

TANCET Reasoning

Sample Paper – 9

Duration: 60 Minutes

Maximum Marks: 50

Instructions

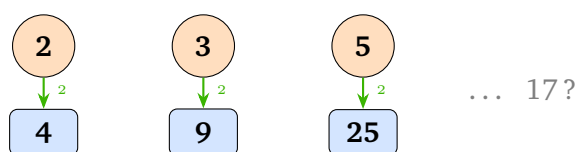
- This paper contains **50 MCQs** (single correct answer), modelled on the Reasoning sections of the **TANCET MCA** entrance examination.
- **Part A** (Q1–Q25): Analytical Reasoning. **Part B** (Q26–Q50): Logical Reasoning. Each part carries **25 marks**.
- Each correct answer carries **+1 mark**. Each 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. The following series is formed by squaring consecutive prime numbers. Find the next term.

4, 9, 25, 49, 121, 169, ?

The diagram below shows the first three primes mapped to their squares.



- (A) 196
- (B) 289
- (C) 256
- (D) 324

Q2. The following series consists of *pentagonal numbers* given by $P(n) = \frac{n(3n-1)}{2}$. Find the next term.

1, 5, 12, 22, 35, 51, ?

Compute $P(7)$ using the formula.



- (A) 60
- (B) 64
- (C) 66
- (D) 70

Q3. The differences between consecutive terms of the following series are triangular numbers ($T_1 = 1, T_2 = 3, T_3 = 6, T_4 = 10, \dots$). Find the next term.

2, 3, 6, 12, 22, 37, ?

Identify the next triangular number difference and add it to the last term.

- (A) 58
- (B) 52
- (C) 55
- (D) 60

Q4. The following series alternates between two operations: **add 4** and **multiply by 3**. Find the missing term.

3, 7, 21, 25, 75, 79, ?

Identify the pattern: $+4, \times 3, +4, \times 3, \dots$

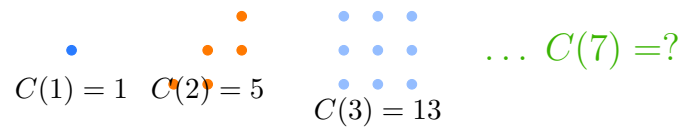
- (A) 220
- (B) 200
- (C) 237
- (D) 250

Q5. The following series consists of *centred square numbers* defined by $C(n) = 2n(n - 1) + 1$. Find the next term.

1, 5, 13, 25, 41, 61, ?

The dot-grid below shows the centred square pattern with concentric L-shaped layers.





- (A) 72
- (B) 78
- (C) 80
- (D) 85

Q6. Each term of the following series equals $\left[\frac{n(n+1)}{2} \right]^2$ for $n = 1, 2, 3, \dots$
Find the next term.

1, 9, 36, 100, 225, 441, ?

Compute the value for $n = 7$.

- (A) 576
- (B) 784
- (C) 625
- (D) 900

Q7. Complete the analogy by identifying the state with which the classical dance form is associated.

ODISSI : ODISHA :: BHARATANATYAM : ?

- (A) TAMIL NADU
- (B) KERALA
- (C) MANIPUR
- (D) ANDHRA PRADESH

Q8. In the first pair, the first word is a creature and the second is what it produces. Apply the same logic.

BEE : HONEY :: SILKWORM : ?

- (A) THREAD
- (B) COCOON



- (C) SILK
- (D) FABRIC

Q9. Complete the analogy based on the relationship between the type of line and its technical geographical name.

LATITUDE : PARALLEL :: LONGITUDE : ?

- (A) EQUATOR
- (B) MERIDIAN
- (C) PRIME
- (D) AXIS

Q10. The first pair describes what the written work is about. Apply the same logic to complete the second pair.

BIOGRAPHY : ANOTHER PERSON'S LIFE :: AUTOBIOGRAPHY : ?

- (A) READER
- (B) PUBLISHER
- (C) NARRATOR
- (D) AUTHOR'S OWN LIFE

Q11. The first pair shows a unit and its collective group. Apply the same logic.

STAR : CONSTELLATION :: SOLDIER : ?

- (A) REGIMENT
- (B) COMPANY
- (C) ARMY
- (D) BATTALION

Q12. In a certain code, each letter of a word is shifted forward by its *position number*: the 1st letter shifts by +1, the 2nd by +2, the 3rd by +3, and the 4th by +4.

Example: PLAN $\rightarrow$ Q(P+1), N(L+2), D(A+3), R(N+4) = QNDR

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



- (A) RQVI
- (B) SQVJ
- (C) SQVI
- (D) SPVI

Q13. In a special code, each letter at position p is replaced by the letter at position $27 - p$ (i.e., $A \leftrightarrow Z$, $B \leftrightarrow Y$, $C \leftrightarrow X$, ...).

Example: $CAT \rightarrow X(C=3 \rightarrow 24), Z(A=1 \rightarrow 26), G(T=20 \rightarrow 7) = XZG$

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

- (A) YRIW
- (B) YRIY
- (C) XRIW
- (D) YSIW

Q14. In a certain code, each letter is shifted **2 places backward** in the alphabet. $A \rightarrow Y$, $B \rightarrow Z$, $C \rightarrow A$ (with wrap-around for A and B).

Example: $CAT \rightarrow A(C-2), Y(A-2), R(T-2) = AYR$

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

- (A) UGKB
- (B) VGLB
- (C) UHLB
- (D) UGLB

Q15. In a special code, each letter is replaced by the *next consonant* appearing after it in the English alphabet (vowels A, E, I, O, U are skipped; Z wraps to B).

Mapping (selected): $A \rightarrow B$, $D \rightarrow F$, $H \rightarrow J$, $N \rightarrow P$, $T \rightarrow V$, $Z \rightarrow B$

Example: $CAT \rightarrow D(C \rightarrow D), B(A \rightarrow B), V(T \rightarrow V) = DBV$

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

- (A) MIPF



- (B) NJPF
- (C) NJPE
- (D) NKPF

Q16. In a certain code, adjacent pairs of letters in a word are swapped: (1st,2nd), (3rd,4th), (5th,6th), ... For odd-length words, the last letter stays unchanged.

Example: STONE (5 letters): (S,T) $\rightarrow$ (T,S); (O,N) $\rightarrow$ (N,O); E stays $\Rightarrow$ TS-NOE

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

- (A) CLMIB
- (B) LCMBI
- (C) LCMIB
- (D) CLBIM

Q17. Three of the following four instruments belong to the category of *string instruments*. Identify the **odd one out**.

VIOLIN, PIANO, GUITAR, SITAR

- (A) VIOLIN
- (B) PIANO
- (C) GUITAR
- (D) SITAR

Q18. Three of the following four cities are *national capitals* of their respective countries. Identify the **odd one out**.

PARIS, LONDON, ROME, SYDNEY

- (A) PARIS
- (B) LONDON
- (C) ROME
- (D) SYDNEY



Q19. Three of the following four letter groups have the property that each successive letter is exactly **5 positions** ahead of the previous one. Identify the **odd one out**.

BGLP, FKPU, GLQV, CHMR

- (A) BGLP
- (B) FKPU
- (C) GLQV
- (D) CHMR

Q20. Three of the following four numbers are *perfect cubes*. Identify the **odd one out**.

27, 64, 150, 125

- (A) 27
- (B) 64
- (C) 150
- (D) 125

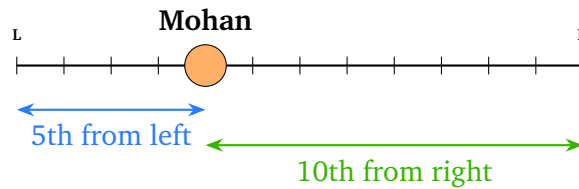
Q21. Five people — Ananya, Bharat, Chitra, Dinesh, and Esha — have different ages. Study the clues and find who is the **oldest**.

- Ananya is younger than Bharat.
- Bharat is younger than Chitra.
- Dinesh is older than Chitra.
- Esha is younger than Ananya.

- (A) Ananya
- (B) Bharat
- (C) Chitra
- (D) Dinesh

Q22. In a row of people, Mohan is **5th from the left end** and **10th from the right end**. How many people are there in the row in total?





- (A) 14
- (B) 15
- (C) 13
- (D) 16

Q23. In a class, Reena's rank is **14th from the top** and **28th from the bottom**. How many students are there in the class in total?

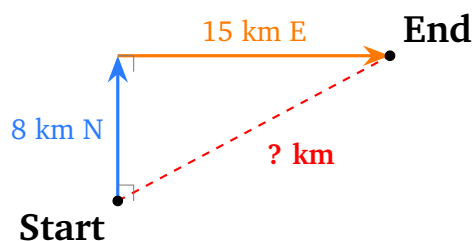
- (A) 38
- (B) 40
- (C) 41
- (D) 42

Q24. Arrange the following five words in **alphabetical order** and find which word comes **third**.

KICK, KIND, KING, KITE, KIWI

- (A) KIND
- (B) KING
- (C) KITE
- (D) KIWI

Q25. A man walks **8 km North** and then turns and walks **15 km East**. What is the straight-line distance from his starting point to his current position?



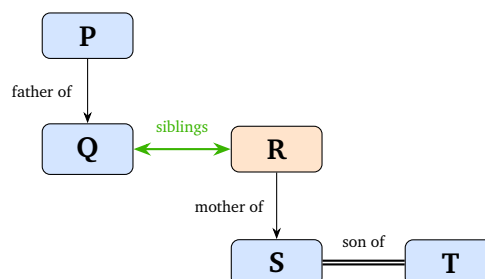
- (A) 13 km
- (B) 15 km
- (C) 16 km
- (D) 17 km

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

Q26. Pointing to a woman, a man says, “She is the wife of my father’s only brother.” How is the woman related to the man?

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

Q27. P is the father of Q. Q is the brother of R. R is the mother of S. S is the son of T. How is **P** related to **T**?



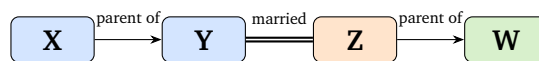
- (A) Father-in-law
- (B) Brother-in-law
- (C) Uncle
- (D) Grandfather

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

- $X \uparrow Y$ means X is the *parent* of Y.
- $X - Y$ means X is *married* to Y.
- $X \leftrightarrow Y$ means X and Y are *siblings*.



Given the expression: $X \uparrow Y - Z \uparrow W$, what is X's relation to W?



- (A) Parent
- (B) Sibling
- (C) Uncle/Aunt
- (D) Grandparent

Q29. A woman introduces a man by saying, “His father is the only son of my paternal grandfather.” How is the man related to the woman?

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

Q30. A person walks **5 km North** and then turns left and walks **12 km West**. What is the straight-line distance from the starting point?



- (A) 13 km
- (B) 11 km
- (C) 15 km
- (D) 17 km

Q31. A person initially faces **South**. He then turns **90° to his left**. Next, he turns **90° to his right**. Finally, he turns **90° to his right** once more. In which direction is he now facing?

- (A) East



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

Q32. A man starts walking towards the **sunrise**. He then turns **90° to his right**. In which direction is he now facing?

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

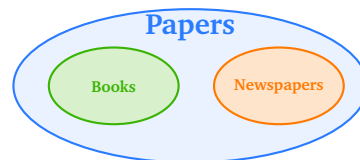
Q33. Statements:

All books are papers.

Some papers are newspapers.

Conclusions:

- I. Some books are newspapers.
- II. Some newspapers are papers.



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:

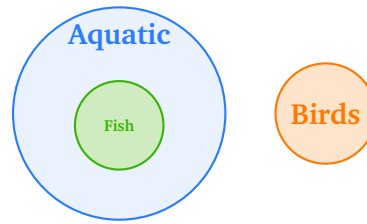
No birds are fish.

All fish are aquatic.

Conclusions:



- I. No birds are aquatic.
II. Some aquatic things are not birds.



Which conclusion(s) follow?

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

Q35. Statements:

All mangoes are fruits.
All fruits are nutritious.

Conclusions:

- I. All mangoes are nutritious.
II. All nutritious things are mangoes.

Which conclusion(s) follow?

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

Q36. Statements:

Some teachers are researchers.
Some researchers are authors.

Conclusions:

- I. Some teachers are authors.
II. Some authors are teachers.

Which conclusion(s) follow?



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

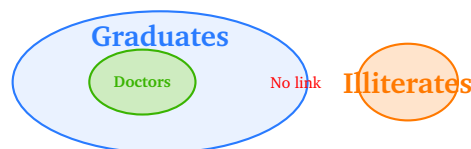
Q37. Statements:

All doctors are graduates.

No graduate is illiterate.

Conclusions:

- I. No doctor is illiterate.
- II. All illiterates are non-doctors.

**Which conclusion(s) follow?**

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

Q38. Statement: “The government has decided to provide free textbooks to students in government schools.”

Assumptions:

- I. Students in government schools need textbooks.
- II. Free textbooks will improve student performance.

Which assumption(s) are implicit in the statement?

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



Q39. Statement: “Despite heavy rains, the newly constructed flyover did not show any signs of damage.”

Conclusions:

- I. The flyover was constructed with high-quality materials.
- II. The engineers had anticipated heavy rainfall during construction.

Which conclusion(s) follow?

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

Q40. Statement: “Many children in the city are spending excessive time on mobile phones.”

Courses of Action:

- I. Parents should monitor and limit screen time for children.
- II. Mobile phone companies should be banned from selling phones to children.

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

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

Q41. Statement: “The crime rate in the city has increased by 25% over the last two years.”

Assumptions:

- I. There are more crimes being committed now than two years ago.
- II. The city needs more police officers.

Which assumption(s) are implicit in the statement?

- (A) Both I and II are implicit
- (B) Only II is implicit



- (C) Only I is implicit
- (D) Neither is implicit

Q42. Statement: “Using public transport reduces individual carbon footprint significantly.”

Conclusions:

- I. People who use public transport are environmentally responsible.
- II. Switching to public transport can help combat climate change.

Which conclusion(s) follow?

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

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



Seating Arrangement:

Seven people — Anil, Bindu, Charan, Deepa, Eshan, Faiza, and Gaurav — are seated in a **row of 7 seats** numbered 1 (left end) to 7 (right end).

- Anil sits at the left end (seat 1).
- Bindu sits at the right end (seat 7).
- Deepa occupies the 3rd seat from the left (seat 3).
- Charan sits immediately to the right of Deepa (seat 4).
- Gaurav sits immediately to the left of Faiza.
- Eshan occupies the remaining seat.

Anil	Eshan	Deepa	Charan	Gaurav	Faiza	Bindu
Seat 1	Seat 2	Seat 3	Seat 4	Seat 5	Seat 6	Seat 7

The arrangement from left to right is: **Anil(1) – Eshan(2) – Deepa(3) – Charan(4) – Gaurav(5) – Faiza(6) – Bindu(7).**

Q43. Who sits in the **middle** (4th seat from the left) of the row?

- (A) Deepa
- (B) Charan
- (C) Eshan
- (D) Gaurav

Q44. Who sits **immediately to the left** of Gaurav?

- (A) Charan
- (B) Deepa
- (C) Eshan
- (D) Faiza

Q45. How many people sit **between Anil and Faiza** in the row?

- (A) 2



- (B) 3
- (C) 5
- (D) 4

Q46. If Deepa and Eshan swap their seats, who will then sit 3rd from the left?

- (A) Deepa
- (B) Eshan
- (C) Charan
- (D) Anil

Q47. Who sits 3rd from the right end of the row?

- (A) Charan
- (B) Faiza
- (C) Gaurav
- (D) Eshan

Q48. Who are the immediate neighbours of Deepa?

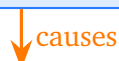
- (A) Anil and Charan
- (B) Anil and Eshan
- (C) Eshan and Charan
- (D) Charan and Faiza

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

Statement I: The city received its highest rainfall in 50 years.

Statement II: Many low-lying areas of the city were inundated.

Heavy Rainfall (I)



Inundation (II)



Options:

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

Q50. Assertion (A): The Great Wall of China was built to keep out invaders.

Reason (R): The Great Wall of China is one of the longest man-made structures in the world.

Select the correct option:

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



Detailed Solutions

Solution

Q1 — Number Series: Squares of Consecutive Primes

Concept — Perfect Squares of Primes: The series is formed by squaring each prime number in order: $2^2, 3^2, 5^2, 7^2, 11^2, 13^2, \dots$

Step 1 — Identify the primes used: 2, 3, 5, 7, 11, 13 give 4, 9, 25, 49, 121, 169.

Step 2 — Find the next prime: After 13, the next prime is 17.

Step 3 — Compute the next term: $17^2 = 289$.

Why other options are wrong:

- (A) $196 = 14^2$, but 14 is not a prime.
- (C) $256 = 16^2$, but 16 is not a prime.
- (D) $324 = 18^2$, but 18 is not a prime.

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

Solution

Q2 — Number Series: Pentagonal Numbers

Concept — Pentagonal Number Formula: The n -th pentagonal number is given by $P(n) = \frac{n(3n-1)}{2}$.

Step 1 — Verify the series:

$$P(1) = 1, \quad P(2) = 5, \quad P(3) = 12, \quad P(4) = 22, \quad P(5) = 35, \quad P(6) = 51.$$

Step 2 — Compute $P(7)$:

$$P(7) = \frac{7(3 \times 7 - 1)}{2} = \frac{7 \times 20}{2} = \frac{140}{2} = 70.$$

Alternative check via differences: Differences are 4, 7, 10, 13, 16 (arithmetic progression with $d = 3$). Next difference: $16 + 3 = 19$. So $51 + 19 = 70$. ✓

Why other options are wrong:

- (A) 60: $51 + 9$ – uses wrong difference.
- (B) 64: $51 + 13$ – reuses the previous difference.
- (C) 66: $51 + 15$ – off by 4 from correct difference.



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

Solution

Q3 — Number Series: Triangular-Number Differences

Concept — Triangular Numbers as Differences: Triangular numbers: $T_1 = 1, T_2 = 3, T_3 = 6, T_4 = 10, T_5 = 15, T_6 = 21$.

Step 1 — Verify the differences:

$$3-2 = 1 = T_1, \quad 6-3 = 3 = T_2, \quad 12-6 = 6 = T_3, \quad 22-12 = 10 = T_4, \quad 37-22 = 15 = T_5.$$

Step 2 — Find the next difference: $T_6 = \frac{6 \times 7}{2} = 21$.

Step 3 — Compute the next term: $37 + 21 = 58$.

Why other options are wrong:

- (B) 52: $37 + 15$ – reuses T_5 instead of advancing to T_6 .
- (C) 55: $37 + 18$ – 18 is not a triangular number.
- (D) 60: $37 + 23$ – 23 is not a triangular number.

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

Solution

Q4 — Number Series: Alternating $+4$ and $\times 3$

Concept — Alternating Operations: The series alternates between adding 4 and multiplying by 3.

Step 1 — Verify the pattern:

$$3 \xrightarrow{+4} 7 \xrightarrow{\times 3} 21 \xrightarrow{+4} 25 \xrightarrow{\times 3} 75 \xrightarrow{+4} 79 \xrightarrow{\times 3} ?$$

Step 2 — Apply the next operation: The last operation was $+4$ (from 75 to 79). The next operation is $\times 3$: $79 \times 3 = 237$.

Why other options are wrong:

- (A) 220: Not 79×3 ; would require an incorrect multiplier.
- (B) 200: Similarly incorrect.
- (D) 250: $79 \times 3 = 237$, not 250.



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

Solution

Q5 — Number Series: Centred Square Numbers

Concept — Centred Square Number Formula: The n -th centred square number is $C(n) = 2n(n - 1) + 1$.

Step 1 — Verify the series:

$$C(1) = 1, \quad C(2) = 5, \quad C(3) = 13, \quad C(4) = 25, \quad C(5) = 41, \quad C(6) = 61.$$

Step 2 — Compute $C(7)$:

$$C(7) = 2 \times 7 \times 6 + 1 = 84 + 1 = 85.$$

Alternative check via differences: Differences are 4, 8, 12, 16, 20 (multiples of 4). Next difference: 24. So $61 + 24 = 85$. ✓

Why other options are wrong:

- (A) 72: $61 + 11$ – not the correct difference.
- (B) 78: $61 + 17$ – not a multiple of 4.
- (C) 80: $61 + 19$ – not a multiple of 4.

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

Solution

Q6 — Number Series: Sum of Cubes Formula

Concept — Sum of Cubes: The sum of the first n natural numbers cubed equals $\left[\frac{n(n+1)}{2} \right]^2$.

Step 1 — Verify the series:

$$n = 1 : \left[\frac{1 \cdot 2}{2} \right]^2 = 1^2 = 1; \quad n = 2 : \left[\frac{2 \cdot 3}{2} \right]^2 = 3^2 = 9; \quad n = 3 : 6^2 = 36; \quad n = 4 : 10^2 = 100; \quad n = 5 : 15^2 = 225$$

Step 2 — Compute for $n = 7$:

$$\frac{7 \times 8}{2} = 28. \quad \text{So the next term} = 28^2 = 784.$$



Why other options are wrong:

- (A) $576 = 24^2$ – would correspond to n where $n(n+1)/2 = 24$, which has no integer solution.
- (C) $625 = 25^2$ – similarly does not fit the formula.
- (D) $900 = 30^2$ – would require $n(n+1)/2 = 30$, giving $n = 7.3$ (non-integer).

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

Solution

Q7 — Analogy: Classical Dance Form – State

Concept — Classical Dance Associations: Each classical Indian dance form is associated with a specific state of origin.

Step 1 — Identify the relationship: ODISSI is the classical dance form of ODISHA.

Step 2 — Apply to BHARATANATYAM: BHARATANATYAM is the classical dance form originating from TAMIL NADU.

Why other options are wrong:

- (B) KERALA: MOHINIYATTAM and KATHAKALI are Kerala's classical dances.
- (C) MANIPUR: MANIPURI is the classical dance form of Manipur.
- (D) ANDHRA PRADESH: KUCHIPUDI is the classical dance form of Andhra Pradesh.

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

Solution

Q8 — Analogy: Producer – Product

Concept — Creature-to-Product Relationship: The first word is a living organism; the second is the substance it produces.

Step 1 — Identify the relationship: A BEE produces HONEY.

Step 2 — Apply to SILKWORM: A SILKWORM produces SILK (the natural fibre unwound from its cocoon).

Why other options are wrong:

- (A) THREAD: Thread is a processed product, not what the silkworm directly produces.



- (B) COCOON: The cocoon is the protective casing the silkworm builds, not the product extracted from it.
- (D) FABRIC: Fabric is a manufactured product made from silk, not produced by the silkworm directly.

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

Solution

Q9 — Analogy: Geographical Lines

Concept — Geographical Line Names: Each type of geographical line on a globe has a specific technical name.

Step 1 — Identify the relationship: Lines of LATITUDE are also called PARALLELS (they run parallel to the Equator).

Step 2 — Apply to LONGITUDE: Lines of LONGITUDE are also called MERIDIANS (they converge at the poles).

Why other options are wrong:

- (A) EQUATOR: The Equator is a specific latitude (0°), not the name for all longitudes.
- (C) PRIME: “Prime” refers to the Prime Meridian (0° longitude) specifically, not to longitude lines in general.
- (D) AXIS: The axis is the imaginary line through the poles around which Earth rotates – not a synonym for longitude.

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

Solution

Q10 — Analogy: Literary Works

Concept — Subject of the Written Work: The relationship is: the written form describes whose life is the subject.

Step 1 — Identify the relationship: A BIOGRAPHY is a written account of ANOTHER PERSON’S LIFE.

Step 2 — Apply to AUTOBIOGRAPHY: An AUTOBIOGRAPHY is a written account of the AUTHOR’S OWN LIFE.

Why other options are wrong:



- (A) READER: The reader consumes the work but is not the subject.
- (B) PUBLISHER: The publisher distributes the book but is not the subject.
- (C) NARRATOR: The narrator tells the story but in an autobiography, the narrator IS the author – the answer must specify whose life it covers.

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

Solution

Q11 — Analogy: Collective Noun

Concept — Unit to Collective Group: The first word is an individual unit; the second is the collective noun for a group of that unit.

Step 1 — Identify the relationship: A group of STARS forms a CONSTELLATION.

Step 2 — Apply to SOLDIER: A group of SOLDIERS forms a REGIMENT.

Why other options are wrong:

- (B) COMPANY: A company is a sub-unit of a battalion; it is a smaller group than a regiment.
- (C) ARMY: An army is the broadest collective – comprising multiple regiments and divisions – and is not the direct parallel to “constellation.”
- (D) BATTALION: A battalion is larger than a company but smaller than a regiment; none matches the precision of “regiment” as the primary collective for soldiers.

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

Solution

Q12 — Coding–Decoding: Position-Based Cumulative Shift

Concept — Shift by Position Number: Each letter is shifted forward by its position in the word: 1st letter +1, 2nd +2, 3rd +3, 4th +4.

Step 1 — Verify using the example (PLAN → QNDR): $P(16)+1=Q(17)$, $L(12)+2=N(14)$, $A(1)+3=D(4)$, $N(14)+4=R(18)$. ✓

Step 2 — Apply to ROSE:

- $R(18)+1 = S(19)$
- $O(15)+2 = Q(17)$
- $S(19)+3 = V(22)$



- $E(5) + 4 = I(9)$

Code = **SQVI**.

Why other options are wrong:

- (A) RQVI: First letter is R not S – forgot to shift R by +1.
- (B) SQVJ: Last letter J(10) = E(5) + 5; position 4 should shift by +4, giving I(9).
- (D) SPVI: Third letter P(16) = S(19) - 3; should be V(22).

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

Solution

Q13 — Coding–Decoding: Mirror Alphabet ($A \leftrightarrow Z$)

Concept — Mirror Substitution: Letter at position p maps to position $27 - p$:
 $A(1) \rightarrow Z(26)$, $B(2) \rightarrow Y(25)$, ..., $M(13) \rightarrow N(14)$.

Step 1 — Verify using the example ($CAT \rightarrow XZG$): $C(3) \rightarrow X(24)$, $A(1) \rightarrow Z(26)$, $T(20) \rightarrow G(7)$. ✓

Step 2 — Apply to BIRD:

- $B(2) \rightarrow 27 - 2 = 25 = Y$
- $I(9) \rightarrow 27 - 9 = 18 = R$
- $R(18) \rightarrow 27 - 18 = 9 = I$
- $D(4) \rightarrow 27 - 4 = 23 = W$

Code = **YRIW**.

Why other options are wrong:

- (B) YRIY: Last letter Y(25) = B(2)'s mirror, not D's mirror.
- (C) XRIW: First letter X(24) is C's mirror; B maps to Y not X.
- (D) YSIW: Second letter S – I(9) maps to R(18), not S(19).

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



Solution**Q14 — Coding–Decoding: Backward Shift of -2**

Concept — Two-Place Backward Shift: Each letter moves 2 positions back: $C \rightarrow A$, $D \rightarrow B$, ..., $A \rightarrow Y$, $B \rightarrow Z$ (wrap-around).

Step 1 — Verify using the example ($CAT \rightarrow AYR$): $C(3) - 2 = A(1)$, $A(1) - 2 = Y(25)$, $T(20) - 2 = R(18)$. ✓

Step 2 — Apply to WIND:

- $W(23) - 2 = U(21)$
- $I(9) - 2 = G(7)$
- $N(14) - 2 = L(12)$
- $D(4) - 2 = B(2)$

Code = **UGLB**.

Why other options are wrong:

- (A) UGKB: Third letter $K(11) = N(14) - 3$; should be -2 giving $L(12)$.
- (B) VGLB: First letter $V(22) = W(23) - 1$; should be -2 giving $U(21)$.
- (C) UHLB: Second letter $H(8) = I(9) - 1$; should be -2 giving $G(7)$.

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

Solution**Q15 — Coding–Decoding: Next Consonant in Alphabet**

Concept — Replace with Next Consonant: Each letter is replaced by the next consonant after it. Vowels (A, E, I, O, U) are skipped. Z wraps to B.

Key mappings: $A \rightarrow B$, $B \rightarrow C$, $C \rightarrow D$, $D \rightarrow F$, $E \rightarrow F$, $F \rightarrow G$, $G \rightarrow H$, $H \rightarrow J$, $I \rightarrow J$, $J \rightarrow K$, $K \rightarrow L$, $L \rightarrow M$, $M \rightarrow N$, $N \rightarrow P$, $O \rightarrow P$, $P \rightarrow Q$, $Q \rightarrow R$, $R \rightarrow S$, $S \rightarrow T$, $T \rightarrow V$, $U \rightarrow V$, $V \rightarrow W$, $W \rightarrow X$, $X \rightarrow Y$, $Y \rightarrow Z$, $Z \rightarrow B$.

Step 1 — Verify using the example ($CAT \rightarrow DBV$): $C \rightarrow D$, $A \rightarrow B$, $T \rightarrow V$. ✓

Step 2 — Apply to MINE:

- $M \rightarrow N$ (next consonant after M)
- $I \rightarrow J$ (next consonant after I, skipping I as vowel)
- $N \rightarrow P$ (next consonant after N, skipping O)



- E → F (next consonant after E, skipping E as vowel)

Code = **NJPF**.

Why other options are wrong:

- (A) MIPF: First letter M (unchanged) and I unchanged – rule was not applied.
- (C) NJPE: Last letter E→F, not E; the vowel E maps to F.
- (D) NKPF: Second letter K – I maps to J, not K.

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

Solution

Q16 — Coding–Decoding: Consecutive Pair Swap

Concept — Adjacent Letter Swap: Swap pairs of adjacent letters: positions (1,2), (3,4), (5,6), ...; for odd-length words, the last letter is unchanged.

Step 1 — Verify using the example (STONE → TSNOE): (S,T)→(T,S); (O,N)→(N,O); E stays ⇒ T,S,N,O,E = TSNOE. ✓

Step 2 — Apply to CLIMB (5 letters): C(1), L(2), I(3), M(4), B(5).

- (C,L) → (L,C)
- (I,M) → (M,I)
- B stays

Code = L, C, M, I, B = **LCMIB**.

Why other options are wrong:

- (A) CLMIB: Positions 1,2 not swapped (CL unchanged).
- (B) LCMBI: Last two letters BI swapped; B is the 5th (odd position) – it should stay in place.
- (D) CLBIM: Multiple errors in the swap order.

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



Solution**Q17 — Classification: Keyboard Instrument vs. String Instruments**

Concept — Musical Instrument Classification: Instruments are classified by how they produce sound.

Step 1 — Classify each instrument: VIOLIN → string (bowed), GUITAR → string (plucked), SITAR → string (plucked).

PIANO → keyboard instrument (strings struck by hammers triggered by keys – classified as keyboard, not simply a string instrument).

Step 2 — Identify the odd one out: VIOLIN, GUITAR, and SITAR are played directly as string instruments. **PIANO** is classified as a keyboard instrument.

Why other options are wrong:

- (A) VIOLIN: Bowed string – clearly belongs.
- (C) GUITAR: Plucked string – clearly belongs.
- (D) SITAR: Plucked string – clearly belongs.

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

Solution**Q18 — Classification: Non-Capital City**

Concept — National Capital Identification: Three of the four cities are national capitals; one is not.

Step 1 — Check each city:

- PARIS: Capital of France. ✓
- LONDON: Capital of the United Kingdom. ✓
- ROME: Capital of Italy. ✓
- SYDNEY: Largest city of Australia, but the capital is **Canberra**. ✗

Step 2 — Identify the odd one out: SYDNEY is NOT a national capital.

Why other options are wrong:

- (A) PARIS: Definitely the capital of France.
- (B) LONDON: Definitely the capital of the UK.
- (C) ROME: Definitely the capital of Italy.

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



Solution**Q19 — Classification: Letter Group with Broken +5 Gap**

Concept — Uniform Gap Test: Check whether consecutive letters in each group are exactly 5 positions apart.

Step 1 — Test each group (positions: A=1, B=2, ...):

- **BGLP:** B(2)→G(7): +5✓; G(7)→L(12): +5✓; L(12)→P(16): +4 ×
- **FKPU:** F(6)→K(11): +5✓; K(11)→P(16): +5✓; P(16)→U(21): +5✓
- **GLQV:** G(7)→L(12): +5✓; L(12)→Q(17): +5✓; Q(17)→V(22): +5✓
- **CHMR:** C(3)→H(8): +5✓; H(8)→M(13): +5✓; M(13)→R(18): +5✓

Step 2 — Identify the odd one out: BGLP has a gap of +4 (not +5) between L and P.

Why other options are wrong:

- (B) FKPU: All gaps are exactly +5.
- (C) GLQV: All gaps are exactly +5.
- (D) CHMR: All gaps are exactly +5.

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

Solution**Q20 — Classification: Not a Perfect Cube**

Concept — Perfect Cube Identification: n^3 for integers n : 1, 8, 27, 64, 125, 216, ...

Step 1 — Check each number:

- $27 = 3^3$. ✓
- $64 = 4^3$. ✓
- $125 = 5^3$. ✓
- 150: $5^3 = 125$, $6^3 = 216$. $125 < 150 < 216$ – **not a perfect cube.** ×

Step 2 — Identify the odd one out: 150.

Why other options are wrong:

- (A) 27: 3^3 – is a perfect cube.
- (B) 64: 4^3 – is a perfect cube.
- (D) 125: 5^3 – is a perfect cube.



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

Solution

Q21 — Ranking/Ordering: Finding the Oldest Person

Concept — Ordering by Age Using Clues: Chain the inequalities to find the complete ordering.

Step 1 — Build the chain:

- Ananya < Bharat (Ananya is younger than Bharat)
- Bharat < Chitra
- Chitra < Dinesh (Dinesh is older than Chitra)
- Esha < Ananya

Step 2 — Full order (youngest to oldest):

$$\text{Esha} < \text{Ananya} < \text{Bharat} < \text{Chitra} < \text{Dinesh}$$

Step 3 — Identify the oldest: Dinesh is the oldest.

Why other options are wrong:

- (A) Ananya: Younger than both Bharat, Chitra, and Dinesh.
- (B) Bharat: Younger than Chitra and Dinesh.
- (C) Chitra: Younger than Dinesh.

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

Solution

Q22 — Ranking/Ordering: Total People in a Row

Concept — Row Count Formula: If a person is m -th from the left and n -th from the right, total = $m + n - 1$.

Step 1 — Apply the formula: Mohan is 5th from the left and 10th from the right.

$$\text{Total} = 5 + 10 - 1 = 14.$$

Step 2 — Verify: There are 4 people to Mohan's left, Mohan himself, and 9 people to



his right: $4 + 1 + 9 = 14$. ✓

Why other options are wrong:

- (B) 15: $5 + 10 = 15$ – common error of not subtracting 1 for Mohan counted twice.
- (C) 13: $5 + 10 - 2 = 13$ – subtracts 2 instead of 1.
- (D) 16: $5 + 10 + 1$ – adds instead of subtracts.

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

Solution

Q23 — Ranking/Ordering: Total Students in a Class

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

Step 1 — Apply the formula: Reena is 14th from top and 28th from bottom.

$$\text{Total} = 14 + 28 - 1 = 41.$$

Step 2 — Verify: There are 13 students above Reena, Reena herself, and 27 students below: $13 + 1 + 27 = 41$. ✓

Why other options are wrong:

- (A) 38: $14 + 28 - 4 = 38$ – incorrect subtraction.
- (B) 40: $14 + 28 - 2 = 40$ – subtracts 2 instead of 1.
- (D) 42: $14 + 28 = 42$ – forgot to subtract 1.

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

Solution

Q24 — Ranking/Ordering: Alphabetical Order

Concept — Dictionary (Alphabetical) Ordering: Compare words letter by letter from left to right.

Step 1 — All words start with KI:

- KICK – 3rd letter C(3)
- KIND – 3rd letter N(14)



- KING – 3rd letter N(14)
- KITE – 3rd letter T(20)
- KIWI – 3rd letter W(23)

Step 2 — Sort by 3rd letter: KICK (C) < KIND/KING (N) < KITE (T) < KIWI (W).

Step 3 — Break the tie between KIND and KING: KIND(4) < KING(7). So KIND < KING.

Step 4 — Final order: 1. KICK, 2. KIND, 3. **KING**, 4. KITE, 5. KIWI.

The 3rd word is **KING**.

Why other options are wrong:

- (A) KIND: KIND is 2nd, not 3rd.
- (C) KITE: KITE is 4th.
- (D) KIWI: KIWI is 5th.

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

Solution

Q25 — Direction: Straight-Line Distance (Pythagorean Theorem)

Concept — Right-Triangle Distance: Walking North then East creates a right angle; use the Pythagorean theorem.

Step 1 — Identify the legs: North leg = 8 km; East leg = 15 km.

Step 2 — Apply Pythagoras:

$$d = \sqrt{8^2 + 15^2} = \sqrt{64 + 225} = \sqrt{289} = 17 \text{ km.}$$

This is the classic 8-15-17 Pythagorean triple.

Why other options are wrong:

- (A) 13 km: $\sqrt{64 + 225} = 17$, not 13. (13 comes from the 5-12-13 triple.)
- (B) 15 km: 15 is just the East leg, not the hypotenuse.
- (C) 16 km: $\sqrt{256} = 16$ – 256 is not 64 + 225.

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



Solution**Q26 — Blood Relations: Wife of Paternal Uncle**

Concept — Tracing the Relation: Identify each step in the chain and determine the final relation.

Step 1 — Parse the description: “My father’s only brother” = paternal uncle.

Step 2 — Determine the relation: The wife of the man’s paternal uncle is his **Aunt** (specifically, aunt-by-marriage / paternal aunt).

Why other options are wrong:

- (A) Sister: A sister is a sibling – not the wife of an uncle.
- (B) Mother: The mother is the wife of one’s father, not one’s uncle.
- (D) Cousin: A cousin is the child of an uncle or aunt, not the aunt herself.

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

Solution**Q27 — Blood Relations: Father-in-Law Chain**

Concept — Multi-Step Family Chain: Trace each relation carefully.

Step 1 — Parse the clues:

- P is the father of Q.
- Q is the brother of R $\Rightarrow$ P is also the father of R (Q and R are siblings).
- R is the mother of S.
- S is the son of T $\Rightarrow$ T is R’s husband (S’s father).

Step 2 — Determine P’s relation to T: P is the father of R. R is married to T. Therefore, P is T’s **father-in-law**.

Why other options are wrong:

- (B) Brother-in-law: P would need to be a sibling of T’s spouse – but P is the father, not sibling.
- (C) Uncle: P would need to be a sibling of T’s parent – incorrect.
- (D) Grandfather: P is T’s father-in-law, not a grandparent of T.

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



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

Concept — Decode the Symbol Chain: Interpret each symbol systematically.

Step 1 — Decode $X \uparrow Y - Z \uparrow W$:

- $X \uparrow Y$: X is the parent of Y.
- $Y - Z$: Y is married to Z.
- $Z \uparrow W$: Z is the parent of W.

Step 2 — Trace the relationship: X is the parent of Y. Y is married to Z $\Rightarrow$ X is the parent-in-law of Z. Z is the parent of W $\Rightarrow$ X is the grandparent of W.

Step 3 — Conclusion: X's relation to W is **Grandparent**.

Why other options are wrong:

- (A) Parent: X is separated from W by two steps, not one.
- (B) Sibling: X is an ancestor, not a sibling.
- (C) Uncle/Aunt: No sibling link in the chain – X is a grandparent.

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

Solution**Q29 — Blood Relations: Son of Only Son of Paternal Grandfather**

Concept — Tracing via “Only Son”: The phrase “only son” fixes the identity precisely.

Step 1 — Parse the statement: “His father is the only son of my paternal grandfather.”

Step 2 — Identify the “only son”: My paternal grandfather's only son = **my father**.

Step 3 — Identify the man: The man's father = my father $\Rightarrow$ the man and I share the same father $\Rightarrow$ the man is my **Brother**.

Why other options are wrong:

- (A) Father: The man would be the father only if he were the woman's father – but the man's father is her father, making him her brother.
- (C) Uncle: An uncle is her father's brother – but here the man's father IS her father.
- (D) Cousin: A cousin would have a different grandfather's son as father.

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



Solution**Q30 — Directions: 5-12-13 Pythagorean Triple**

Concept — Right-Triangle Distance: Walking North then West creates a right angle; use the Pythagorean theorem.

Step 1 — Identify the legs: North leg = 5 km; West leg = 12 km.

Step 2 — Apply Pythagoras:

$$d = \sqrt{5^2 + 12^2} = \sqrt{25 + 144} = \sqrt{169} = 13 \text{ km.}$$

This is the classic 5-12-13 Pythagorean triple.

Why other options are wrong:

- (B) 11 km: $\sqrt{121} = 11$ – does not equal $\sqrt{25 + 144}$.
- (C) 15 km: $\sqrt{225} = 15$ – would require legs of 9 and 12.
- (D) 17 km: $\sqrt{289} = 17$ – would require legs of 8 and 15.

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

Solution**Q31 — Directions: Turn Sequence Ending West**

Concept — Tracking Direction Through Turns: Update the current facing direction after each turn (left = 90° CCW, right = 90° CW).

Step 1 — Initial direction: South.

Step 2 — Turn 1: 90° left from South: Left from South = **East**.

Step 3 — Turn 2: 90° right from East: Right from East = **South**.

Step 4 — Turn 3: 90° right from South: Right from South = **West**.

Final direction: West.

Why other options are wrong:

- (A) East: This was the direction after only the first turn.
- (B) North: Would require a left turn from West, not a right turn from South.
- (D) South: This was the direction after two turns, not three.

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



Solution**Q32 — Directions: Sunrise Orientation**

Concept — Sunrise is in the East: The sun rises in the East, so walking towards the sunrise means walking East.

Step 1 — Identify initial direction: Walking towards sunrise = walking **East**.

Step 2 — Turn 90° right from East: A right turn (90° clockwise) from East = **South**.

Final direction: South.

Why other options are wrong:

- (A) East: This was the initial direction before the turn.
- (C) West: West is opposite to East – requires a 180° turn, not 90° right.
- (D) North: A 90° left from East gives North, not a right turn.

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

Solution**Q33 — Syllogism: Books, Papers, Newspapers (Only II)**

Concept — Evaluating Syllogistic Conclusions: Use the Venn diagram: Books $\subseteq$ Papers; Newspapers partially overlap Papers but not necessarily Books.

Step 1 — Test Conclusion I: “Some books are newspapers”: The “some papers are newspapers” set may be entirely outside the Books subset. There is no guarantee that any book is a newspaper. **Conclusion I does NOT follow.**

Step 2 — Test Conclusion II: “Some newspapers are papers”: This is a direct conversion of the premise “Some papers are newspapers” (I→I conversion is valid). **Conclusion II FOLLOWS.**

Final answer: Only II follows.

Why other options are wrong:

- (A) Both follow: Conclusion I is not valid.
- (B) Only I follows: Conclusion I is not valid.
- (C) Neither: Conclusion II is a valid simple conversion.

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



Solution**Q34 — Syllogism: Birds, Fish, Aquatic (Only II)**

Concept — Venn Diagram Analysis: $\text{Fish} \subseteq \text{Aquatic}$; $\text{Birds} \cap \text{Fish} = \emptyset$. Birds may or may not be Aquatic.

Step 1 — Test Conclusion I: “No birds are aquatic”: Even though no bird is a fish, some birds (e.g., penguins, ducks) could be aquatic. Conclusion I goes beyond what is stated. **Conclusion I does NOT necessarily follow.**

Step 2 — Test Conclusion II: “Some aquatic things are not birds”: All fish are aquatic, and no fish is a bird. So those fish (which are aquatic) are not birds. Therefore some aquatic things are definitely not birds. **Conclusion II FOLLOWS.**

Final answer: Only II follows.

Why other options are wrong:

- (A) Both: Conclusion I is not certain.
- (C) Only I: Conclusion I is not valid; Conclusion II is.
- (D) Neither: Conclusion II is valid.

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

Solution**Q35 — Syllogism: All-All Chain (Only I)**

Concept — Transitive “All” Syllogism: If all A are B and all B are C, then all A are C.

Step 1 — Test Conclusion I: “All mangoes are nutritious”: All mangoes are fruits (given). All fruits are nutritious (given). By transitivity: all mangoes are nutritious. **Conclusion I FOLLOWS.**

Step 2 — Test Conclusion II: “All nutritious things are mangoes”: This reverses the direction. Even though all mangoes are nutritious, there are many other nutritious things (e.g., vegetables, grains). **Conclusion II does NOT follow.**

Final answer: Only I follows.

Why other options are wrong:

- (B) Only II: Conclusion II is an invalid reversal.
- (C) Both: Conclusion II is invalid.
- (D) Neither: Conclusion I is valid by transitivity.

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



Solution**Q36 — Syllogism: Teachers, Researchers, Authors (Neither)**

Concept — “Some-Some” Does Not Chain: Two “some” premises do not guarantee any connection between the extreme sets.

Step 1 — Test Conclusion I: “Some teachers are authors”: The teachers who are researchers may not be the same researchers who are authors. The two “some” groups need not overlap. **Conclusion I does NOT necessarily follow.**

Step 2 — Test Conclusion II: “Some authors are teachers”: Same reasoning as Conclusion I – this is simply the converse of I, which also cannot be established. **Conclusion II does NOT follow.**

Final answer: Neither I nor II follows.

Why other options are wrong:

- (A) Both: Neither is valid with two “some” premises.
- (B) Only I: Conclusion I is not valid.
- (D) Only II: Conclusion II is not valid.

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

Solution**Q37 — Syllogism: Doctors, Graduates, Illiterates (Both Follow)**

Concept — All-No Chain: If all A are B and no B is C, then no A is C (and equivalently, all C are non-A).

Step 1 — Test Conclusion I: “No doctor is illiterate”: All doctors are graduates (given). No graduate is illiterate (given). Since every doctor is a graduate, and no graduate is illiterate, no doctor can be illiterate. **Conclusion I FOLLOWS.**

Step 2 — Test Conclusion II: “All illiterates are non-doctors”: This is logically equivalent to “no illiterate is a doctor,” which is the converse of Conclusion I. Since no doctor is illiterate, it follows that no illiterate is a doctor, i.e., all illiterates are non-doctors. **Conclusion II FOLLOWS.**

Final answer: Both I and II follow.

Why other options are wrong:

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



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

Solution

Q38 — Statement-Assumption: Free Textbooks

Concept — Implicit Assumptions: An assumption is something that must be true for the statement to make sense.

Step 1 — Test Assumption I: “Students in government schools need textbooks”: The government’s decision to provide textbooks is based on the understanding that students need them. This is the direct premise behind the action – clearly implicit. **Assumption I IS implicit.**

Step 2 — Test Assumption II: “Free textbooks will improve student performance”: This is a hoped-for outcome or policy goal, not a prior assumption. The government could provide textbooks for access reasons alone, not necessarily expecting performance improvement. **Assumption II is NOT necessarily implicit.**

Final answer: Only I is implicit.

Why other options are wrong:

- (A) Only II: Assumption II is speculative, not implicit.
- (C) Both: Assumption II is not implicit.
- (D) Neither: Assumption I is clearly implicit.

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

Solution

Q39 — Statement-Conclusion: Flyover Withstands Rain

Concept — Valid Inference from Evidence: A conclusion must be directly supported by the statement without speculation.

Step 1 — Test Conclusion I: “The flyover was constructed with high-quality materials”: If the flyover showed no damage despite heavy rain, the most direct inference is that it was built well, which implies quality materials. **Conclusion I FOLLOWS.**

Step 2 — Test Conclusion II: “The engineers had anticipated heavy rainfall during construction”: This speculates about the engineers’ intent or foresight – something not stated or necessarily implied. A flyover may simply have been built to standard specifications. **Conclusion II does NOT necessarily follow.**

Final answer: Only I follows.



Why other options are wrong:

- (A) Both: Conclusion II is speculative.
- (B) Only II: Conclusion II is not valid; Conclusion I is.
- (C) Neither: Conclusion I is a direct, valid inference.

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

Solution

Q40 — Course of Action: Children and Mobile Phones

Concept — Evaluating Practicality of Action: A course of action should be targeted, practical, and proportionate to the problem.

Step 1 — Test Course of Action I: “Parents should monitor and limit screen time”: This is a direct, targeted, and practical response to children’s excessive phone use. Parents are the primary supervisors of children’s behaviour. **Course I FOLLOWS logically.**

Step 2 — Test Course of Action II: “Mobile phone companies should be banned from selling to children”: This is an extreme, broadly impractical measure. It ignores that phones have many legitimate uses and that parents (not companies) are responsible for regulation at home. **Course II does NOT follow logically.**

Final answer: Only I follows.

Why other options are wrong:

- (B) Only II: Course II is extreme and impractical.
- (C) Both: Course II is not logically recommended.
- (D) Neither: Course I is clearly a rational response.

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

Solution

Q41 — Statement-Assumption: Crime Rate Increase

Concept — Distinguishing Implicit Assumptions from Conclusions: An assumption is a pre-condition or background belief; a conclusion is a derived outcome.

Step 1 — Test Assumption I: “There are more crimes being committed now than two years ago”: A 25% increase in crime rate directly implies there are more crimes now. This is the straightforward meaning of the statement – it is implicit and factually



embedded. **Assumption I IS implicit.**

Step 2 — Test Assumption II: “The city needs more police officers”: This is a policy recommendation or course of action derived from the statement, not an assumption. The statement does not pre-suppose any solution. **Assumption II is NOT implicit.**

Final answer: Only I is implicit.

Why other options are wrong:

- (A) Both: Assumption II is a policy suggestion, not an assumption.
- (B) Only II: Assumption II is not implicit.
- (D) Neither: Assumption I is directly implicit.

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

Solution

Q42 — Statement-Conclusion: Public Transport and Carbon Footprint

Concept — Directly Supported Conclusions Only: A conclusion must be derivable from the statement, not from assumptions about motivation.

Step 1 — Test Conclusion I: “People who use public transport are environmentally responsible”: Using public transport may reduce one’s carbon footprint, but one may do so for cost, convenience, or other reasons – not necessarily environmental responsibility. This infers motivation, which is unwarranted. **Conclusion I does NOT follow.**

Step 2 — Test Conclusion II: “Switching to public transport can help combat climate change”: Reduced carbon footprint per individual $\Rightarrow$ lower overall greenhouse gas emissions $\Rightarrow$ helps combat climate change. This is a direct and valid inference. **Conclusion II FOLLOWS.**

Final answer: Only II follows.

Why other options are wrong:

- (A) Both: Conclusion I infers intent without basis.
- (C) Only I: Conclusion I is not valid.
- (D) Neither: Conclusion II is valid.

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



Solution**Q43 — Seating Arrangement: Middle (4th) Seat**

Arrangement: Anil(1) – Eshan(2) – Deepa(3) – **Charan(4)** – Gaurav(5) – Faiza(6) – Bindu(7).

Step 1: The middle of a 7-seat row is seat 4.

Step 2: Seat 4 is occupied by **Charan**.

Why other options are wrong:

- (A) Deepa: Deepa is in seat 3 (3rd from left), not 4th.
- (C) Eshan: Eshan is in seat 2.
- (D) Gaurav: Gaurav is in seat 5.

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

Solution**Q44 — Seating Arrangement: Immediately Left of Gaurav**

Arrangement: Anil(1) – Eshan(2) – Deepa(3) – Charan(4) – **Gaurav(5)** – Faiza(6) – Bindu(7).

Step 1: Gaurav is in seat 5. The seat immediately to his left is seat 4.

Step 2: Seat 4 is occupied by **Charan**.

Why other options are wrong:

- (B) Deepa: Deepa is in seat 3, two seats to the left of Gaurav.
- (C) Eshan: Eshan is in seat 2, three seats away.
- (D) Faiza: Faiza is in seat 6, immediately to the RIGHT of Gaurav.

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

Solution**Q45 — Seating Arrangement: People Between Anil and Faiza**

Arrangement: Anil(1) – Eshan(2) – Deepa(3) – Charan(4) – Gaurav(5) – **Faiza(6)** – Bindu(7).

Step 1: Anil is at seat 1; Faiza is at seat 6.

Step 2: Seats between them: 2 (Eshan), 3 (Deepa), 4 (Charan), 5 (Gaurav) = **4 people**.



Why other options are wrong:

- (A) 2: Only counts 2 of the 4 people between them.
- (B) 3: Misses one person; there are seats 2,3,4,5 = 4 seats between.
- (C) 5: Includes either Anil or Faiza in the count.

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

Solution

Q46 — Seating Arrangement: After Deepa and Eshan Swap

Original: Anil(1) – Eshan(2) – Deepa(3) – Charan(4) – Gaurav(5) – Faiza(6) – Bindu(7).

Step 1 — After Deepa and Eshan swap: Anil(1) – Deepa(2) – Eshan(3) – Charan(4) – Gaurav(5) – Faiza(6) – Bindu(7).

Step 2 — Who is 3rd from the left? Seat 3 after the swap = **Eshan**.

Why other options are wrong:

- (A) Deepa: After the swap, Deepa is in seat 2, not 3.
- (C) Charan: Charan remains in seat 4 throughout.
- (D) Anil: Anil remains in seat 1.

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

Solution

Q47 — Seating Arrangement: 3rd from the Right End

Arrangement: Anil(1) – Eshan(2) – Deepa(3) – Charan(4) – Gaurav(5) – Faiza(6) – Bindu(7).

Step 1: 3rd from the right end in a 7-seat row = seat $7 - 3 + 1$ = seat 5.

Step 2: Seat 5 is occupied by **Gaurav**.

Why other options are wrong:

- (A) Charan: Charan is in seat 4 = 4th from the right.
- (B) Faiza: Faiza is in seat 6 = 2nd from the right.
- (D) Eshan: Eshan is in seat 2 = 6th from the right.



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

Solution

Q48 — Seating Arrangement: Immediate Neighbours of Deepa

Arrangement: Anil(1) – Eshan(2) – **Deepa(3)** – Charan(4) – Gaurav(5) – Faiza(6) – Bindu(7).

Step 1: Deepa is in seat 3. Her left neighbour is seat 2 = **Eshan**; her right neighbour is seat 4 = **Charan**.

Immediate neighbours: Eshan and Charan.

Why other options are wrong:

- (A) Anil and Charan: Anil is in seat 1 – not adjacent to Deepa (seat 3).
- (B) Anil and Eshan: Anil is not adjacent to Deepa.
- (D) Charan and Faiza: Faiza is in seat 6 – far from Deepa.

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

Solution

Q49 — Cause–Effect: Heavy Rainfall and Inundation

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

Step 1 — Analyse the two statements: Statement I: The city received its highest rainfall in 50 years – a meteorological event. Statement II: Many low-lying areas were inundated – a physical outcome.

Step 2 — Determine the relationship: Record rainfall directly and inevitably leads to flooding (inundation) of low-lying areas. Statement I is the **cause**; Statement II is the **effect**.

Why other options are wrong:

- (A) II causes I: Inundation cannot cause rainfall – the sequence is reversed.
- (B) Both are effects of a common cause: There is a direct and obvious causal link between record rainfall and flooding; no third cause is required.
- (C) Both are independent: They are clearly related – record rain causes flooding.

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



Solution**Q50 — Assertion–Reason: Great Wall of China**

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

Step 1 — Is Assertion (A) true? “The Great Wall of China was built to keep out invaders.” This is **TRUE**. The Great Wall was built over many centuries as a military fortification to protect Chinese states against nomadic invasions from the north.

Step 2 — Is Reason (R) true? “The Great Wall of China is one of the longest man-made structures in the world.” This is **TRUE**. Stretching over 21,000 km in total (including all sections), it is one of the longest structures ever built.

Step 3 — Does R explain A? The reason (length/scale) describes *what* the wall is, not *why* it was built. The length of the wall does not explain its military purpose. **R does NOT explain A.**

Final answer: Both A and R are true, but R is NOT the correct explanation of A.

Why other options are wrong:

- (B) R explains A: The length of the wall is irrelevant to explaining why it was built.
- (C) A true, R false: R is factually true.
- (D) A false, R true: A is also factually true.

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



Answer Key

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

