

Question 1: Find the next number in the sequence: 2, 5, 10, 17, 26, ?

- a) 34
- b) 37
- c) 38
- d) 35

Question 2: A museum has 4 rooms (A, B, C, D). Guards must be assigned so that no two adjacent rooms are empty at once. Today one guard is absent from room C. Manager wants to leave exactly one room unguarded while keeping adjacency rule. Which room can be left unguarded?

- a) Room B
- b) Room A
- c) Room D
- d) No single-room choice satisfies the rule

Question 3: If $3x - 5 = 16$, what is x ?

- a) 7
- b) 6
- c) 5
- d) 21

Question 4: What is the next term in the pattern: A, C, F, J, O, ?

- a) U
- b) T
- c) V
- d) S

Question 5: A small table shows students' test scores: Alice 80, Ben 70, Clare 90, Dan 60.

What is the median score?

- a) 75
- b) 80
- c) 85
- d) 70

Question 6: A train covers 240 km in 3 hours. At the same speed, how long to cover 400 km?

- a) 6 hours
- b) 5 hours
- c) 4 hours
- d) $5\frac{1}{3}$ hours

Question 7: If every A is B and some B are C, which statement is always true?

- a) Some A are C.
- b) All C are A.
- c) All A are B.
- d) No A are C.

Question 8: The sequence 1, 4, 9, 16, 25,?

- a) Squares of integers; 36
- b) Add 3, then 5, then 7; next 36
- c) Squares of integers; 36
- d) Prime numbers; 29

Question 9: Four friends—Rita, Sam, Tina, Umar—sit in a row. Tina is left of Umar but not at an end. Rita sits to the right of Sam.

Who can be at the far left?

- a) Rita only
- b) Sam only
- c) Tina only
- d) Both Sam or Tina are possible

Question 10: If $x + y = 12$ and $x - y = 4$, what is x ?

- a) 4
- b) 6
- c) 8
- d) 10

Question 11: Consider sequence 7, 10, 8, 11, 9, 12, ? What is next?

- a) 10
- b) 13
- c) 14
- d) 11

Question 12: A bar chart shows monthly rainfall: Jan 40, Feb 60, Mar 80, Apr 40. Which month has rainfall equal to average of Jan and Mar?

- a) Feb
- b) Apr
- c) Jan
- d) None

Question 13: A company reports profits rose 20% last year after cutting employee training. What skeptical question best tests the claim?

- a) Did the company also cut long-term investment that might reduce future profits?
- b) Are the profits printed in color?
- c) How many employees were trained last month?
- d) What is the CEO's favorite color?

Question 14: 3, 6, 18, 54, ? What is next?

- a) 108
- b) 162
- c) 72
- d) 216

Question 15: Two taps together fill a tank in 6 hours. One tap alone takes 10 hours. How long will the other tap take alone?

- a) 15 hours
- b) 12 hours
- c) 30 hours
- d) 20 hours

Question 16: Three statements:

(1) If it rains then ground is wet.

(2) The ground is wet.

(3) Therefore it rained.

Which is correct?

- a) Validly derived
- b) Logical fallacy
- c) Contradiction of premise
- d) Example of inductive proof

Question 17: The quadratic equation $x^2 - 5x + 6 = 0$ has roots:

- a) 2 and 3
- b) 1 and 6
- c) -2 and -3
- d) 3 and 3

Question 18: A survey of 200 students found 60% prefer soccer. How many students prefer soccer?

- a) 120
- b) 60
- c) 140
- d) 100

Question 19: You have two ropes that burn in 60 minutes each but burn unevenly. How can you measure 45 minutes using them?

- a) Burn one rope at both ends and the other at one end; when first finishes (30 min) light the other end of remaining rope; it will finish after further 15 min → total 45 min
- b) Burn both at one end only and wait
- c) Fold ropes and measure by eye
- d) Impossible

Question 20: Sequence: 4, 7, 13, 25, ? Which option is correct?

- a) 49
- b) 45
- c) 38
- d) 50

Question 21: All poets are dreamers. Some dreamers are late. Which is possible?

- a) Some poets are late.
- b) No poets are late.
- c) All late people are poets.
- d) Some late people are not dreamers.

Question 22: Table shows product sales: P: 50 units, Q: 75 units, R: 25 units. What product has highest share (%)?

- a) P
- b) Q
- c) R
- d) All equal

Question 23: Solve $2(x - 3) = x + 5$.

- a) $x = 11$
- b) $x = 1$
- c) $x = 7$
- d) $x = -1$

Question 24: What is the next term in 1, 2, 6, 24, ?

- a) 120
- b) 48
- c) 36
- d) 720

Question 25: A guard must cross a corridor in 5 steps, but trapdoors must not be stepped consecutively. You know step 2 and 4 are safe. Which steps could be trapdoors to maximize number while obeying rule? (Choose the correct set)

- a) Steps 1 and 3 and 5 all trapdoors
- b) Steps 3 and 4 only
- c) Steps 1 and 2 only
- d) None

Question 26: A chart shows correlation between ice cream sales and drowning incidents. What is the best interpretation?

- a) Correlation likely due to seasonality (hot months increase both)
- b) Ice cream causes drowning directly
- c) Drowning causes ice cream sales
- d) No relation at all

Question 27: Find the next in pattern: 2, 4, 12, 48, ?

- a) 120
- b) 240
- c) 96
- d) 192

Question 28: A dataset: 2, 3, 3, 7, 9. What is mode?

- a) 3
- b) 7
- c) 5
- d) 9

Question 29: Three sisters have ages in ratio 2:3:5 and total 50 years. What is the youngest sister's age?

- a) 10
- b) 12
- c) 8
- d) 5

Question 30: On an island, Knights always tell truth, Knaves always lie. A person says "I am a knave." What can you conclude?

- a) The statement is impossible
- b) The person is a knight
- c) The person is a knave
- d) The person is both

Question 31: The sequence: 5, 9, 17, 33, ...? What is next?

- a) 65
- b) 66
- c) 63
- d) 61

Question 32: A pie chart shows 25% red, 25% blue, 50% green. If 200 total items, how many are green?

- a) 50
- b) 100
- c) 150
- d) 75

Question 33: Solve: $x/2 + y/3 = 5$ and $x = 6$. What is y?

- a) 3
- b) 0
- c) 6
- d) 9

Question 34: You have coins of 1, 3, and 4 value. How many ways to make 6?

- a) 3
- b) 4
- c) 5
- d) 6

Question 35: Six people A–F sit around a round table. A sits opposite D, B between A and C, E to left of F. Which statement must be true?

- a) B is adjacent to A and C
- b) A sits next to D
- c) E opposite A
- d) F next to D

Question 36: 0.1, 0.11, 0.111, 0.1111, ? What is the 6th term?

- a) 0.111111
- b) 0.11111
- c) 0.1111111
- d) 0.111

Question 37: Five numbers average to 20. One number is replaced by 30, new average 22. What was the original replaced number?

- a) 10
- b) 20
- c) 30
- d) 40

Question 38: A shop sells pencils at ₹3 each and pens at ₹5 each. If a student buys 4 pens and some pencils spending ₹47 total, how many pencils will he buy?

- a) 7
- b) 9
- c) 6
- d) 5

Question 39: A small puzzle: Three houses use red, green, blue colours, and owners are a baker, teacher, and driver. Clues: Baker doesn't have blue house; teacher next to blue house; driver not green. Which colour will be for baker?

- a) Blue
- b) Red
- c) Green
- d) Cannot determine

Question 40: Sequence: 1, 2, 3, 5, 8, 13, ?

Which option will be the next?

- a) 21
- b) 20
- c) 18
- d) 24

Question 41: An advertisement: "Buy Brand X — 9 out of 10 dentists recommend it." Which is the best skeptical query?

- a) Ask who surveyed the dentists, sample size and methodology — is it independent?
- b) Assume claim is true immediately
- c) Count number of advertisements
- d) Check color scheme of ad

Question 42: Two variables have negative correlation coefficient near -0.9 . Which interpretation is the strongest?

- a) Strong inverse linear relationship
- b) They are not related at all
- c) One causes the other always
- d) Variables are same

Question 43: If $5y + 2 = 3y + 14$, what is y ?

- a) 6
- b) 7
- c) 8
- d) 4

Question 44: You have 12 coins, one counterfeit heavier. Which is minimum weighings?

- a) 2
- b) 3
- c) 4
- d) 1

Question 45: Find next: Sequence 0, 1, 8, 27, ?

- a) 64
- b) 125
- c) 32
- d) 48

Question 46: A survey shows 40% like tea, 60% like coffee out of 500 people (some like both). If 150 like both, how many like only tea?

- a) 50
- b) 100
- c) 150
- d) 200

Question 47: On a chessboard remove two opposite corner squares — can you tile remaining with dominoes each covering two adjacent squares?

- a) Yes, always
- b) No
- c) Only if board smaller
- d) Only with L-shaped pieces

Question 48: Which is the next prime after 47?

- a) 49
- b) 51
- c) 53
- d) 55

Question 49: Three people make statements: A: “B is a liar.” B: “C tells the truth.” C: “A and B are liars.” Exactly one always tells truth. Which one is truthful?

- a) A
- b) B
- c) C
- d) None

Question 50: If 3 pens cost ₹15, how many pens for ₹45?

- a) 9
- b) 12
- c) 6
- d) 10

Question 51: A frequency table groups ages: 10–19: 20–29: , 30–39: Median age group corresponds to which interval? Which option is correct?

- a) 10–19
- b) 20–29
- c) 30–39
- d) Cannot say

Question 52: A number is three times another. Their sum is 48. What are the numbers?

- a) 12 and 36
- b) 16 and 48
- c) 9 and 27
- d) 10 and 30

Question 53: 10, 14, 13, 17, 16, 20, ?

- a) 19
- b) 22
- c) 21
- d) 18

Question 54: Farmer with wolf, goat, and cabbage —: Which first move to take?

- a) Wolf
- b) Goat
- c) Cabbage
- d) Any

Question 55: A price rises from ₹250 to ₹300. What percent it has increased?

- a) 15%
- b) 20%
- c) 25%
- d) 10%

Question 56: A time-series shows sales steadily increasing except one month drop. Which investigative question is most relevant?

- a) Were there external events (holidays, supply issues, promotions) explaining the drop?
- b) What is the colour of sales graph?
- c) How many axes?
- d) Who drew the chart?

Question 57: You pick two consecutive integers whose product is 72. Which pair will be the correct?

- a) 8 and 9
- b) 6 and 7
- c) 9 and 10
- d) 7 and 8

Question 58: 81, 27, 9, 3,?

- a) 1
- b) 0
- c) 3
- d) 9

Question 59: Five houses in a row are painted different colours. Clue: green house is immediately left of white house; the blue house is to the right of the red house. If middle house is yellow, which house cannot be green?

- a) House 3 (middle)
- b) House 1
- c) House 2
- d) House 5

Question 60: You face a complex multi-step problem with unclear data. Which is the best first approach?

- a) Restate problem clearly, identify known/unknowns, break into sub problems and plan small checks (divide & conquer)
- b) Guess the answer immediately
- c) Work on a random part without plan
- d) Ignore the problem

ROUGH WORK
(NOT TO BE EVALUATED)

DATE