

TANCET Reasoning

Sample Paper – 8

Duration: 60 Minutes

Maximum Marks: 50

Instructions

- This paper contains **50 MCQs** (single correct answer), modelled on the Reasoning sections of the **TANCET MCA** entrance examination.
- **Part A** (Q1–Q25): Analytical Reasoning. **Part B** (Q26–Q50): Logical Reasoning. Each part carries **25 marks**.
- Each correct answer carries **+1 mark**. Each wrong answer carries a penalty of $-\frac{1}{4}$ **mark**. Unattempted questions carry **no penalty**.
- **Only one** option is correct for each question.
- Personal calculators, mobile phones, and electronic gadgets are **strictly prohibited**. Rough work may be done in the space provided on the question paper.

Part A: Analytical Reasoning (Q1–Q25, 25 Marks)

Q1. Study the following number series and identify the term that comes next.

4, 16, 64, 256, 1024, ?

Each term is obtained by multiplying the previous term by a fixed number.

(A) 2048

(B) 3072

(C) 3600

(D) 4096

Q2. The following series is formed by the rule $T_n = n(n - 1)$ starting at $n = 2$.

What is the missing term?

2, 6, 12, 20, 30, ?

Find the next value in this pattern.

(A) 36

(B) 42

(C) 40



(D) 48

Q3. The differences between consecutive terms of the following series are consecutive perfect cubes ($1^3, 2^3, 3^3, \dots$). Find the next term.

0, 1, 9, 36, 100, ?

Compute the next difference and add it to the last term.

(A) 225

(B) 196

(C) 210

(D) 256

Q4. The series below consists of *two interleaved arithmetic progressions*: the terms at odd positions (1st, 3rd, 5th, ...) form one AP and the terms at even positions (2nd, 4th, 6th, ...) form another. Find the missing term.

3, 7, 8, 14, 13, 21, 18, ?

Identify the common difference for each AP.

(A) 23

(B) 25

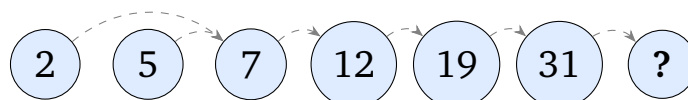
(C) 28

(D) 30

Q5. In the series below, each term equals the sum of the two terms immediately before it. What term comes next?

2, 5, 7, 12, 19, 31, ?

The diagram shows the sum arrows.



(A) 47

(B) 50

(C) 52



(D) 56

Q6. Each term of the following series is obtained by multiplying the previous term by 5. Find the next term.

2, 10, 50, 250, 1250, ?

(A) 5000

(B) 5500

(C) 6000

(D) 6250

Q7. Complete the analogy by choosing the most appropriate word.

ROMEO : JULIET :: LAILA : ?

(A) MAJNU

(B) SULTAN

(C) HEER

(D) SHIRIN

Q8. Identify the relationship and complete the analogy.

STETHOSCOPE : DOCTOR :: SEXTANT : ?

(A) SAILOR

(B) PILOT

(C) NAVIGATOR

(D) CAPTAIN

Q9. The first pair shows how a material undergoes a natural degradation process. Apply the same logic.

WOOD : BURN :: IRON : ?

(A) MELT

(B) RUST

(C) CORRODE



(D) OXIDISE

Q10. Complete the analogy based on the relationship between a number and its associated numeral system.

2 : BINARY :: 8 : ?

(A) HEXADECIMAL

(B) DECIMAL

(C) DIGITAL

(D) OCTAL

Q11. Complete the analogy based on the relationship between a month and the season in which it falls (Northern Hemisphere).

JUNE : SUMMER :: DECEMBER : ?

(A) WINTER

(B) SPRING

(C) AUTUMN

(D) MONSOON

Q12. In a certain code, letters at *odd positions* (1st, 3rd, ...) in a word are shifted +2 places forward in the alphabet, while letters at *even positions* (2nd, 4th, ...) are shifted -1 place backward.

Example: PLAN → RKCM (P→R, L→K, A→C, N→M)

Using the same rule, how is **ROSE** coded?

(A) SMTD

(B) TNUD

(C) SNUD

(D) TNUE

Q13. In a certain code, all *vowels* are removed from the word; then the remaining consonants are written in *reverse order*.

Example: PENCIL → consonants P,N,C,L → reversed = LCNP



Using the same rule, what is the code for **STONE**?

- (A) SNT
- (B) TSN
- (C) TNS
- (D) NTS

Q14. In a special code, each consonant is replaced by the *next vowel that appears after it* in the English alphabet, and each vowel remains unchanged. The vowel groups are: (B,C,D)→E; (F,G,H)→I; (J,K,L,M,N)→O; (P,Q,R,S,T)→U; (V,W,X,Y,Z)→A.

Example: CAT → C→E, A→A, T→U = EAU

Using the same rule, what is the code for **MAD**?

- (A) OAI
- (B) UAE
- (C) OAE
- (D) AUE

Q15. In a certain code, each letter is shifted +4 positions forward in the English alphabet (wrapping around: W→A, X→B, Y→C, Z→D).

Example: COLD → G,S,P,H = GSPH

Using the same rule, what is the code for **MINE**?

- (A) QMRI
- (B) RMQI
- (C) QMSI
- (D) PNRI

Q16. In a special code for a 6-letter word, the letters at odd positions (1,3,5) are extracted and reversed; the letters at even positions (2,4,6) are extracted and reversed. The two reversed groups are then interleaved, odd-first at each step.



Example: BOUNCE (B,O,U,N,C,E): Odd = (B,U,C) $\rightarrow$ rev = (C,U,B); Even = (O,N,E) $\rightarrow$ Interleave: C,E,U,N,B,O = CEUNBO

Using the same rule, what is the code for **BOUNCE**?

- (A) CEUBNO
- (B) UCENBO
- (C) CEUBNQ
- (D) CEUNBO

Q17. Three of the following four words belong to the same category of *cricket equipment*. Identify the **odd one out**.

BAT, BALL, RACKET, WICKET

- (A) BAT
- (B) BALL
- (C) RACKET
- (D) WICKET

Q18. Three of the following four countries are located in *Asia*. Identify the **odd one out**.

NEPAL, BHUTAN, MONGOLIA, MOROCCO

- (A) NEPAL
- (B) MOROCCO
- (C) BHUTAN
- (D) MONGOLIA

Q19. Three of the following four letter groups have the property that each successive letter is exactly **3 positions** ahead of the previous one. Identify the **odd one out**.

CGJ, DGJ, EHK, FIL

- (A) CGJ
- (B) DGJ



(C) EHK

(D) FIL

Q20. Three of the following four numbers are *odd*. Identify the **odd one out** (i.e., the even number).

11, 33, 48, 55

(A) 11

(B) 33

(C) 55

(D) 48

Q21. Five people P, Q, R, S, and T have different weights. Study the clues and find who is the **lightest**.

- P is heavier than Q.
- Q is heavier than R.
- R is heavier than S.
- S is heavier than T.

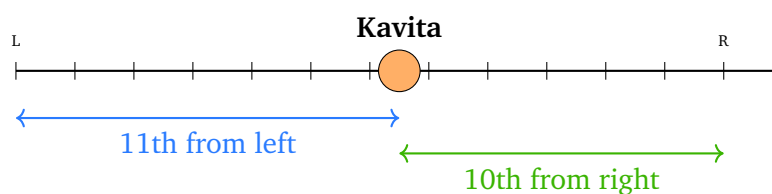
(A) T

(B) S

(C) R

(D) Q

Q22. In a queue of people, Kavita is **11th from the left** end and **10th from the right** end. How many people are there in the queue in total?



(A) 18

(B) 19



(C) 21

(D) 20

Q23. In a class, Rohit's rank is **9th from the top** and **22nd from the bottom**. How many students are there in the class?

(A) 28

(B) 29

(C) 30

(D) 31

Q24. Five people — Vijay, Uma, Waqar, Xena, and Yash — are standing in a row. Study the clues and find who is at the **3rd position from the right**.

- Yash stands at the right end.
- Uma is immediately to the left of Yash.
- Vijay stands at the left end.
- Xena stands between Vijay and Waqar.
- Waqar stands between Xena and Uma.

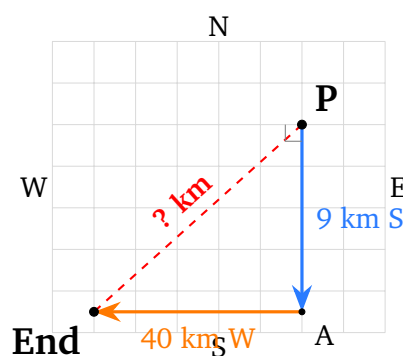
(A) Xena

(B) Waqar

(C) Uma

(D) Yash

Q25. A person starts from point P, walks **9 km South**, and then turns and walks **40 km West**. What is the straight-line distance from the starting point P to the current position?



- (A) 41 km
- (B) 38 km
- (C) 43 km
- (D) 45 km

Part B: Logical Reasoning (Q26–Q50, 25 Marks)

Q26. Pointing to a man, a woman says, “He is the husband of my grandfather’s only daughter.” How is the man related to the woman?

- (A) Brother
- (B) Uncle
- (C) Son
- (D) Father

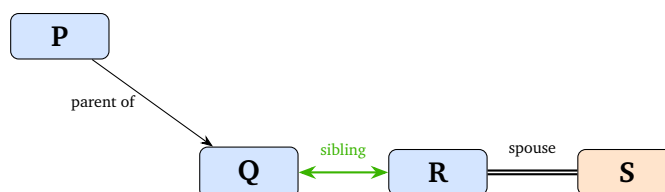
Q27. X is the mother of Y. Y is the brother of Z. Z is married to W. W is the father of V. What is X’s relation to V?

- (A) Mother
- (B) Aunt
- (C) Grandmother
- (D) Great-grandmother

Q28. A coded family relation scheme is defined as follows:

- $P \oplus Q$ means P is the *parent* of Q.
- $P \otimes Q$ means P is the *sibling* of Q.
- $P \odot Q$ means P is the *spouse* of Q.

Given the expression: $P \oplus Q \otimes R \odot S$, what is P’s relation to S?

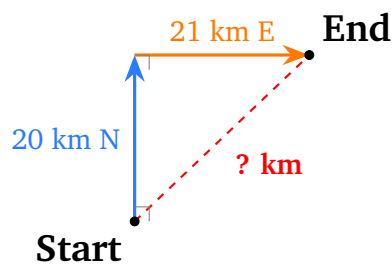


- (A) Father
- (B) Parent-in-law
- (C) Grandparent
- (D) Sibling

Q29. Pointing to a girl, a boy says, “She is the daughter of the only son of my paternal grandfather.” How is the girl related to the boy?

- (A) Sister
- (B) Mother
- (C) Aunt
- (D) Cousin

Q30. A person walks **20 km North** and then turns right and walks **21 km East**. What is the straight-line distance from the starting point?



- (A) 29 km
- (B) 27 km
- (C) 31 km
- (D) 25 km

Q31. A person initially faces **North**. He then turns **180°** clockwise. After that he turns **90°** clockwise. In which direction is he finally facing?

- (A) North
- (B) East
- (C) South
- (D) West



Q32. Ravi faces **North**. He turns **90° to his left**, then turns **90° to his left** again, and then turns **90° to his left** once more. In which direction is Ravi now facing?

- (A) North
- (B) West
- (C) East
- (D) South

Q33. Statements:

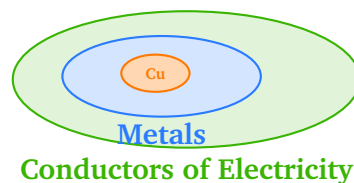
All metals conduct electricity.

Copper is a metal.

Conclusions:

I. Copper conducts electricity.

II. All conductors of electricity are metals.



Which conclusion(s) follow?

- (A) Both I and II follow
- (B) Only I follows
- (C) Neither I nor II follows
- (D) Only II follows

Q34. Statements:

Some clouds bring rain.

No rain is harmful.

Conclusions:

I. Some clouds are not harmful.

II. All clouds are beneficial.

Which conclusion(s) follow?



- (A) Only I follows
- (B) Only II follows
- (C) Both I and II follow
- (D) Neither I nor II follows

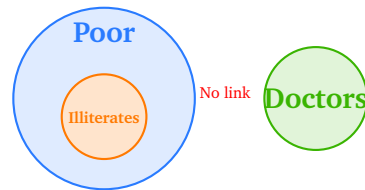
Q35. Statements:

No doctor is illiterate.

All illiterates are poor.

Conclusions:

- I. No doctor is poor.
- II. Some poor people are not doctors.

**Which conclusion(s) follow?**

- (A) Both I and II follow
- (B) Only I follows
- (C) Only II follows
- (D) Neither I nor II follows

Q36. Statements:

All students passed.

Some students were hardworking.

Conclusions:

- I. All hardworking students passed.
- II. Some students who passed were hardworking.

Which conclusion(s) follow?

Passed (all students)



- (A) Neither I nor II follows
- (B) Only I follows
- (C) Only II follows
- (D) Both I and II follow

Q37. Statements:

Some cats are black.

No black animals are friendly.

Conclusions:

I. Some cats are not friendly.

II. No cats are friendly.

Which conclusion(s) follow?

- (A) Both I and II follow
- (B) Only I follows
- (C) Neither I nor II follows
- (D) Only II follows

Q38. Statement: “Lack of sleep leads to decreased concentration and impaired cognitive function.”

Assumptions:

I. Sleep is essential for proper brain function.

II. Concentration requires adequate rest.

Which assumption(s) are implicit in the statement?

- (A) Only I is implicit
- (B) Only II is implicit
- (C) Both I and II are implicit
- (D) Neither is implicit

Q39. Statement: “The Government launched a ‘Clean City’ campaign to improve urban cleanliness.”

Courses of Action:

- I. Citizens should participate in cleanliness drives and avoid littering.
- II. Penalties should be imposed on industries for water pollution in rivers.

Which course(s) of action follow logically from the statement?

- (A) Only II follows
- (B) Only I follows
- (C) Both I and II follow
- (D) Neither follows

Q40. Statement: “Reserve forest has been encroached upon, leading to large-scale loss of wildlife habitat.”

Conclusions:

- I. Wildlife populations in the area will decline.
- II. The encroachment was carried out deliberately by organised groups.

Which conclusion(s) follow?

- (A) Only I follows
- (B) Only II follows
- (C) Both I and II follow
- (D) Neither follows

Q41. Statement: “Studies show that people who meditate regularly have significantly lower stress levels.”

Assumptions:

- I. Meditation has measurable effects on human psychology.
- II. Stress is a common problem in modern society.

Which assumption(s) are implicit in the statement?

- (A) Only I is implicit
- (B) Only II is implicit
- (C) Neither is implicit
- (D) Both I and II are implicit



Q42. Statement: “The new bridge across the river has significantly reduced travel time between the two cities.”

Conclusions:

- I. The bridge was built after careful planning and engineering.
- II. People now prefer to travel between the two cities more frequently.

Which conclusion(s) follow?

- (A) Both I and II follow
- (B) Only I follows
- (C) Neither I nor II follows
- (D) Only II follows

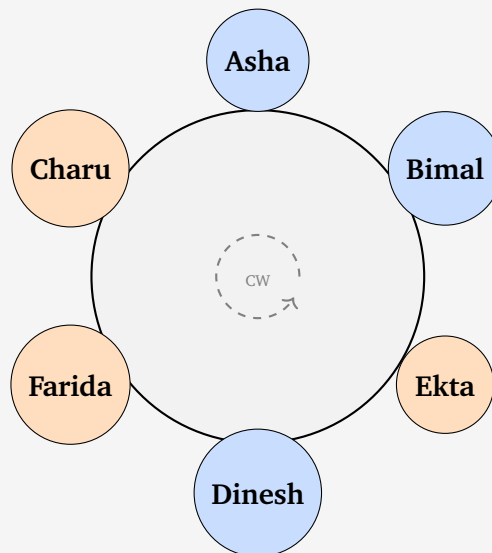
Directions (Q43–Q48): Read the seating arrangement information carefully and answer the questions that follow.



Seating Arrangement:

Six people — Asha, Bimal, Charu, Dinesh, Ekta, and Farida — are seated around a **circular table**, all facing **outward** (away from the centre).

- Asha sits directly opposite Dinesh.
- Bimal is immediately clockwise from Asha.
- Charu is immediately counter-clockwise from Asha.
- Farida sits directly opposite Bimal.
- Ekta sits between Bimal and Dinesh going clockwise.



The clockwise order is: **Asha(1) – Bimal(2) – Ekta(3) – Dinesh(4) – Farida(5) – Charu(6).**

Q43. Who sits **directly opposite** Charu?

- (A) Asha
- (B) Ekta
- (C) Bimal
- (D) Farida

Q44. Who sits **immediately clockwise** from Dinesh?

- (A) Ekta



- (B) Charu
- (C) Farida
- (D) Asha

Q45. How many people sit **between Asha and Farida** going **clockwise** from Asha?

- (A) 1
- (B) 2
- (C) 4
- (D) 3

Q46. If **Bimal and Farida swap** their seats, who will then sit **directly opposite Asha**?

- (A) Dinesh
- (B) Farida
- (C) Bimal
- (D) Ekta

Q47. Who sits **immediately counter-clockwise** from Ekta?

- (A) Dinesh
- (B) Asha
- (C) Bimal
- (D) Farida

Q48. Who are the **immediate neighbours** of Ekta?

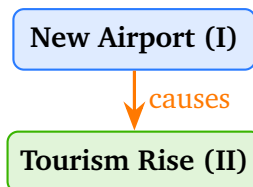
- (A) Asha and Dinesh
- (B) Bimal and Dinesh
- (C) Farida and Charu
- (D) Asha and Farida



Q49. Study the two statements and decide the cause–effect relationship.

Statement I: A new international airport was inaugurated in the city.

Statement II: The number of tourists visiting the city has increased significantly.



Options:

- (A) Statement I is the cause; Statement II is the effect.
- (B) Statement II is the cause; Statement I is the effect.
- (C) Both I and II are effects of a common cause.
- (D) Both I and II are independent causes.

Q50. Assertion (A): Plants release carbon dioxide during photosynthesis.

Reason (R): Photosynthesis is the process by which plants make their food using sunlight.

Select the correct option:

- (A) Both A and R are true, and R is the correct reason for A.
- (B) Both A and R are true, but R is NOT the correct reason for A.
- (C) A is true, but R is false.
- (D) A is false, but R is true.



Detailed Solutions

Solution

Q1 — Number Series: Powers of 4

Concept — Geometric Progression (ratio = 4): Each term is obtained by multiplying the previous term by 4. This is a geometric series with first term $a = 4$ and common ratio $r = 4$.

Step 1 — Verify the pattern: $4 \xrightarrow{\times 4} 16 \xrightarrow{\times 4} 64 \xrightarrow{\times 4} 256 \xrightarrow{\times 4} 1024$. Every ratio is exactly 4.

Step 2 — Find the next term: $1024 \times 4 = 4096$.

Alternatively: $4 = 4^1$, $16 = 4^2$, $64 = 4^3$, $256 = 4^4$, $1024 = 4^5$. Next: $4^6 = 4096$.

Why other options are wrong:

- (A) 2048: 1024×2 – ratio of 2 is incorrect.
- (B) 3072: 1024×3 – ratio of 3 is incorrect.
- (C) 3600: Not a power of 4 at all; $60^2 = 3600$.

Answer: (D) [Go Back to Q 1](#)

Solution

Q2 — Number Series: $N(N-1)$ Series

Concept — Product of Consecutive Integers: The k -th term is given by $T_k = (k+1) \cdot k$ (starting at $k = 1$):

$$T_1 = 2 \times 1 = 2, \quad T_2 = 3 \times 2 = 6, \quad T_3 = 4 \times 3 = 12, \quad T_4 = 5 \times 4 = 20, \quad T_5 = 6 \times 5 = 30.$$

Step 1 — Find the next term: $T_6 = 7 \times 6 = 42$.

Alternative check via differences: Differences: $6 - 2 = 4$, $12 - 6 = 6$, $20 - 12 = 8$, $30 - 20 = 10$. Differences increase by 2. Next difference: $10 + 2 = 12$. So $30 + 12 = 42$.
✓

Why other options are wrong:

- (A) 36: Would require the next difference to be 6, not 12.
- (C) 40: $30 + 10 = 40$ – reuses the previous difference instead of increasing by 2.
- (D) 48: $30 + 18$ – overestimates the next difference.

Answer: (B) [Go Back to Q 2](#)



Solution**Q3 — Number Series: Differences Are Consecutive Cubes**

Concept — Cubic Differences: The difference between consecutive terms is a perfect cube: $1^3 = 1$, $2^3 = 8$, $3^3 = 27$, $4^3 = 64$, $5^3 = 125$, ...

Step 1 — Verify:

$$0 \xrightarrow{+1^3=+1} 1 \xrightarrow{+2^3=+8} 9 \xrightarrow{+3^3=+27} 36 \xrightarrow{+4^3=+64} 100$$

Step 2 — Next term: Add $5^3 = 125$: $100 + 125 = 225$.

Why other options are wrong:

- (B) 196: $100 + 96 - 96$ is not a perfect cube.
- (C) 210: $100 + 110 - 110$ is not a perfect cube.
- (D) 256: $100 + 156 - 156$ is not a perfect cube ($5^3 = 125$, $6^3 = 216$).

Answer: (A) [Go Back to Q 3](#)

Solution**Q4 — Number Series: Two Interleaved Arithmetic Progressions**

Concept — Interleaved APs: Separate the series into odd-position and even-position terms.

Step 1 — Odd-position terms (positions 1, 3, 5, 7): 3, 8, 13, 18 – common difference = +5.

Step 2 — Even-position terms (positions 2, 4, 6, 8): 7, 14, 21, ? – common difference = +7. Next: $21 + 7 = 28$.

Step 3 — The 8th term is from the even-position AP: 28.

Why other options are wrong:

- (A) 23: $18 + 5$ – applies the odd-position AP difference to an even position.
- (B) 25: $21 + 4$ – incorrect difference for the even AP.
- (D) 30: $21 + 9$ – overshoots the correct difference of 7.

Answer: (C) [Go Back to Q 4](#)



Solution**Q5 — Number Series: Fibonacci-Variant**

Concept — Generalised Fibonacci Rule: Each term equals the sum of the two immediately preceding terms: $T_n = T_{n-1} + T_{n-2}$.

Step 1 — Verify the pattern: $2 + 5 = 7✓$, $5 + 7 = 12✓$, $7 + 12 = 19✓$, $12 + 19 = 31✓$.

Step 2 — Next term: $19 + 31 = 50$.

Why other options are wrong:

- (A) 47: $31 + 16 - 16$ is not in the series.
- (C) 52: Off by 2 – perhaps adds $21 + 31$ erroneously.
- (D) 56: $31 + 25 - 25$ is not a term in the series.

Answer: (B) [Go Back to Q 5](#)

Solution**Q6 — Number Series: Geometric Series (ratio = 5)**

Concept — Geometric Progression: Each term is multiplied by a fixed ratio $r = 5$.

Step 1 — Verify: $2 \xrightarrow{\times 5} 10 \xrightarrow{\times 5} 50 \xrightarrow{\times 5} 250 \xrightarrow{\times 5} 1250$.

Step 2 — Next term: $1250 \times 5 = 6250$.

Why other options are wrong:

- (A) 5000: 1250×4 – ratio of 4 is incorrect.
- (B) 5500: 1250×4.4 – not an integer ratio.
- (C) 6000: 1250×4.8 – also not a whole-number ratio.

Answer: (D) [Go Back to Q 6](#)

Solution**Q7 — Analogy: Famous Literary/Folk Pairs**

Concept — Iconic Romantic Pairs: The analogy links the male and female protagonists of a famous romantic story.

Step 1 — Identify the relationship: ROMEO and JULIET are the two lovers in Shakespeare's tragedy. Similarly, LAILA and MAJNU are the iconic lovers of the classical Arab/Persian romantic legend.



Why other options are wrong:

- (B) SULTAN: Sultan is not Laila's legendary partner.
- (C) HEER: Heer is the female protagonist paired with RANJHA, not Laila.
- (D) SHIRIN: Shirin is paired with FARHAD (or KHUSROW) in Persian legend, not with Laila.

Answer: (A) [Go Back to Q 7](#)

Solution

Q8 — Analogy: Tool–Professional

Concept — Instrument Used by a Specific Professional: The second word is the professional who uses the instrument named in the first word.

Step 1 — Identify the relationship: A STETHOSCOPE is the primary diagnostic instrument of a DOCTOR. A SEXTANT (a navigational instrument used to measure the angle of celestial bodies to determine geographic position) is the primary instrument of a NAVIGATOR.

Why other options are wrong:

- (A) SAILOR: A sailor works on a ship generally; a sextant is specifically used by a navigator for position-fixing.
- (B) PILOT: Pilots of aircraft use other instruments (altimeter, compass, etc.); sextant is specific to maritime/celestial navigation.
- (D) CAPTAIN: A captain commands the vessel; the sextant is the navigator's specific tool.

Answer: (C) [Go Back to Q 8](#)

Solution

Q9 — Analogy: Natural Degradation Process

Concept — Material and Its Characteristic Degradation: The first word is a material; the second word is the primary way that material naturally degrades or is destroyed over time.

Step 1 — Identify the relationship: WOOD is characteristically destroyed by fire (BURN). IRON is characteristically degraded by oxidation in the presence of moisture,



which forms iron oxide: this is called **RUST**.

Why other options are wrong:

- (A) MELT: Iron can melt, but only at extremely high temperatures; this is not its characteristic natural degradation.
- (C) CORRODE: Corrosion is the general umbrella process; RUST specifically names the product/process for iron, making it the most precise and analogous answer to BURN for wood.
- (D) OXIDISE: While rusting is technically oxidation, “oxidise” is a general chemical term applied to many materials. The specific analogue to “burn” for iron is “rust.”

Answer: (B) [Go Back to Q 9](#)

Solution

Q10 — Analogy: Number Base System

Concept — Numeral System Named by Its Base: Each positional numeral system is named according to the number of distinct digits it uses (its base).

Step 1 — Identify the relationship: Base 2 is called **BINARY** (uses digits 0 and 1). By the same logic, base 8 is called **OCTAL** (uses digits 0–7).

Why other options are wrong:

- (A) **HEXADECIMAL**: Hexadecimal corresponds to base 16, not base 8.
- (B) **DECIMAL**: Decimal corresponds to base 10.
- (C) **DIGITAL**: “Digital” is not the name of a numeral base system.

Answer: (D) [Go Back to Q 10](#)

Solution

Q11 — Analogy: Month–Season

Concept — Month and Its Season (Northern Hemisphere): The second word is the meteorological season in which the month falls.

Step 1 — Identify the relationship: **JUNE** falls in **SUMMER** (June–August in the Northern Hemisphere). **DECEMBER** falls in **WINTER** (December–February in the Northern Hemisphere).

Why other options are wrong:



- (B) SPRING: Spring spans March–May; December is not a spring month.
- (C) AUTUMN: Autumn spans September–November; December is past autumn.
- (D) MONSOON: Monsoon is a regional weather pattern, not a global meteorological season name for December.

Answer: (A) [Go Back to Q 11](#)

Solution

Q12 — Coding–Decoding: Odd Position +2, Even Position –1

Concept — Position-Dependent Shift: Letters at odd positions (1st, 3rd, ...) shift +2 forward; letters at even positions (2nd, 4th, ...) shift –1 backward in the alphabet.

Step 1 — Verify with the example PLAN → RKCM: $P(1, \text{odd}) + 2 = R\checkmark$, $L(2, \text{even}) - 1 = K\checkmark$, $A(3, \text{odd}) + 2 = C\checkmark$, $N(4, \text{even}) - 1 = M\checkmark$.

Step 2 — Apply to ROSE:

$$R(1, \text{odd}) + 2 = T, \quad O(2, \text{even}) - 1 = N, \quad S(3, \text{odd}) + 2 = U, \quad E(4, \text{even}) - 1 = D$$

Code = **TNUD**.

Why other options are wrong:

- (A) SMTD: S would require $R + 1 = S$, not $R + 2 = T$.
- (C) SNUD: S for R is wrong (needs +2 not +1).
- (D) TNUE: U for E would require $E + 1$, but E is at position 4 (even) so $E - 1 = D$, not $E + 1 = F$.

Answer: (B) [Go Back to Q 12](#)

Solution

Q13 — Coding–Decoding: Remove Vowels, Reverse Consonants

Concept — Vowel Deletion then Consonant Reversal: Step 1: remove all vowels. Step 2: reverse the order of the remaining consonants.

Verify with PENCIL: Vowels: E, I. Consonants in order: P, N, C, L. Reversed: L, C, N, P → **LCNP**. ✓

Apply to STONE: Vowels: O, E. Consonants in order: S, T, N. Reversed: **N, T, S** → **NTS**.

Why other options are wrong:



- (A) SNT: This is the original order of consonants, not reversed.
- (B) TSN: Partial reversal – reverses only the first two consonants.
- (C) TNS: Incorrect order; the fully reversed sequence of S,T,N is N,T,S not T,N,S.

Answer: (D) [Go Back to Q 13](#)

Solution

Q14 — Coding–Decoding: Consonant → Next Vowel

Concept — Consonant-to-Vowel Group Mapping: Each consonant is replaced by the next vowel in the alphabet after it: (B,C,D)→E; (F,G,H)→I; (J,K,L,M,N)→O; (P,Q,R,S,T)→U; (V,W,X,Y,Z)→A. Vowels (A,E,I,O,U) remain unchanged.

Verify with CAT → EAU: C(consonant, group B-D)→E✓, A(vowel)→A✓, T(consonant, group P-T)→U✓.

Apply to MAD: M (consonant, group J-N) → O; A (vowel) → A; D (consonant, group B-D) → E. Code = **OAE**.

Why other options are wrong:

- (A) OAI: I would mean D is mapped to I (group F-H), but D is in group B-D→E.
- (B) UAE: U would mean M is in group P-T, but M is in group J-N→O.
- (D) AUE: A would mean M is in group V-Z, which is incorrect.

Answer: (C) [Go Back to Q 14](#)

Solution

Q15 — Coding–Decoding: +4 Caesar Shift

Concept — Caesar Cipher (+4): Each letter is shifted forward by 4 positions in the alphabet. Wrap-around applies: W→A, X→B, Y→C, Z→D.

Verify with COLD → GSPH: C(3)+4=G(7)✓, O(15)+4=S(19)✓, L(12)+4=P(16)✓, D(4)+4=H(8)✓.

Apply to MINE:

$$M(13) + 4 = Q(17), \quad I(9) + 4 = M(13), \quad N(14) + 4 = R(18), \quad E(5) + 4 = I(9)$$

Code = **QMRI**.

Why other options are wrong:



- (B) RMQI: R would require $M+5=R$, not $M+4=Q$.
- (C) QMSI: S would require $N+5=S$, but $N+4=R$.
- (D) PNRI: P would require $M+3=P$, not $M+4=Q$.

Answer: (A) [Go Back to Q 15](#)

Solution

Q16 — Coding–Decoding: Interleave Reversed Odd and Even Position Letters

Concept — Interleaved Reversal Encoding: (1) Extract odd-position letters (1,3,5) and reverse them. (2) Extract even-position letters (2,4,6) and reverse them. (3) Interleave: take one from the reversed-odd group, then one from the reversed-even group, and so on.

Apply to BOUNCE (B,O,U,N,C,E): Odd-position letters: B(1), U(3), C(5) → reversed: C, U, B.

Even-position letters: O(2), N(4), E(6) → reversed: E, N, O.

Interleave (odd-first at each pair): C, E, U, N, B, O → **CEUNBO**.

Why other options are wrong:

- (A) CEUBNO: Incorrectly places B before N in the interleaving.
- (B) UCENBO: Places U first instead of C from the reversed-odd group.
- (C) CEUBNQ: Q is not a letter from BOUNCE – typographical error option.

Answer: (D) [Go Back to Q 16](#)

Solution

Q17 — Classification: Cricket Equipment vs. Other Sports Equipment

Concept — Category Identification: Three of the four items are used in cricket; one belongs to a different sport.

Step 1 — Classify each item: BAT – used in cricket. ✓

BALL – used in cricket. ✓

RACKET – used in badminton/tennis/squash, **not** cricket. **Odd one out.**

WICKET – the three stumps and bails, a core piece of cricket equipment. ✓

Step 2 — Odd one out: RACKET.

Why other options are wrong:



- (A) BAT: Essential cricket equipment.
- (B) BALL: Essential cricket equipment.
- (D) WICKET: The wicket (stumps + bails) is the target in cricket – essential equipment.

Answer: (C) [Go Back to Q 17](#)

Solution

Q18 — Classification: Countries by Continent

Concept — Geographic Classification: Three countries are in Asia; one is in Africa.

Step 1 — Classify each country: NEPAL – South Asia. ✓

BHUTAN – South Asia. ✓

MONGOLIA – East/Central Asia. ✓

MOROCCO – North Africa. **Not in Asia.**

Step 2 — Odd one out: MOROCCO.

Why other options are wrong:

- (A) NEPAL: Located in South Asia, bordering India and China.
- (C) BHUTAN: Located in South Asia, bordering India and China.
- (D) MONGOLIA: Located in East/Central Asia, bordering Russia and China.

Answer: (B) [Go Back to Q 18](#)

Solution

Q19 — Classification: Letter Groups with Uniform +3 Gap

Concept — Equal Letter-Gap Pattern: In a valid group, each successive letter is exactly 3 positions ahead of the previous one.

Step 1 — Check each group: DGJ: D(4)→G(7) gap=3✓, G(7)→J(10) gap=3✓. Valid.

EHK: E(5)→H(8) gap=3✓, H(8)→K(11) gap=3✓. Valid.

FIL: F(6)→I(9) gap=3✓, I(9)→L(12) gap=3✓. Valid.

CGJ: C(3)→G(7) gap=4≠3!, G(7)→J(10) gap=3. The first gap is 4, not 3. **Invalid.**

Step 2 — Odd one out: CGJ.

Why other options are wrong:

- (B) DGJ: Both gaps are exactly 3 – valid group.



- (C) EHK: Both gaps are exactly 3 – valid group.
- (D) FIL: Both gaps are exactly 3 – valid group.

Answer: (A) [Go Back to Q 19](#)

Solution

Q20 — Classification: Even Number Among Odd Numbers

Concept — Parity (Odd vs. Even): An even number is exactly divisible by 2; an odd number leaves a remainder of 1.

Step 1 — Check each number: $11 \div 2 = 5$ remainder 1 – **odd**. ✓

$33 \div 2 = 16$ remainder 1 – **odd**. ✓

$55 \div 2 = 27$ remainder 1 – **odd**. ✓

$48 \div 2 = 24$ remainder 0 – **even**. Odd one out.

Step 2 — Odd one out: 48.

Why other options are wrong:

- (A) 11: Odd (ends in 1).
- (B) 33: Odd (ends in 3).
- (C) 55: Odd (ends in 5).

Answer: (D) [Go Back to Q 20](#)

Solution

Q21 — Ranking/Ordering: Weight Ordering

Concept — Linear Ordering from Comparative Clues: Build a chain from the given inequalities.

Step 1 — Chain the clues: $P > Q > R > S > T$.

Step 2 — Identify the lightest: T is at the bottom of the chain – the lightest.

Why other options are wrong:

- (B) S: S is heavier than T.
- (C) R: R is heavier than S and T.
- (D) Q: Q is heavier than R, S, and T.

Answer: (A) [Go Back to Q 21](#)



Solution**Q22 — Ranking/Ordering: Queue Position**

Concept — Position from Both Ends: If a person is m th from the left and n th from the right, the total = $m + n - 1$.

Step 1 — Apply the formula: Total = $11 + 10 - 1 = 20$.

Step 2 — Intuitive verification: There are 10 people to Kavita's left (positions 1–10), Kavita at position 11, and 9 people to her right (positions 12–20). Total = $10 + 1 + 9 = 20$.
✓

Why other options are wrong:

- (A) 18: Subtracts 3 instead of 1 from $11 + 10$.
- (B) 19: Subtracts 2 instead of 1.
- (C) 21: Adds $11 + 10 = 21$ without subtracting 1 for Kavita counted twice.

Answer: (D) [Go Back to Q 22](#)

Solution**Q23 — Ranking/Ordering: Class Rank**

Concept — Rank from Top and Bottom: Total students = (rank from top) + (rank from bottom) – 1.

Step 1 — Apply the formula: Total = $9 + 22 - 1 = 30$.

Step 2 — Verify: 8 students rank above Rohit; 21 rank below; Rohit himself: $8 + 1 + 21 = 30$. ✓

Why other options are wrong:

- (A) 28: Subtracts 3 – overcorrects.
- (B) 29: Subtracts 2 – off by 1.
- (D) 31: Adds $9 + 22 = 31$ without subtracting 1.

Answer: (C) [Go Back to Q 23](#)

Solution**Q24 — Ranking/Ordering: Row Position**

Concept — Sequential Position Deduction: Assign positions using the clues one by one.



Step 1 — Fix positions: Vijay is at position 1 (left end).

Yash is at position 5 (right end).

Uma is immediately left of Yash $\Rightarrow$ position 4.

Waqar is between Xena and Uma $\Rightarrow$ Waqar is at position 3.

Xena is between Vijay and Waqar $\Rightarrow$ Xena is at position 2.

Step 2 — Arrangement (left to right):

1: Vijay 2: Xena 3: **Waqar** 4: Uma 5: Yash

3rd from right = position $5 - 3 + 1 = 3 = \text{Waqar}$.

Why other options are wrong:

- (A) Xena: Xena is at position 2 (4th from right).
- (C) Uma: Uma is at position 4 (2nd from right).
- (D) Yash: Yash is at position 5 (1st from right/rightmost).

Answer: (B) [Go Back to Q 24](#)

Solution

Q25 — Net Displacement: 9-40-41 Pythagorean Triple

Concept — Pythagorean Theorem for Net Displacement: When a person walks South (vertical) and West (horizontal), the straight-line return distance is $\sqrt{(\text{South})^2 + (\text{West})^2}$.

Step 1 — Identify the right triangle: South leg = 9 km (vertical). West leg = 40 km (horizontal). These are perpendicular, forming a right angle.

Step 2 — Calculate:

$$d = \sqrt{9^2 + 40^2} = \sqrt{81 + 1600} = \sqrt{1681} = 41 \text{ km}$$

This is the 9-40-41 Pythagorean triple ($9^2 + 40^2 = 81 + 1600 = 1681 = 41^2$).

Why other options are wrong:

- (B) 38 km: $\sqrt{81 + 1600} = 41 \neq 38$.
- (C) 43 km: $43^2 = 1849 \neq 1681$.
- (D) 45 km: $45^2 = 2025 \neq 1681$.

Answer: (A) [Go Back to Q 25](#)



Solution**Q26 — Blood Relations: Husband of Grandfather's Only Daughter**

Concept — Family Tree Deduction: Trace the relationships step by step.

Step 1 — Identify the woman's grandfather's only daughter: The woman's grandfather has only one daughter. If that daughter is the woman's mother, then the man (husband of the grandfather's only daughter) is the woman's **father**.

Step 2 — Confirm: Grandfather's only daughter = woman's mother. Man is the husband of the woman's mother = woman's **FATHER**.

Why other options are wrong:

- (A) Brother: A brother is a sibling, not the parent.
- (B) Uncle: An uncle would be the brother of a parent, not the father.
- (C) Son: A son would be one generation below, not above.

Answer: (D) [Go Back to Q 26](#)

Solution**Q27 — Blood Relations: Three-Generation Chain**

Concept — Multi-step Relationship Tracing: Follow the chain of relationships to determine the final connection.

Step 1 — Build the chain: X is mother of Y. Y is brother of Z $\Rightarrow$ X is also mother of Z. Z is married to W. W is father of V $\Rightarrow$ Z is mother of V. Since X is mother of Z and Z is mother of V, X is V's **maternal grandmother**.

Step 2 — Confirm: X (grandmother) $\rightarrow$ Z (mother) $\rightarrow$ V (grandchild). X is V's **Grandmother**.

Why other options are wrong:

- (A) Mother: X is one generation above Z, who is V's mother. X is two generations above V.
- (B) Aunt: An aunt would be a sibling of V's parent, not the parent's parent.
- (D) Great-grandmother: That would require X to be three generations above V; here only two generations separate them.

Answer: (C) [Go Back to Q 27](#)



Solution**Q28 — Blood Relations: Coded Symbols**

Concept — Symbolic Relation Parsing: Decode the expression using the given operator definitions.

Step 1 — Parse $P \oplus Q \otimes R \odot S$: $P \oplus Q$: P is parent of Q.

$Q \otimes R$: Q is sibling of R $\Rightarrow$ P is also parent of R (since P is parent of Q and Q,R are siblings).

$R \odot S$: R is spouse of S.

Step 2 — Determine P's relation to S: P is parent of R. R is spouse of S. Therefore P is the **parent-in-law** of S.

Why other options are wrong:

- (A) Father: Father implies P is male and a direct parent; P is a parent-in-law of S, not a direct parent.
- (C) Grandparent: P would need to be the parent of S's parent; here P is the parent of S's spouse.
- (D) Sibling: P and S are two generations apart and not of the same generation.

Answer: (B) [Go Back to Q 28](#)

Solution**Q29 — Blood Relations: Pointing at Girl (Sister)**

Concept — Tracing the Relationship Chain: Resolve each phrase step by step.

Step 1 — Identify “the only son of my paternal grandfather”: The boy's paternal grandfather has only one son = the boy's *father*.

Step 2 — Identify “daughter of the only son of my paternal grandfather”: Daughter of the boy's father = the boy's **sister**.

Why other options are wrong:

- (B) Mother: The mother would be the wife of the boy's father, not his daughter.
- (C) Aunt: An aunt would be a sister of the boy's father or mother.
- (D) Cousin: A cousin would be a child of the boy's uncle or aunt, not of his father.

Answer: (A) [Go Back to Q 29](#)



Solution**Q30 — Directions: 20-21-29 Pythagorean Triple**

Concept — Pythagorean Theorem: Two perpendicular displacements (North and East) form the legs of a right triangle; the straight-line distance is the hypotenuse.

Step 1 — Identify the legs: North = 20 km (vertical leg). East = 21 km (horizontal leg).

Step 2 — Calculate the hypotenuse:

$$d = \sqrt{20^2 + 21^2} = \sqrt{400 + 441} = \sqrt{841} = 29 \text{ km}$$

The 20-21-29 Pythagorean triple: $20^2 + 21^2 = 400 + 441 = 841 = 29^2$. ✓

Why other options are wrong:

- (B) 27 km: $27^2 = 729 \neq 841$.
- (C) 31 km: $31^2 = 961 \neq 841$.
- (D) 25 km: $25^2 = 625 \neq 841$.

Answer: (A) [Go Back to Q 30](#)

Solution**Q31 — Directions: Sequential Compass Turns**

Concept — Direction after Sequential Turns: Track each turn from the current facing direction.

Step 1 — Initial direction: North.

Step 2 — Turn 180° clockwise from North: 180 clockwise from North $\Rightarrow$ faces **South**.

Step 3 — Turn 90° clockwise from South: 90 clockwise from South $\Rightarrow$ faces **West**.

Final direction: **West**.

Why other options are wrong:

- (A) North: That would be the result of a full 360 turn.
- (B) East: 90° clockwise from South is West, not East; 90° counter-clockwise from South would be East.
- (C) South: Only the intermediate direction after the first turn.

Answer: (D) [Go Back to Q 31](#)



Solution**Q32 — Directions: Three Left Turns from North**

Concept — Cumulative Left Turns: Each 90° left turn (counter-clockwise) rotates the facing direction by one compass point counter-clockwise.

Step 1 — Initial direction: North.

Step 2 — First 90° left from North: Faces West.

Step 3 — Second 90° left from West: Faces South.

Step 4 — Third 90° left from South: Faces East.

Final direction: East.

Note: Three 90° left turns = 270° counter-clockwise = 90° clockwise from the starting direction. 90° clockwise from North = East. ✓

Why other options are wrong:

- (A) North: Would require four 90° left turns (full rotation).
- (B) West: Only the direction after the first left turn.
- (D) South: Only the direction after the second left turn.

Answer: (C) [Go Back to Q 32](#)

Solution**Q33 — Syllogism: Metals and Electricity (Only I Follows)**

Concept — Universal Affirmative Syllogism: “All A are B” and “C is an A” imply “C is a B.”

Step 1 — Check Conclusion I: All metals conduct electricity ($\text{Copper} \subset \text{Metals} \subset \text{Conductors}$). Copper is a metal. Therefore **Copper conducts electricity**. Conclusion I follows.

Step 2 — Check Conclusion II: “All conductors of electricity are metals” is the converse of the first premise. The converse of a universal affirmative is not necessarily true. There could be non-metal conductors (e.g., graphite, plasma, ionic solutions). Conclusion II does **not** follow.

Only I follows.

Why other options are wrong:

- (A) Both: Conclusion II is an invalid converse.
- (C) Neither: Conclusion I is directly and validly derived.



- (D) Only II: II is not logically implied; I is.

Answer: (B) [Go Back to Q 33](#)

Solution

Q34 — Syllogism: Clouds and Rain (Only I Follows)

Concept — Partial Set with Negative Universal: “Some A are B” and “No B is C” together imply “Some A are not C.”

Step 1 — Check Conclusion I: Some clouds bring rain. Those rain-bearing clouds are members of the set “rain.” Since no rain is harmful, those clouds (which bring rain) are not harmful. Therefore **some clouds are not harmful**. Conclusion I **follows**.

Step 2 — Check Conclusion II: “All clouds are beneficial” – the premises speak only of “some clouds” bringing rain and say nothing about the other clouds. We cannot conclude all clouds are beneficial. Conclusion II does **not** follow.

Only I follows.

Why other options are wrong:

- (B) Only II: II is an over-generalisation not supported by the premises.
- (C) Both: II is not valid.
- (D) Neither: I is validly derived from the given statements.

Answer: (A) [Go Back to Q 34](#)

Solution

Q35 — Syllogism: Doctors and Illiterates (Only II Follows)

Concept — Negative Universal + Universal Affirmative: “No A is B” and “All B are C” together imply “Some C are not A” (since all B are C, and no B is A, those B-persons who are C are not A).

Step 1 — Check Conclusion I: “No doctor is poor” – this is too strong. The premises establish that illiterates are not doctors and illiterates are poor, but doctors could still be poor for other reasons. Conclusion I does **not** follow.

Step 2 — Check Conclusion II: All illiterates are poor (illiterates $\subset$ poor). No doctor is illiterate (doctors $\cap$ illiterates = $\emptyset$). Therefore the illiterate poor people are not doctors – so **some poor people are not doctors**. Conclusion II **follows**.

Only II follows.



Why other options are wrong:

- (A) Both: Conclusion I cannot be validly derived.
- (B) Only I: I is not supported; II is.
- (D) Neither: Conclusion II is validly derived.

Answer: (C) [Go Back to Q 35](#)

Solution

Q36 — Syllogism: Students and Hardworking (Both Follow)

Concept — Universal Affirmative + Particular Affirmative: “All A are B” and “Some A are C” allow us to conclude “Some C are B” (the C-members of A have already passed).

Step 1 — Check Conclusion I: All students passed. Some students were hardworking. Since hardworking students are still students, and all students passed, **all hardworking students passed**. Conclusion I follows.

Step 2 — Check Conclusion II: Some students were hardworking. Those hardworking students passed (from Conclusion I). Therefore **some students who passed were hardworking**. Conclusion II follows.

Both I and II follow.

Why other options are wrong:

- (A) Neither: Both are validly derived.
- (B) Only I: Conclusion II is equally valid.
- (C) Only II: Conclusion I is also valid.

Answer: (D) [Go Back to Q 36](#)

Solution

Q37 — Syllogism: Cats and Black Animals (Only I Follows)

Concept — Particular Affirmative + Universal Negative: “Some A are B” and “No B is C” together imply “Some A are not C.”

Step 1 — Check Conclusion I: Some cats are black. No black animals are friendly. Therefore, those cats that are black are not friendly – hence **some cats are not friendly**. Conclusion I follows.



Step 2 — Check Conclusion II: “No cats are friendly” is too strong. Only the black cats are confirmed not friendly. Non-black cats could be friendly (the premises do not restrict non-black cats). Conclusion II does **not** follow.

Only I follows.

Why other options are wrong:

- (A) Both: Conclusion II is an invalid over-generalisation.
- (C) Neither: Conclusion I is validly derived.
- (D) Only II: II cannot be concluded; I is the valid one.

Answer: (B) [Go Back to Q 37](#)

Solution

Q38 — Statement–Assumption: Lack of Sleep

Concept — Implicit Assumptions: An implicit assumption is a hidden premise that must be accepted for the statement to be meaningful.

Step 1 — Check Assumption I: The statement says lack of sleep impairs cognitive function and decreases concentration. This presupposes that sleep plays an essential role in brain function – otherwise the connection would not hold. Assumption I is **implicit**.

Step 2 — Check Assumption II: The statement specifically mentions “decreased concentration” due to lack of sleep, which directly implies that concentration requires adequate rest. Assumption II is **implicit**.

Both I and II are implicit.

Why other options are wrong:

- (A) Only I: Assumption II is equally embedded in the statement’s claim about concentration.
- (B) Only II: Assumption I underlies the entire premise about brain function.
- (D) Neither: Both assumptions are clearly implicit in the statement.

Answer: (C) [Go Back to Q 38](#)



Solution**Q39 — Course of Action: Clean City Campaign**

Concept — Practical, Directly Relevant Course of Action: A valid course of action must directly and logically address the stated problem.

Step 1 — Evaluate Course I: A “Clean City” campaign is aimed at improving urban cleanliness. Encouraging citizens to participate in cleanliness drives and avoid littering directly supports the campaign’s objective. Course I **follows**.

Step 2 — Evaluate Course II: Imposing penalties on industries for water pollution addresses river/water quality – a different environmental concern not covered by the “Clean City” cleanliness campaign. Course II does **not** follow (it is tangential to the stated problem).

Only I follows.

Why other options are wrong:

- (A) Only II: Course II is not directly related to urban cleanliness.
- (C) Both: Course II is tangential and not implied by the campaign statement.
- (D) Neither: Course I is a clear and direct response to the campaign.

Answer: (B) [Go Back to Q 39](#)

Solution**Q40 — Statement–Conclusion: Reserve Forest Encroachment**

Concept — Logical Inference vs. Unsupported Speculation: A valid conclusion must follow from the given information without adding unsupported details.

Step 1 — Check Conclusion I: Loss of wildlife habitat is a direct consequence of encroachment. When animals lose their habitat, populations decline. This is a well-established ecological consequence. Conclusion I **follows**.

Step 2 — Check Conclusion II: “The encroachment was carried out deliberately by organised groups” is not stated or implied. Encroachment could be accidental, gradual, or by individuals. Attributing intent and organisation is speculative. Conclusion II does **not** follow.

Only I follows.

Why other options are wrong:

- (B) Only II: II introduces unsupported specificity about intent.
- (C) Both: II cannot be validly derived from the statement.



- (D) Neither: Conclusion I is a logical and direct inference.

Answer: (A) [Go Back to Q 40](#)

Solution

Q41 — Statement–Assumption: Meditation and Stress

Concept — Implicit Assumptions in Research Statements: A study's finding is only worth reporting if the underlying assumptions hold.

Step 1 — Check Assumption I: For a study measuring lower stress levels to be meaningful, meditation must produce measurable psychological effects. This is an implicit assumption – the entire premise of the study rests on meditation being psychologically influential. Assumption I is **implicit**.

Step 2 — Check Assumption II: Studies about stress reduction are worthwhile only if stress is a prevalent concern. By citing a study on stress, the statement implicitly assumes stress is a common modern problem worth investigating. Assumption II is **implicit**.

Both I and II are implicit.

Why other options are wrong:

- (A) Only I: Assumption II is equally embedded in the rationale for the study.
- (B) Only II: Assumption I is the core scientific premise of the statement.
- (C) Neither: Both are clearly underlying the statement.

Answer: (D) [Go Back to Q 41](#)

Solution

Q42 — Statement–Conclusion: Bridge Reduces Travel Time

Concept — Scope of a Statement: A conclusion must be directly and necessarily implied by the statement, without requiring additional assumptions.

Step 1 — Check Conclusion I: “The bridge was built after careful planning” – the statement only tells us the effect (reduced travel time), not the process of construction. Careful planning is not implied; poorly planned bridges can also reduce travel time. Conclusion I does **not** follow.

Step 2 — Check Conclusion II: “People now prefer to travel between the two cities more frequently” – reduced travel time may encourage more travel, but the statement does not state this; travel frequency could remain unchanged. The statement says nothing



about preference or frequency of travel. Conclusion II does **not** follow.

Neither I nor II follows.

Why other options are wrong:

- (A) Both: Neither conclusion is stated or necessarily implied.
- (B) Only I: Conclusion I adds information about construction process not in the statement.
- (D) Only II: Conclusion II adds information about travel behaviour not stated.

Answer: (C) [Go Back to Q 42](#)

Solution

Q43 — Seating Arrangement: Directly Opposite Charu

Concept — Circular Arrangement, Diametrically Opposite Seat: In a 6-person circular arrangement, the person directly opposite sits 3 seats away (clockwise or counter-clockwise).

Clockwise order: Asha(1) – Bimal(2) – Ekta(3) – Dinesh(4) – Farida(5) – Charu(6).

Step 1 — Find the seat opposite Charu (seat 6): Opposite seat = $6 - 3 = 3 = \text{Ekta}$.

Why other options are wrong:

- (A) Asha: Asha (seat 1) is opposite Dinesh (seat 4), not Charu.
- (C) Bimal: Bimal (seat 2) is opposite Farida (seat 5), not Charu.
- (D) Farida: Farida (seat 5) is opposite Bimal (seat 2), not Charu.

Answer: (B) [Go Back to Q 43](#)

Solution

Q44 — Seating Arrangement: Immediately Clockwise from Dinesh

Clockwise order: Asha(1) – Bimal(2) – Ekta(3) – Dinesh(4) – Farida(5) – Charu(6).

Step 1 — Person immediately clockwise from Dinesh (seat 4): Next seat clockwise = seat 5 = **Farida**.

Why other options are wrong:

- (A) Ekta: Ekta (seat 3) is immediately *counter-clockwise* from Dinesh.



- (B) Charu: Charu is at seat 6, two seats clockwise from Dinesh.
- (D) Asha: Asha is at seat 1; going clockwise from Dinesh(4) reaches Farida(5), Charu(6), then Asha(1) – three steps, not one.

Answer: (C) [Go Back to Q 44](#)

Solution

Q45 — Seating Arrangement: Between Asha and Farida Going Clockwise

Clockwise order: Asha(1) – Bimal(2) – Ekta(3) – Dinesh(4) – Farida(5) – Charu(6).

Step 1 — Count people between Asha (seat 1) and Farida (seat 5) going clockwise:

Going clockwise from Asha: Bimal(2), Ekta(3), Dinesh(4), then Farida(5).

People strictly between: Bimal, Ekta, Dinesh = **3 people**.

Why other options are wrong:

- (A) 1: Significantly undercounts – there are 3 people between them.
- (B) 2: Undercounts by 1 – only Bimal and Ekta would be between them if Dinesh were excluded, which is incorrect.
- (C) 4: Overcounts – only 3 seats lie strictly between Asha and Farida going clockwise.

Answer: (D) [Go Back to Q 45](#)

Solution

Q46 — Seating Arrangement: After Bimal–Farida Swap, Opposite Asha

Original clockwise order: Asha(1) – Bimal(2) – Ekta(3) – Dinesh(4) – Farida(5) – Charu(6).

Step 1 — After Bimal and Farida swap: New clockwise order: Asha(1) – **Farida**(2) – Ekta(3) – Dinesh(4) – **Bimal**(5) – Charu(6).

Step 2 — Who is directly opposite Asha (seat 1)? Opposite seat = seat 1 + 3 = 4 = **Dinesh**. (Dinesh did not swap; he remains at seat 4.)

Why other options are wrong:

- (B) Farida: After the swap, Farida is at seat 2 (opposite would be seat 5 = Bimal), not at the seat opposite Asha.
- (C) Bimal: After the swap, Bimal is at seat 5 (opposite Farida's new seat 2), not opposite Asha.



- (D) Ekta: Ekta is at seat 3 (opposite Charu at seat 6), not opposite Asha.

Answer: (A) [Go Back to Q 46](#)

Solution

Q47 — Seating Arrangement: Immediately Counter-Clockwise from Ekta

Clockwise order: Asha(1) – Bimal(2) – Ekta(3) – Dinesh(4) – Farida(5) – Charu(6).

Step 1 — Person immediately counter-clockwise from Ekta (seat 3): Counter-clockwise from seat 3 = seat 2 = **Bimal**.

Why other options are wrong:

- (A) Dinesh: Dinesh (seat 4) is immediately *clockwise* from Ekta.
- (B) Asha: Asha (seat 1) is two seats counter-clockwise from Ekta.
- (D) Farida: Farida (seat 5) is two seats clockwise from Ekta.

Answer: (C) [Go Back to Q 47](#)

Solution

Q48 — Seating Arrangement: Immediate Neighbours of Ekta

Clockwise order: Asha(1) – Bimal(2) – Ekta(3) – Dinesh(4) – Farida(5) – Charu(6).

Step 1 — Find neighbours of Ekta (seat 3): Counter-clockwise neighbour (seat 2) = **Bimal**. Clockwise neighbour (seat 4) = **Dinesh**.

Ekta's immediate neighbours are **Bimal and Dinesh**.

Why other options are wrong:

- (A) Asha and Dinesh: Asha is at seat 1 – two seats from Ekta, not adjacent.
- (C) Farida and Charu: Both are on the other side of the table from Ekta.
- (D) Asha and Farida: Neither is adjacent to Ekta (Asha is at seat 1, Farida at seat 5).

Answer: (B) [Go Back to Q 48](#)



Solution**Q49 — Cause–Effect: New Airport and Tourism**

Concept — Cause-Effect Identification: Determine which event logically precedes and directly brings about the other.

Step 1 — Analyse the two statements: Statement I: A new international airport was inaugurated – a concrete infrastructure event. Statement II: Tourist numbers increased significantly – a measurable outcome.

Step 2 — Determine the relationship: A new international airport improves connectivity, reduces flight costs, increases the number of available routes, and makes the city more accessible to international tourists. This directly causes tourism to increase. Statement I is the **cause**; Statement II is the **effect**.

Why other options are wrong:

- (B) II causes I: Rising tourism does not cause airports to be built in the sequence described; the airport precedes and causes the tourism rise.
- (C) Effects of a common cause: There is no third common cause implied; the airport directly enables tourism.
- (D) Independent causes: They are not independent; there is a clear causal link.

Answer: (A) [Go Back to Q 49](#)

Solution**Q50 — Assertion–Reason: Plants and Photosynthesis**

Concept — Assertion-Reason Analysis: Check each statement for factual accuracy, then determine if R explains A.

Step 1 — Is Assertion (A) true? “Plants release carbon dioxide during photosynthesis.” This is **FALSE**. During photosynthesis, plants absorb carbon dioxide (CO_2) and release oxygen (O_2). Plants release CO_2 during respiration, not photosynthesis.

Step 2 — Is Reason (R) true? “Photosynthesis is the process by which plants make their food using sunlight.” This is **TRUE**. Photosynthesis converts light energy, CO_2 , and water into glucose (food for the plant) and oxygen.

Assertion A is FALSE; Reason R is TRUE.

Why other options are wrong:

- (A) Both true, R explains A: A is factually incorrect – plants release oxygen, not CO_2 , during photosynthesis.



- (B) Both true, R not correct reason: A is false, so this option is also incorrect.
- (C) A true, R false: It is the opposite – A is false and R is true.

Answer: (D) [Go Back to Q 50](#)



Answer Key

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

