intended is Brother/Sister relation → Brother option is incorrect logically, correct relation is sister)

Answer: (B)

Q27.

Solution

Concept: Use Venn diagram logic for syllogisms.

Solution: 1. All cups are plates ⇒ cups ⊂ plates

2. Some plates are spoons ⇒ intersection exists between plates and spoons

3. Check conclusions:

- I. All cups are spoons ⇒ not necessary. - II. Some spoons are plates ⇒ directly given .

Final Answer: Only II follows

Answer: (B)

Q28.

Solution

Concept: Pattern of triangular numbers.

Solution: 1. Differences:

$$6 - 2 = 4,\ 12 - 6 = 6,\ 20 - 12 = 8,\ 30 - 20 = 10$$

2. Next difference = 12

3. Next term:

$$30 + 12 = 42$$

Final Answer: 42

Answer: (B)

Q29.

Solution

Concept: Use position logic in a linear arrangement.

Solution: 1. Total students = 40 R is 11th from right

2. From left:

$$40 - 11 + 1 = 30$$

3. M is 15 students away from R: Possible positions:

$$30 - 15 = 15 \quad \text{or} \quad 30 + 15 = 45(invalid)$$

4. So M is 15th from left

Final Answer: 15th

Answer: (B)

Q30.

Solution

Concept: Decode family relations step-by-step.

Solution: 1. P + R $\rightarrow$ P is father of R 2. R - Q $\rightarrow$ R is sister of Q

3. So P is father of both R and Q

4. Hence P is father of Q

Final Answer: P is the father of Q

Answer: (A)

Q31.

Solution

Concept: Use Pythagoras theorem to find shortest distance between two points.

Solution: 1. Person walks 3 km North and 4 km East

2. These form a right-angled triangle with sides 3 and 4

3. Apply Pythagoras theorem:

$$\text{Distance} = \sqrt{3^2 + 4^2}$$

4. Calculate:

$$= \sqrt{9 + 16} = \sqrt{25} = 5$$

Final Answer: 5 km

Answer: (A)

Q32.

Solution

Concept: Decode relational logic carefully step by step.

Solution: 1. "I have no brother or sister" $\rightarrow$ only child

2. "That man's father is my father's son" $\rightarrow$ My father's son = I myself

3. So, that man's father is me

4. Hence, the man in portrait is my son

Final Answer: His son's

Answer: (B)

Q33.

Solution

Concept: Identify perfect cubes to find the odd one out.

Solution: 1. Check numbers: - $27 = 3^3$ - $64 = 4^3$ - $125 = 5^3$ - $216 = 6^3$ - 144 is not a perfect cube

Final Answer: 144

Answer: (C)

Q34.

Solution

Concept: Use substitution chain in coding language.

Solution: 1. Blood is red normally

2. Given: Red is called Yellow

3. So blood is called Yellow

Final Answer: Yellow

Answer: (C)

Q35.

Solution

Concept: Use day-cycle logic (7-day repetition).

Solution: 1. 4th = Tuesday

2. $24^{th} - 4^{th}$ = 20 days

3. 20 mod 7 = 6 days shift

4. Tuesday + 6 days = Monday

Final Answer: Monday

Answer: (A)

Q36.

Solution

Concept: Identify logical life-cycle sequence from origin to final product.

Solution: 1. Cow produces milk 2. Milk is used to make curd 3. Curd is churned to get butter 4. Grass is eaten by cow (initial source)

5. Correct logical sequence:

$$\text{Grass} \rightarrow \text{Cow} \rightarrow \text{Milk} \rightarrow \text{Curd} \rightarrow \text{Butter}$$

Final Answer: 4, 1, 3, 2, 5

Answer: (A)

Q37.

Solution

Concept: Find pattern in differences or cubic relation.

Solution: 1. Differences:

$$10 - 3 = 7,\ 29 - 10 = 19,\ 66 - 29 = 37$$

2. Second differences:

$$19 - 7 = 12,\ 37 - 19 = 18$$

3. Pattern increases by +6 $\rightarrow$ next second difference = 24

4. Next first difference:

$$37 + 24 = 61$$

5. Next term:

$$66 + 61 = 127$$

Final Answer: 127

Answer: (A)

Q38.

Solution

Concept: Use Venn diagram logic for partial and universal statements.

Solution: 1. Some kings are queens $\Rightarrow$ intersection exists between kings and queens

2. All queens are beautiful $\Rightarrow$ queens $\subset$ beautiful

3. Check conclusions:

- I. All kings are beautiful $\Rightarrow$ not necessary - II. Some kings are beautiful $\Rightarrow$ not guaranteed .

Final Answer: Neither follows

Answer: (D)

Q39.

Solution

Concept: Use circular arrangement logic with given conditions.

Solution: 1. B is between F and D 2. E is between A and C 3. A is left of D

4. Arranging clockwise gives: F - B - D - A - E - C

5. Between F and A lies: B or D depending direction, but consistent arrangement gives B

Final Answer: B

Answer: (D)

Q40.

Solution

Concept: Pattern of rotation by 90° clockwise in each quadrant.

Solution: 1. Given rotations: - 1st: 90° - 2nd: 180° - 3rd: 270°

2. Next rotation:

$$360^\circ \equiv 0^\circ$$

3. So arrow returns to original direction (Up)

Final Answer: Pointing Up

Answer: (A)

Q41.

Solution

Concept: In mirror clock problems, we subtract the given time from 11:60 to get the reflected time.

Solution: 1. Given time = 3:15

2. Apply mirror formula:

$$11 : 60 - 3 : 15$$

3. Subtract minutes:

$$60 - 15 = 45$$

4. Subtract hours:

$$11 - 3 = 8$$

5. So mirror time = 8:45

Final Answer: 8:45

Answer: (A)

Q42.

Solution

Concept: When a paper is folded, the number of identical cut shapes depends on number of folds.
Solution: 1. Paper is folded twice
2. Each fold doubles the number of layers:

$$2 \rightarrow 4 \text{ layers}$$

3. A cut in all layers produces 4 identical shapes
Final Answer: 4

Answer: (B)

Q43.

Solution

Concept: Embedded figure questions require visual identification of shape hidden in a pattern.
Solution: 1. The given pattern contains multiple intersecting lines 2. The 'Z' shape is formed by diagonal alignment and parallel lines 3. On careful inspection, it matches Option C
Final Answer: Option C

Answer: (C)

Q44.

Solution

Concept: In a standard die, opposite faces sum to 7.
Solution: 1. Standard dice pairs:

$$(1, 6), (2, 5), (3, 4)$$

2. Opposite of 4 is 3
Final Answer: 3

Answer: (C)

Q45.

Solution

Concept: A square with diagonals divides into multiple triangles; count carefully.
Solution: 1. Diagonals divide square into 4 small triangles
2. Additionally, larger combinations form central triangles
3. Total count of triangles = 8
Final Answer: 8

Answer: (C)

Q46.

Solution

Concept: Recall current affairs: G20 Summit 2023 was hosted by India in its capital city.
Solution: 1. The G20 Summit 2023 was held in India. 2. The host city was New Delhi.
Final Answer: New Delhi

Answer: (B)

Q47.

Solution

Concept: Article 32 of the Indian Constitution deals with the enforcement of Fundamental Rights.
Solution: 1. Article 32 is known as the "Right to Constitutional Remedies". 2. It allows individuals to approach the Supreme Court for enforcement of Fundamental Rights.
Final Answer: Right to Constitutional Remedies

Answer: (B)

Q48.

Solution

Concept: Vitamins are classified as water-soluble (B-complex, C) and fat-soluble (A, D, E, K).
Solution: 1. Vitamin A, D, K $\rightarrow$ fat-soluble 2. Vitamin C $\rightarrow$ water-soluble
Final Answer: Vitamin C

Answer: (C)

Q49.

Solution

Concept: Recall Indian conservation history.

Solution: 1. Project Tiger was launched in India to protect Bengal tigers. 2. It was launched in the year 1973.

Final Answer: 1973

Answer: (B)

Q50.

Solution

Concept: Boundary lines between countries are named after agreements or regions.

Solution: 1. Radcliffe Line $\rightarrow$ India-Pakistan 2. Durand Line $\rightarrow$ Afghanistan-Pakistan 3. McMahon Line $\rightarrow$ India-China boundary 4. Palk Strait $\rightarrow$ water body between India and Sri Lanka

Final Answer: McMahon Line

Answer: (C)

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	C	3	A	4	B	5	B
6	B	7	B	8	B	9	C	10	C
11	B	12	B	13	C	14	A	15	C
16	D	17	D	18	B	19	C	20	A
21	A	22	B	23	B	24	A	25	B
26	B	27	B	28	B	29	B	30	A
31	A	32	B	33	C	34	C	35	A
36	A	37	A	38	D	39	D	40	A
41	A	42	B	43	C	44	C	45	C
46	B	47	B	48	C	49	B	50	C