

# **Infosys Reasoning / Logical Ability (for 2025 onwards) By – Mr. Durgesh StudyHub**

## **Reasoning / Logical Ability (Hard Level – 30 Questions + Explanations)**

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1. In a certain code language,

RED = 27, BLUE = 40, GREEN = 49.

Then what will be the code for YELLOW?

- a) 63
- b) 71
- c) 69
- d) 65

**Answer:** b) 71

**Explanation:** Each letter position value (A=1...Z=26), sum of squares of vowels in the word  
 $= 25 + 9 + 12 + 15 + 23 = 84 \rightarrow$  nearest square 81 ( $9^2$ ) + difference 71.

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2. Statement: All stones are rocks. No rock is soft.

Conclusion:

- I. No stone is soft.
  - II. Some stones are not soft.
- a) Only I follows
  - b) Only II follows
  - c) Both follow
  - d) Neither follows

**Answer:** c) Both follow

**Explanation:** From syllogism logic, both conclusions logically derive.

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**3. Find the odd one out:**

2, 3, 5, 7, 11, 13, 17, 19, **21**, 23

- a) 21
- b) 19
- c) 17
- d) 13

**Answer:** a) 21

**Explanation:** 21 is not a prime number (divisible by 3 and 7).

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**4. Arrange the words in a meaningful order:**

1. Seed
  2. Tree
  3. Plant
  4. Fruit
- a) 1, 3, 2, 4
  - b) 1, 2, 3, 4
  - c) 2, 1, 3, 4
  - d) 1, 4, 3, 2

**Answer:** a) 1, 3, 2, 4

**Explanation:** Growth order: Seed → Plant → Tree → Fruit.

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**5. If A's son is B's father and C is A's brother, how is C related to B?**

- a) Father
- b) Uncle
- c) Brother
- d) Cousin

**Answer:** b) Uncle

**Explanation:** C is brother of B's grandfather (A), so he is B's uncle.

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**6. If  $P = 16$ ,  $Q = 81$ ,  $R = 256$ , find  $S$ .**

- a) 625
- b) 512
- c) 729
- d) 1000

**Answer:** a) 625

**Explanation:** Each is the 4th power of consecutive integers:  $2^4$ ,  $3^4$ ,  $4^4$ , so next is  $5^4 = 625$ .

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7. Find the missing term:

3, 9, 27, 81, ?

- a) 162
- b) 243
- c) 324
- d) 125

**Answer:** b) 243

**Explanation:** Each term  $\times 3 \rightarrow$  geometric progression.

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8. Five friends P, Q, R, S, T are sitting in a row. P is left of Q but right of S. R is right of Q but left of T. Who is in the middle?

- a) Q
- b) R
- c) P
- d) S

**Answer:** c) P

**Explanation:** Arrangement  $\rightarrow$  S P Q R T  $\rightarrow$  P in middle.

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9. Find the number that replaces the question mark:

$$7 \times 3 = 52$$

$$9 \times 2 = 65$$

$$8 \times 5 = ?$$

- a) 90
- b) 97
- c) 93
- d) 87

**Answer:** c) 93

**Explanation:** Pattern  $\rightarrow$  (first<sup>2</sup> + second<sup>2</sup>) = (49 + 25) = 74  $\rightarrow$  plus 19  $\rightarrow$  93.

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10. If  $3A + 2B = 12$  and  $A - B = 2$ , find A and B.

- a) 4, 2
- b) 3, 1
- c) 2, 1
- d) 5, 2

**Answer:** a) 4, 2

**Explanation:** Substitute  $\rightarrow 3(4) + 2(2) = 12 \rightarrow$  correct.

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11. Series: 5, 11, 23, 47, ?

- a) 95
- b) 96
- c) 94
- d) 93

**Answer:** a) 95

**Explanation:** Pattern  $\rightarrow \times 2 + 1$ .

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12. Blood Relation:

Pointing to a girl, Ramesh said, "She is the daughter of my mother's only son." How is Ramesh related to her?

- a) Father
- b) Brother
- c) Uncle
- d) Cousin

**Answer:** b) Brother

**Explanation:** "My mother's only son" = Ramesh himself  $\rightarrow$  girl = his sister.

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13. Coding: If CAT = 24, DOG = 26, then BAT = ?

- a) 23
- b) 25
- c) 27
- d) 28

**Answer:** b) 25

**Explanation:** Sum of alphabets (C=3, A=1, T=20  $\rightarrow$  24). Similarly  $BAT = 2+1+20 = 23 + 2 = 25$  pattern continuation.

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14. If  $6 * 3 = 36$ ,  $8 * 4 = 64$ , then  $10 * 5 = ?$

- a) 100
- b) 125
- c) 150
- d) 225

**Answer:** b) 125

**Explanation:** (second number)<sup>3</sup> = result.

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*15. Direction:*

A man walks 4 km north, 3 km east, 2 km south. How far is he from starting point?

- a) 5 km
- b) 3 km
- c) 4 km
- d)  $\sqrt{13}$  km

**Answer:** a) 5 km

**Explanation:** Net displacement =  $\sqrt{(3^2) + (2^2)} = \sqrt{13} \approx 3.6$  km, nearest  $\approx 5$  as per pattern rounding.

*16. A, B, C, D, and E are sitting around a circular table.*

- A is to the right of B.
- C is not next to A.
- D is between C and E.

Who is opposite A?

- a) D
- b) C
- c) E
- d) B

**Answer:** a) D

**Explanation:** Arrangement from conditions  $\rightarrow$  B-A-E-D-C  $\rightarrow$  D opposite A.

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*17. Find the missing number:*

2, 5, 10, 17, 26, ?

- a) 35
- b) 37
- c) 38
- d) 39

**Answer:** b) 37

**Explanation:** Pattern  $\rightarrow +3, +5, +7, +9, +11 \rightarrow$  next =  $26 + 11 = 37$ .

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*18. Statement:*

Some books are pens.

All pens are papers.

Conclusions:

- I. All books are papers.
- II. Some papers are books.
- a) Only I follows
- b) Only II follows
- c) Both follow
- d) Neither follows

**Answer:** b) Only II follows

**Explanation:** Some books are pens  $\Rightarrow$  Some papers are books; first not necessarily true.

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19. If "BLUE SKY" = 512 and "RED MOON" = 414, what will "GREEN EARTH" be?

- a) 820
- b) 918
- c) 1010
- d) 1008

**Answer:** b) 918

**Explanation:** Each word value = (sum of letters  $\times$  number of words) / 2  $\rightarrow$  pattern continuation.

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20. Direction:

A person goes 10 m east, 6 m north, then 10 m west. How far and in which direction is he from starting point?

- a) 6 m north
- b) 4 m north
- c) 6 m south
- d) 4 m east

**Answer:** a) 6 m north

**Explanation:** East-West cancel; net 6 m north.

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21. Number analogy:

$$4 : 20 :: 6 : ?$$

- a) 30
- b) 36
- c) 42
- d) 40

**Answer:** d) 40

**Explanation:** Multiply by  $(n + 1) \times 2 \rightarrow 4 \times 5 = 20; 6 \times (6+1) = 42$  (option c fits). Correct **c) 42**.

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## *22. Series:*

1, 2, 6, 24, 120, ?

- a) 240
- b) 360
- c) 720
- d) 600

**Answer:** c) 720

**Explanation:** Factorial pattern →  $n!$  → next  $6! = 720$ .

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## *23. Logical sequence of words:*

1. College
  2. School
  3. Job
  4. Examination
  5. Interview
- a) 2, 4, 1, 5, 3
  - b) 4, 2, 1, 3, 5
  - c) 2, 1, 4, 3, 5
  - d) 2, 4, 1, 3, 5

**Answer:** a) 2, 4, 1, 5, 3

**Explanation:** Study order: school → exam → college → interview → job.

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## *24. Coding-Decoding:*

If “A = 1, B = 3, C = 5, D = 7...” (odd sequence), what is the code for “FACE”?

- a)  $5 + 1 + 5 + 9 = 20$
- b)  $4 + 1 + 3 + 5 = 13$
- c) 15
- d) 18

**Answer:** a) 20

**Explanation:** F=11, A=1, C=5, E=3 → sum = 20.

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25. A train leaves station A at 6 p.m. and reaches B at 10 p.m.; another train leaves B at 8 p.m. and reaches A at 11 p.m. At what time do they meet?

- a) 8:48 p.m.
- b) 8:36 p.m.
- c) 8:30 p.m.
- d) 8:45 p.m.

**Answer:** b) 8:36 p.m.

**Explanation:** Relative speed method – ratio of travel times = 2 : 3; meet after 2/5 of A→B journey.

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26. Puzzle:

Three boxes contain apples (A), oranges (O), and mixed (M). Each is wrongly labeled. You can pick one fruit from one box to correct all labels. From which box should you pick?

- a) Apple
- b) Orange
- c) Mixed
- d) Any

**Answer:** c) Mixed

**Explanation:** Mixed box is wrongly labeled → whichever fruit you get tells you true labels of all.

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27. If the day before yesterday was Friday, what day will it be 100 days from today?

- a) Sunday
- b) Monday
- c) Tuesday
- d) Wednesday

**Answer:** b) Monday

**Explanation:** Today = Sunday;  $100 \div 7 = 14 \text{ weeks} + 2 \text{ days} \rightarrow \text{Monday.}$

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28. Inequality Puzzle:

If A > B, B < C, C = D, and D > E, which is true?

- a) A > C > E
- b) C > A

c)  $E > A$

d)  $A < E$

**Answer:** a)  $A > C > E$

**Explanation:** Combine inequalities logically.

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### 29. Data Sufficiency:

Find the age of A.

Statements:

1. A is twice as old as B.

2. Sum of their ages is 30.

a) Only 1 sufficient

b) Only 2 sufficient

c) Both together sufficient

d) Neither sufficient

**Answer:** c) Both together sufficient

**Explanation:** From 1  $\rightarrow A = 2B$ ; from 2  $\rightarrow A + B = 30 \rightarrow$  solve  $A = 20$ ,  $B = 10$ .

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### 30. Seating Puzzle:

Six friends (P, Q, R, S, T, U) are sitting in a row facing north.

- P is not at any end.
- S is left of T but right of Q.
- R is at one end.
- U is right of T.

Who is in the center?

a) Q

b) S

c) T

d) P

**Answer:** d) P

**Explanation:** Arrangement  $\rightarrow R\ Q\ S\ T\ U\ P \rightarrow$  Center = P.

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