

TANCET Reasoning

Sample Paper – 10

Duration: 60 Minutes

Maximum Marks: 50

Instructions

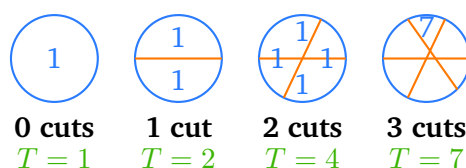
- This paper contains **50 MCQs** (single correct answer), modelled on the Reasoning sections of the **TANCET MCA** entrance examination.
- **Part A** (Q1–Q25): Analytical Reasoning. **Part B** (Q26–Q50): Logical Reasoning. Each part carries **25 marks**.
- Each correct answer carries **+1 mark**. Each 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. The differences between consecutive terms increase by 1 each time. Find the next term.

1, 2, 4, 7, 11, 16, ?

The figures below illustrate the *lazy caterer sequence*: each new straight cut adds one more piece than the previous cut.



- (A) 18
(B) 22
(C) 20
(D) 24

Q2. The following series lists the squares of consecutive integers in *decreasing* order. Identify the missing term.



100, 81, 64, 49, 36, 25, ?

- (A) 9
- (B) 12
- (C) 16
- (D) 18

Q3. Each term in the series below equals the difference between squares of two consecutive integers $(n + 1)^2 - n^2$. Find the next term.

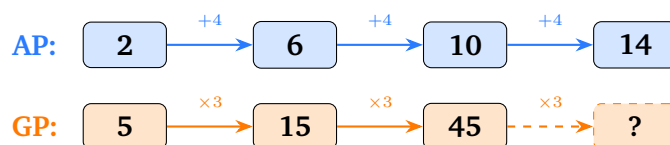
3, 5, 7, 9, 11, 13, ?

- (A) 14
- (B) 17
- (C) 12
- (D) 15

Q4. The series below is formed from *two interleaved sequences*: odd-position terms form an arithmetic progression and even-position terms form a geometric progression. Find the missing term.

2, 5, 6, 15, 10, 45, 14, ?

The diagram separates the two sub-sequences:



- (A) 135
- (B) 45
- (C) 120
- (D) 150

Q5. In the series below, the difference between successive terms is a perfect square $(1^2, 2^2, 3^2, \dots)$. What is the next term?

0, 1, 5, 14, 30, 55, 91, ?



- (A) 130
- (B) 140
- (C) 150
- (D) 125

Q6. Each term of the series is generated by the rule: $T(n) = T(n - 1) \times 2 - 3$. Find the next term.

5, 7, 11, 19, 35, 67, ?

- (A) 120
- (B) 128
- (C) 135
- (D) 131

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

HERBIVORE : PLANTS :: CARNIVORE : ?

- (A) MEAT
- (B) GRASS
- (C) INSECTS
- (D) FRUITS

Q8. Identify the relationship between the first pair and apply the same logic to the second pair.

CIRCLE : SPHERE :: SQUARE : ?

- (A) CYLINDER
- (B) PYRAMID
- (C) CONE
- (D) CUBE

Q9. Complete the analogy based on the relationship between a professional and the primary cutting tool they use.

HAMMER : CARPENTER :: SCALPEL : ?



- (A) DOCTOR
- (B) SURGEON
- (C) NURSE
- (D) PHYSICIAN

Q10. Complete the analogy based on the defining property of the type of triangle.

ISOSCELES : TWO EQUAL SIDES :: EQUILATERAL : ?

- (A) NO EQUAL SIDES
- (B) RIGHT ANGLE
- (C) THREE EQUAL SIDES
- (D) ONE EQUAL SIDE

Q11. The first pair shows a characteristic seasonal wind and the region where it is well known. Apply the same logic.

MONSOON : INDIA :: HARMATTAN : ?

- (A) WEST AFRICA
- (B) NORTH AMERICA
- (C) SOUTH AMERICA
- (D) AUSTRALIA

Q12. In a certain code, a word is first *reversed*, then each letter is replaced by the letter that comes *immediately after* it in the alphabet (*Z* wraps to *A*).

Example: BIRD $\rightarrow$ reversed = DRIB $\rightarrow$ each +1: D $\rightarrow$ E, R $\rightarrow$ S, I $\rightarrow$ J, B $\rightarrow$ C = ESJC

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

- (A) EBPQ
- (B) DBPS
- (C) EBPS
- (D) FBPS



Q13. In a certain code, each letter is shifted **2 places back** in the alphabet (wrapping: $A \rightarrow Y$, $B \rightarrow Z$, $C \rightarrow A$, ...).

Example: FINE $\rightarrow$ F($6 - 2 = 4 = D$), I($9 - 2 = 7 = G$), N($14 - 2 = 12 = L$), E($5 - 2 = 3 = C$) = DGLC

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

- (A) YMKB
- (B) ZNLC
- (C) ZMLB
- (D) ZMLC

Q14. In a certain code, each letter is shifted **6 places forward** in the alphabet (wrapping: $U \rightarrow A$, $V \rightarrow B$, $W \rightarrow C$, $X \rightarrow D$, $Y \rightarrow E$, $Z \rightarrow F$).

Example: STAR $\rightarrow$ S($19 + 6 = 25 = Y$), T($20 + 6 = 26 = Z$), A($1 + 6 = 7 = G$), R($18 + 6 = 24 = X$) = YZGX

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

- (A) UOTQ
- (B) VOTQ
- (C) VOTP
- (D) WOTQ

Q15. In a certain code, each *vowel* is replaced by the *next vowel* in the cyclic order $A \rightarrow E \rightarrow I \rightarrow O \rightarrow U \rightarrow A$, while consonants remain unchanged.

Example: LIME $\rightarrow$ L(stays), I $\rightarrow$ O, M(stays), E $\rightarrow$ I = LOMI

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

- (A) BREVI
- (B) BREVO
- (C) BRIVI
- (D) BRAVI

Q16. In a certain code, each letter is shifted **7 places back** in the alphabet (wrapping when position ≤ 7 : add 26). For example: A(1) $\rightarrow$ T(20),



$H(8) \rightarrow A(1), S(19) \rightarrow L(12).$

Example: Using the rule, $B(2) \rightarrow U(21), O(15) \rightarrow H(8), L(12) \rightarrow E(5), D(4) \rightarrow W(23).$

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

- (A) GCHW
- (B) ECHV
- (C) UHEW
- (D) GCGW

Q17. Three of the following four words belong to the same category of *two-dimensional* (flat) shapes. Identify the **odd one out**.

RECTANGLE, CONE, RHOMBUS, TRAPEZIUM

- (A) RECTANGLE
- (B) CONE
- (C) RHOMBUS
- (D) TRAPEZIUM

Q18. Three of the following four planets are *terrestrial* (rocky) planets in our solar system. Identify the **odd one out**.

SATURN, VENUS, MERCURY, MARS

- (A) SATURN
- (B) VENUS
- (C) MERCURY
- (D) MARS

Q19. Three of the following four letter groups have the property that each successive letter is exactly **6 positions** ahead of the previous one. Identify the **odd one out**.

BHN, DJP, CIP, EKQ

- (A) BHN
- (B) DJP



- (C) CIP
- (D) EKQ

Q20. Three of the following four numbers are exactly divisible by 8. Identify the **odd one out**.

32, 56, 72, 84

- (A) 32
- (B) 56
- (C) 72
- (D) 84

Q21. In a row of **25 students**, Kavya is **11th from the left end**. What is her position from the **right end**?

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

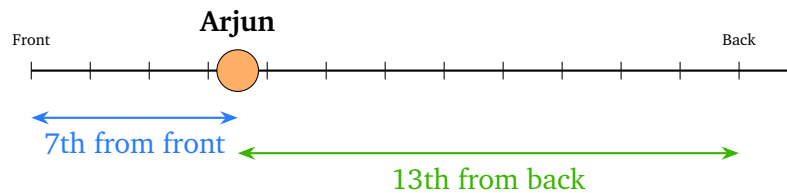
Q22. Five students P, Q, R, S, T scored different marks. Study the clues and find who scored the **3rd highest**.

- P scored more than Q.
- Q scored more than T.
- T scored more than R.
- S scored less than R.

- (A) P
- (B) Q
- (C) S
- (D) T

Q23. In a queue, Arjun is **7th from the front** and **13th from the back**. How many people are there in the queue in total?





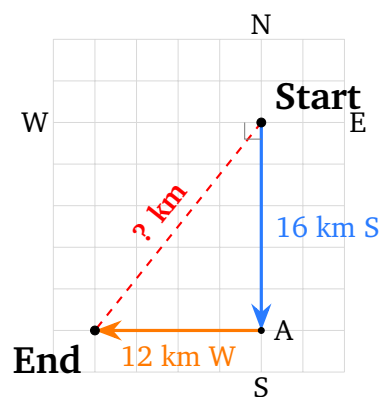
- (A) 19
- (B) 20
- (C) 18
- (D) 21

Q24. Arrange the following four Indian cities in *alphabetical order* and identify the city that comes **2nd**.

KOLKATA, KOCHI, KOHIMA, KOZHIKODE

- (A) KOCHI
- (B) KOHIMA
- (C) KOLKATA
- (D) KOZHIKODE

Q25. A person walks **16 km South**, then turns West and walks **12 km**. What is the straight-line distance from the starting point to the current position?



- (A) 18 km
- (B) 22 km
- (C) 20 km
- (D) 24 km

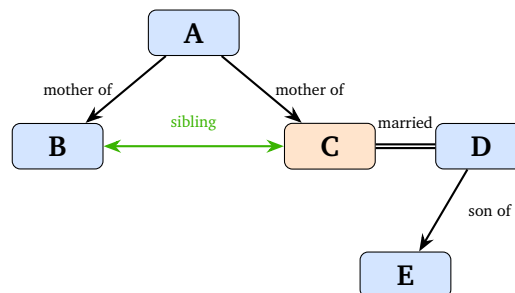


Part B: Logical Reasoning (Q26–Q50, 25 Marks)

Q26. Pointing to a boy, a girl says, “He is the son of the daughter of the father of my uncle.” How is the boy related to the girl?

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

Q27. A is the mother of B. B is the brother of C. D is the husband of C. E is the son of D. How is A related to E?

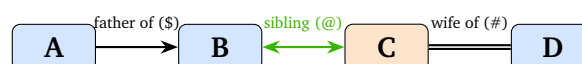


- (A) Grandmother
- (B) Great-grandmother
- (C) Aunt
- (D) Mother

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

- P\$Q means P is the *father* of Q.
- P@Q means P is the *sibling* of Q.
- P#Q means P is the *wife* of Q.

Given the expression: **A\$B@C#D**, how is A related to D?



- (A) Grandfather

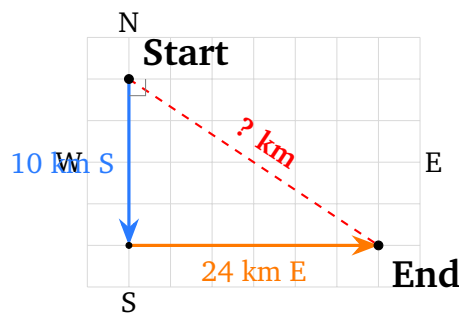


- (B) Uncle
- (C) Father-in-law
- (D) Brother-in-law

Q29. A man introduces a woman saying, “Her father is the only son of my wife’s father.” How is the woman related to the man?

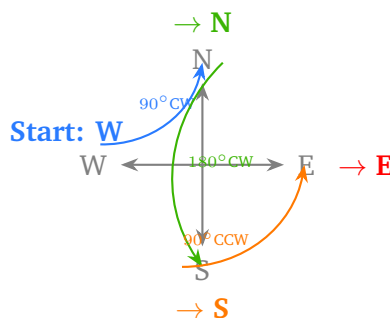
- (A) Niece
- (B) Daughter
- (C) Cousin
- (D) Sister

Q30. A person walks **10 km South**, then turns and walks **24 km East**. What is the straight-line distance from the starting point?



- (A) 20 km
- (B) 26 km
- (C) 28 km
- (D) 24 km

Q31. A person initially faces **West**. He then turns 90° *clockwise*, then 180° *clockwise*, then 90° *counter-clockwise*. In which direction does he now face?



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

Q32. At noon, the sun is due **South** (Northern Hemisphere). A person's shadow falls *directly behind* him at noon. In which direction is the person facing?

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

Q33. Statements:

1. All engineers are scientists.
2. Some scientists are teachers.

Conclusions:

- I. Some engineers are teachers.
- II. Some teachers are scientists.

Which conclusion(s) follow(s)?

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

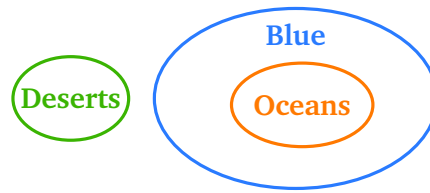
Q34. Statements:

1. No deserts are oceans.
2. All oceans are blue.

Conclusions:



- I. No deserts are blue.
- II. Some blue things are not deserts.



Which conclusion(s) follow(s)?

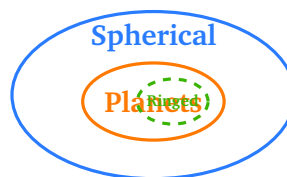
- (A) Only I follows
- (B) Both I and II follow
- (C) Only II follows
- (D) Neither follows

Q35. Statements:

- 1. Some planets have rings.
- 2. All planets are spherical.

Conclusions:

- I. Some spherical things have rings.
- II. All spherical things are planets.



Which conclusion(s) follow(s)?

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

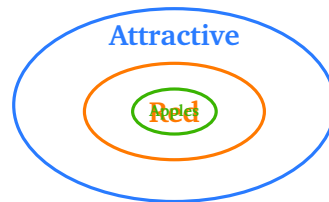
Q36. Statements:



1. All apples are red.
2. All red things are attractive.

Conclusions:

- I. All apples are attractive.
- II. Some attractive things are apples.



Which conclusion(s) follow(s)?

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

Q37. Statements:

1. No reptiles are warm-blooded.
2. Some warm-blooded creatures are mammals.

Conclusions:

- I. Some mammals are not reptiles.
- II. No reptiles are mammals.

Which conclusion(s) follow(s)?

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



Q38. Statement: “The city’s air quality index dropped significantly after the festival season.”

Assumptions:

- I. Festival activities contribute to air pollution.
- II. The city has a monitoring system for air quality.

Which assumption(s) is/are implicit?

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

Q39. Statement: “Companies should reduce their carbon emissions to help address climate change.”

Conclusions:

- I. High carbon emissions are a major cause of climate change.
- II. Companies are the only source of carbon emissions.

Which conclusion(s) follow(s)?

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

Q40. Statement: “A new metro rail system has been inaugurated in the city to ease traffic congestion.”

Courses of Action:

- I. Citizens should be encouraged to use the metro instead of private vehicles.
- II. All private vehicles should be banned from the city immediately.

Which course(s) of action should be followed?



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

Q41. Statement: “The price of onions has increased by 200% in the past month.”

Assumptions:

- I. The supply of onions has decreased.
- II. Onions are an essential commodity.

Which assumption(s) is/are implicit?

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

Q42. Statement: “The university has made attendance mandatory for all students.”

Arguments:

- I. Yes, mandatory attendance ensures regular study habits and discipline.
- II. No, students should have the freedom to choose whether to attend classes.

Which argument(s) is/are *strong*?

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



Q43. Read the following information carefully for Q43–Q48.

Five people — Kaveri (K), Latha (L), Mohan (M), Nanda (N), and Omkar (O) — live on five different floors of a building (Floor 1 = Ground, Floor 5 = Top), one person per floor.

- Mohan lives on the top floor (Floor 5).
- Latha lives on Floor 2.
- Nanda lives below Kaveri.
- Omkar lives on the floor directly above Kaveri.
- Nanda does not live on Floor 4.

F5	Mohan	Top
F4	Omkar	
F3	Kaveri	
F2	Latha	
F1	Nanda	Ground

Q43: Who lives on the **3rd floor**?

- (A) Nanda
- (B) Omkar
- (C) Kaveri
- (D) Latha

Q44. (*Refer to the same floor arrangement as Q43.*)

How many floors are there **between** Latha (Floor 2) and Mohan (Floor 5)?

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

Q45. (*Refer to the same floor arrangement as Q43.*)

Who lives **directly below** Omkar?



- (A) Kaveri
- (B) Nanda
- (C) Latha
- (D) Mohan

Q46. *(Refer to the same floor arrangement as Q43.)*

If Nanda and Kaveri **swap floors**, who will then live on the **3rd floor**?

- (A) Omkar
- (B) Latha
- (C) Nanda
- (D) Kaveri

Q47. *(Refer to the same floor arrangement as Q43.)*

Who lives on the **ground floor** (Floor 1)?

- (A) Omkar
- (B) Nanda
- (C) Kaveri
- (D) Latha

Q48. *(Refer to the same floor arrangement as Q43.)*

How many people live **above Kaveri** (Floor 3)?

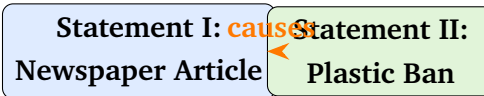
- (A) 3
- (B) 1
- (C) 0
- (D) 2

Q49. Statement I: The local newspaper published an article highlighting the harms of plastic pollution.

Statement II: The municipal corporation announced a ban on single-use plastic the following week.



What is the relationship between the two statements?



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

Q50. Assertion (A): Diamond is the hardest naturally occurring substance.

Reason (R): Carbon is the softest element, which is why its allotrope diamond is extremely hard.

Select the correct option:

- (A) Both A and R are true, and R is the correct explanation of A.
- (B) Both A and R are true, but R is NOT 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: Lazy Caterer Sequence

Concept — Differences Increase by 1 Each Step: The series is 1, 2, 4, 7, 11, 16, ... This is the lazy caterer sequence: the maximum number of pieces a circle can be divided into with n straight cuts.

Step 1 — Compute differences:

$$2 - 1 = 1, \quad 4 - 2 = 2, \quad 7 - 4 = 3, \quad 11 - 7 = 4, \quad 16 - 11 = 5.$$

The differences are 1, 2, 3, 4, 5 — each increases by 1.

Step 2 — Find the next term: Next difference = $5 + 1 = 6$. So the next term = $16 + 6 = 22$.

Why other options are wrong:

- (A) 18: $16 + 2$ — uses difference 2 instead of 6.
- (C) 20: $16 + 4$ — uses difference 4 (same as the previous-previous gap).
- (D) 24: $16 + 8$ — overshoots the correct next difference.

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

Solution

Q2 — Number Series: Descending Squares

Concept — Squares of Consecutive Integers in Decreasing Order: $10^2 = 100$, $9^2 = 81$, $8^2 = 64$, $7^2 = 49$, $6^2 = 36$, $5^2 = 25$, $4^2 = ?$

Step 1 — Identify the pattern: Each term is the square of an integer, starting at 10 and decreasing by 1 each step.

Step 2 — Next term: $4^2 = 16$.

Why other options are wrong:

- (A) 9: $3^2 = 9$ — skips a term (would need the integer to drop by 2).
- (B) 12: Not a perfect square at all.
- (D) 18: Not a perfect square; $4^2 = 16$, $5^2 = 25$ — 18 lies between them.

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



Solution**Q3 — Number Series: Differences of Consecutive Squares (Odd Numbers)**

Concept — $(n+1)^2 - n^2 = 2n+1$: The k -th term equals $(k+1)^2 - k^2 = 2k+1$, producing successive odd numbers.

Step 1 — Verify: $2^2 - 1^2 = 3$, $3^2 - 2^2 = 5$, $4^2 - 3^2 = 7$, $5^2 - 4^2 = 9$, $6^2 - 5^2 = 11$, $7^2 - 6^2 = 13$.

Step 2 — Next term: $8^2 - 7^2 = 64 - 49 = 15$.

Why other options are wrong:

- (A) 14: Not an odd number; the series only produces odd numbers.
- (B) 17: $9^2 - 8^2 = 17$ — that is the term after next, not the immediate next.
- (C) 12: Even; does not fit the pattern of consecutive odd numbers.

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

Solution**Q4 — Number Series: Two Interleaved Series (AP + GP)**

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

Step 1 — Odd-position terms (positions 1, 3, 5, 7): 2, 6, 10, 14 — common difference = +4. (Arithmetic progression.)

Step 2 — Even-position terms (positions 2, 4, 6, 8): 5, 15, 45, ? — common ratio = $\times 3$. (Geometric progression.)

Step 3 — The 8th term is from the even-position GP: $45 \times 3 = 135$.

Why other options are wrong:

- (B) 45: That is the 6th term already in the series; not the answer.
- (C) 120: $14 \times ?$ — does not match either AP or GP.
- (D) 150: $45 \times 3.\bar{3}$ — ratio is not 3.

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



Solution**Q5 — Number Series: Square-Difference Series**

Concept — Differences Are Perfect Squares: The differences between successive terms are $1^2, 2^2, 3^2, 4^2, 5^2, 6^2, \dots$

Step 1 — Verify the differences:

$$1-0 = 1 = 1^2, \quad 5-1 = 4 = 2^2, \quad 14-5 = 9 = 3^2, \quad 30-14 = 16 = 4^2, \quad 55-30 = 25 = 5^2, \quad 91-55 = 36 = 6^2$$

Step 2 — Next difference: $7^2 = 49$.

Step 3 — Next term: $91 + 49 = 140$.

Why other options are wrong:

- (A) 130: $91 + 39$ — 39 is not a perfect square.
- (C) 150: $91 + 59$ — 59 is not a perfect square ($7^2 = 49$, $8^2 = 64$).
- (D) 125: $91 + 34$ — 34 is not a perfect square.

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

Solution**Q6 — Number Series: Double-Minus-3 Recurrence**

Concept — Recurrence Rule $T(n) = T(n-1) \times 2 - 3$:

Step 1 — Verify: $5 \times 2 - 3 = 7\checkmark$, $7 \times 2 - 3 = 11\checkmark$, $11 \times 2 - 3 = 19\checkmark$, $19 \times 2 - 3 = 35\checkmark$, $35 \times 2 - 3 = 67\checkmark$.

Step 2 — Next term: $67 \times 2 - 3 = 134 - 3 = 131$.

Why other options are wrong:

- (A) 120: $67 + 53$ — does not follow the recurrence.
- (B) 128: $67 \times 2 - 6 = 128$ — subtracts 6 instead of 3.
- (C) 135: $67 \times 2 - 1 = 133 \neq 135$ — incorrect arithmetic.

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

Solution**Q7 — Analogy: Diet Type and Food Source**

Concept — Herbivore eats plants; Carnivore eats meat: A herbivore derives nutrition exclusively from plants. By the same relationship, a carnivore derives nutrition from meat (other animals).

Step 1 — Identify the relationship: Animal classification based on dietary food source.

Step 2 — Apply: CARNIVORE → MEAT.

Why other options are wrong:

- (B) GRASS: Grass is a subset of plants — the food of a herbivore, not a carnivore.
- (C) INSECTS: Some carnivores eat insects but it is not the defining category; MEAT is the primary category.
- (D) FRUITS: Fruit-eating animals are frugivores, not carnivores.

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

Solution

Q8 — Analogy: 2D Shape to 3D Counterpart

Concept — Rotating a 2D shape about an axis gives its 3D counterpart: A circle rotated in 3D gives a sphere. A square (all four equal sides) extended into 3D gives a cube (all six equal square faces).

Step 1 — CIRCLE : SPHERE — 2D to 3D transformation; all sides/radii equal.

Step 2 — SQUARE : CUBE — all four sides equal → all six faces are equal squares.

Why other options are wrong:

- (A) CYLINDER: Cylinder is the 3D counterpart of a rectangle (or circle extended linearly), not a square.
- (B) PYRAMID: A pyramid has a polygonal base and triangular faces; not the 3D square analogue.
- (C) CONE: Cone is the 3D counterpart of a triangle, not a square.

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

Solution

Q9 — Analogy: Tool–Professional

Concept — Primary cutting/striking tool used by a specific professional: A hammer



is the primary striking tool of a carpenter. A scalpel is the primary cutting instrument used by a surgeon in operating theatres.

Step 1 — HAMMER : CARPENTER — primary tool to professional.

Step 2 — SCALPEL : SURGEON — a scalpel is the precision surgical cutting blade uniquely associated with surgeons.

Why other options are wrong:

- (A) DOCTOR: Too broad; a general doctor does not routinely use a scalpel.
- (C) NURSE: Nurses assist but do not perform incisions with scalpels.
- (D) PHYSICIAN: A physician is a medical doctor who primarily diagnoses; a surgeon is specifically trained for operative procedures.

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

Solution

Q10 — Analogy: Triangle Property

Concept — Defining property of triangle types: An isosceles triangle is defined by having exactly two equal sides. An equilateral triangle is defined by having all three sides equal.

Step 1 — ISOSCELES : TWO EQUAL SIDES — defining property.

Step 2 — EQUILATERAL : THREE EQUAL SIDES.

Why other options are wrong:

- (A) NO EQUAL SIDES: That defines a scalene triangle.
- (B) RIGHT ANGLE: That defines a right-angled triangle, not an equilateral one.
- (D) ONE EQUAL SIDE: A triangle cannot have only one equal side in isolation; this is not a recognised definition.

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

Solution

Q11 — Analogy: Regional Seasonal Wind

Concept — Characteristic seasonal wind paired with its region: The monsoon is India's defining seasonal wind (bringing heavy rains from the southwest). The Harmattan



is the characteristic dry, dusty trade wind that blows across West Africa from the Sahara Desert.

Step 1 — MONSOON : INDIA — characteristic wind : region.

Step 2 — HARMATTAN : WEST AFRICA.

Why other options are wrong:

- (B) NORTH AMERICA: The characteristic winds there include the Chinook and Nor'easter, not the Harmattan.
- (C) SOUTH AMERICA: The Pampero and Zonda are notable South American winds, not the Harmattan.
- (D) AUSTRALIA: The Fremantle Doctor and Brickfielder are Australian winds; Harmattan is African.

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

Solution

Q12 — Coding-Decoding: Reverse Word Then Shift +1

Concept — Step 1: Reverse the word. Step 2: Shift each letter +1.

Step 1 — Reverse ROAD: R-O-A-D → D-A-O-R.

Step 2 — Shift each letter +1 (Z wraps to A): D(4)→E(5), A(1)→B(2), O(15)→P(16), R(18)→S(19).

Result: EBPS.

Why other options are wrong:

- (A) EBPQ: Q instead of S at the end; R should shift to S, not Q.
- (B) DBPS: D instead of E at the start; D should shift to E, not stay as D.
- (D) FBPS: F instead of E at the start; D+1=E, not F.

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

Solution

Q13 — Coding-Decoding: Backward Shift -2

Concept — Each letter position p maps to $((p - 3) \bmod 26) + 1$, i.e., subtract 2 with wrap A→Y, B→Z.



Step 1 — Apply to BONE: B(2): $2 - 2 = 0$; since 0 in mod-26 context = 26 = Z.
 O(15): $15 - 2 = 13 = M$.
 N(14): $14 - 2 = 12 = L$.
 E(5): $5 - 2 = 3 = C$.

Result: ZMLC.

Why other options are wrong:

- (A) YMKB: Each letter is off by one extra step backward (shift -3 instead of -2).
- (B) ZNLC: Z is correct but the second letter N suggests $O-1=N$ (shift -1), not -2 .
- (C) ZMLB: The last letter B suggests $E \rightarrow D$ (shift -1) instead of $E \rightarrow C$ (shift -2).

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

Solution

Q14 — Coding-Decoding: Forward Shift +6

Concept — Each letter position p maps to $((p + 5) \bmod 26) + 1$, i.e., add 6 with wrap $U \rightarrow A$, $V \rightarrow B$, etc.

Step 1 — Apply to PINK: P(16): $16 + 6 = 22 = V$.
 I(9): $9 + 6 = 15 = O$.
 N(14): $14 + 6 = 20 = T$.
 K(11): $11 + 6 = 17 = Q$.

Result: VOTQ.

Why other options are wrong:

- (A) UOTQ: U implies $P+5 = U$ (shift $+5$, not $+6$).
- (C) VOTP: P implies $K+5 = P$ (shift $+5$ for K), should be $K+6 = Q$.
- (D) WOTQ: W implies $P+7 = W$ (shift $+7$, not $+6$).

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

Solution

Q15 — Coding-Decoding: Vowel $\rightarrow$ Next Vowel (Cyclic)

Concept — Cyclic vowel shift $A \rightarrow E \rightarrow I \rightarrow O \rightarrow U \rightarrow A$; consonants unchanged.

Step 1 — Identify vowels in BRAVE: B(consonant), R(consonant), A(vowel),



V(consonant), E(vowel).

Step 2 — Shift vowels: A→E, E→I.

Step 3 — Reassemble: B-R-E-V-I = BREVI.

Why other options are wrong:

- (B) BREVO: O instead of I at the end; E should shift to I, not O (that would be I→O, one step further).
- (C) BRIVI: I instead of E at position 3; A should shift to E, not I.
- (D) BRAVI: A is unchanged here; the rule requires A to shift to E.

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

Solution

Q16 — Coding-Decoding: Backward Shift –7

Concept — Each letter position p maps to $((p - 8) \bmod 26) + 1$, i.e., subtract 7; if $p \leq 7$ add 26.

Step 1 — Full mapping table (key letters): A(1)→T(20), B(2)→U(21), O(15)→H(8), L(12)→E(5), D(4)→W(23).

Step 2 — Apply to BOLD: B(2)→U(21), O(15)→H(8), L(12)→E(5), D(4)→W(23).

Result: UHEW.

Why other options are wrong:

- (A) GCHW: G implies $B+5 = G$ (wrong shift direction and magnitude).
- (B) ECHV: E implies $B+3$ (wrong); C implies $O-12$ (wrong).
- (D) GCGW: G for B twice — the shift magnitude is inconsistent.

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

Solution

Q17 — Classification: 3D Shape Among 2D Shapes

Concept — Dimension classification: Rectangle, rhombus, and trapezium are all *two-dimensional* flat (plane) shapes. A cone is a *three-dimensional* solid object with a circular base and an apex.

Step 1 — Rectangle: 2D quadrilateral. ✓ **Step 2 — Rhombus:** 2D quadrilateral with



all sides equal. ✓ **Step 3 — Trapezium:** 2D quadrilateral with one pair of parallel sides.
 ✓ **Step 4 — Cone:** 3D solid. **ODD ONE OUT.**

Why other options are wrong:

- (A) RECTANGLE: A 2D quadrilateral — belongs to the group.
- (C) RHOMBUS: A 2D quadrilateral — belongs to the group.
- (D) TRAPEZIUM: A 2D quadrilateral — belongs to the group.

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

Solution

Q18 — Classification: Gas Giant Among Rocky Planets

Concept — Terrestrial vs. Gas Giant planets: Venus, Mercury, and Mars are all *terrestrial* (rocky) planets. Saturn is a *gas giant* — the second largest planet in the solar system, composed primarily of hydrogen and helium.

Step 1 — Venus: Rocky terrestrial planet. ✓ **Step 2 — Mercury:** Rocky terrestrial planet. ✓ **Step 3 — Mars:** Rocky terrestrial planet. ✓ **Step 4 — Saturn:** Gas giant. **ODD ONE OUT.**

Why other options are wrong:

- (B) VENUS: Third planet from the Sun; terrestrial.
- (C) MERCURY: Closest planet to the Sun; terrestrial.
- (D) MARS: The Red Planet; terrestrial.

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

Solution

Q19 — Classification: Letter Group with Broken +6 Gap

Concept — Each valid group has letters with uniform gap of +6.

Step 1 — Check BHN: B(2)→H(8): gap +6✓; H(8)→N(14): gap +6✓. Valid.

Step 2 — Check DJP: D(4)→J(10): gap +6✓; J(10)→P(16): gap +6✓. Valid.

Step 3 — Check CIP: C(3)→I(9): gap +6✓; I(9)→P(16): gap +7×. **Broken — ODD ONE OUT.** (Should be CIO for a uniform +6 gap.)

Step 4 — Check EKQ: E(5)→K(11): gap +6✓; K(11)→Q(17): gap +6✓. Valid.



Why other options are wrong:

- (A) BHN: Uniform gap of +6 — belongs to the group.
- (B) DJP: Uniform gap of +6 — belongs to the group.
- (D) EKQ: Uniform gap of +6 — belongs to the group.

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

Solution

Q20 — Classification: Not Divisible by 8

Concept — Divisibility by 8: a number is divisible by 8 if its last 3 digits form a number divisible by 8.

Step 1 — Check each: $32 \div 8 = 4 \checkmark$; $56 \div 8 = 7 \checkmark$; $72 \div 8 = 9 \checkmark$; $84 \div 8 = 10.5 \times$.

84 is the odd one out.

Why other options are wrong:

- (A) 32: $32 = 8 \times 4$ — perfectly divisible.
- (B) 56: $56 = 8 \times 7$ — perfectly divisible.
- (C) 72: $72 = 8 \times 9$ — perfectly divisible.

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

Solution

Q21 — Ranking / Ordering: Position from the Other End

Concept — Position from right = Total – Position from left + 1.

Step 1 — Given: Total students = 25; Kavya is 11th from the left.

Step 2 — Calculate:

$$\text{Position from right} = 25 - 11 + 1 = 15.$$

Why other options are wrong:

- (A) 13: $25 - 11 - 1 = 13$ — subtracts 1 extra, which is incorrect.
- (B) 14: $25 - 11 = 14$ — forgets to add 1 for the person herself.
- (D) 16: $25 - 11 + 2 = 16$ — adds 2 instead of 1.



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

Solution

Q22 — Ranking / Ordering: 3rd Highest Scorer

Concept — Establish the complete order from the given inequalities.

Step 1 — Chain the clues: $P > Q$ (P scored more than Q); $Q > T$ (Q scored more than T); $T > R$ (T scored more than R); $S < R$ (S scored less than R).

Step 2 — Full order (highest to lowest): $P > Q > T > R > S$.

Step 3 — 3rd highest: 1st = P, 2nd = Q, 3rd = T.

Why other options are wrong:

- (A) P: Highest scorer (1st), not 3rd.
- (B) Q: 2nd highest scorer, not 3rd.
- (C) S: Lowest scorer (5th), not 3rd.

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

Solution

Q23 — Ranking / Ordering: Queue Total

Concept — Total = Position from front + Position from back – 1.

Step 1 — Given: Arjun is 7th from the front and 13th from the back.

Step 2 — Calculate:

$$\text{Total} = 7 + 13 - 1 = 19.$$

Intuition: Arjun himself is counted once from both ends, so subtract 1 to avoid double-counting him.

Why other options are wrong:

- (B) 20: $7 + 13 = 20$ — does not subtract 1 for Arjun being counted twice.
- (C) 18: $7 + 13 - 2 = 18$ — subtracts 2 extra, which is incorrect.
- (D) 21: $7 + 13 + 1 = 21$ — adds instead of subtracts.

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



Solution**Q24 — Ranking / Ordering: Alphabetical 2nd City**

Concept — Compare letter by letter from the leftmost differing position.

Step 1 — All four cities share the prefix KO: KOCHI (KO-C), KOHIMA (KO-H), KOLKATA (KO-L), KOZHIKODE (KO-Z).

Step 2 — Compare the 3rd letter: $C < H < L < Z$ (alphabetically).

Step 3 — Alphabetical order: KOCHI, KOHIMA, KOLKATA, KOZHIKODE.

Step 4 — 2nd in order: KOHIMA.

Why other options are wrong:

- (A) KOCHI: 1st in alphabetical order, not 2nd.
- (C) KOLKATA: 3rd in alphabetical order.
- (D) KOZHIKODE: 4th in alphabetical order.

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

Solution**Q25 — Direction / Distance: Pythagorean Triple**

Concept — Straight-line distance via the Pythagorean theorem; South and West are perpendicular.

Step 1 — Form a right triangle: Leg 1 (South) = 16 km; Leg 2 (West) = 12 km.

Step 2 — Apply Pythagoras:

$$d = \sqrt{16^2 + 12^2} = \sqrt{256 + 144} = \sqrt{400} = 20 \text{ km.}$$

Recognise the triple: $12 : 16 : 20 = 4 \times (3 : 4 : 5)$.

Why other options are wrong:

- (A) 18 km: $\sqrt{16^2 + 12^2} \neq 18$; $18^2 = 324 \neq 400$.
- (B) 22 km: $22^2 = 484 \neq 400$.
- (D) 24 km: $24^2 = 576 \neq 400$; 24 would require legs of 10 and $\sqrt{576 - 100} \approx 22.1$.

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



Solution**Q26 — Blood Relations: Son of Daughter of Grandfather's Brother**

Concept — Trace the chain step by step from the girl's perspective.

Step 1 — "Father of my uncle" = girl's grandfather (paternal grandfather).

Step 2 — "Daughter of the grandfather" = one of grandfather's daughters = the girl's father's sister = the girl's *aunt*.

Step 3 — "Son of the aunt" = the girl's *cousin*.

The boy is the girl's Cousin.

Why other options are wrong:

- (A) Brother: Brother shares the same parents; this chain goes through an aunt.
- (B) Nephew: Nephew is the son of a sibling; this boy's mother is the girl's aunt.
- (C) Uncle: Uncle is the brother of a parent; the boy is a generation below the aunt.

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

Solution**Q27 — Blood Relations: A is Grandmother of E**

Concept — Trace two-generation descent through the sibling link.

Step 1 — A is mother of B. **Step 2 —** B is brother of C $\Rightarrow$ A is also mother of C. **Step 3 —** D is husband of C; E is son of D (and C). **Step 4 —** A is C's mother, and E is C's son $\Rightarrow$ A is E's grandmother.

Why other options are wrong:

- (B) Great-grandmother: Would require one more generation; E is only one generation below C.
- (C) Aunt: Aunt is the sibling of a parent; A is C's mother, not sibling.
- (D) Mother: A is not E's mother; C (married to D) is E's mother.

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

Solution**Q28 — Blood Relations: Coded Relation (Father-in-law)**

Concept — Decode each symbol step by step.



Step 1 — A\$B: A is the *father* of B.

Step 2 — B@C: B is the *sibling* of C $\Rightarrow$ A is also the father of C (since A is father of B and B is sibling of C).

Step 3 — C#D: C is the *wife* of D $\Rightarrow$ D married C.

Step 4 — A's relation to D: A is the father of C, and C is D's wife. Therefore A is D's **father-in-law**.

Why other options are wrong:

- (A) Grandfather: Would require A to be a generation above D's parent; A is only D's wife's father.
- (B) Uncle: Uncle is a sibling of a parent; not the case here.
- (D) Brother-in-law: Brother-in-law is the sibling of one's spouse; A is the father, not sibling, of C.

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

Solution

Q29 — Blood Relations: Niece

Concept — Trace from the man's perspective.

Step 1 — "My wife's father" = man's father-in-law.

Step 2 — "Only son of my wife's father" = the only son of the father-in-law = man's *brother-in-law* (wife's brother).

Step 3 — "Her father is the brother-in-law" $\Rightarrow$ the woman is the daughter of the man's brother-in-law = man's **niece**.

Why other options are wrong:

- (B) Daughter: Daughter's father would be the man himself, not the brother-in-law.
- (C) Cousin: Cousin relationship involves same-generation; this is one generation below via brother-in-law.
- (D) Sister: Sister would be the man's own sibling; this woman is the sibling's (brother-in-law's) child.

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



Solution**Q30 — Directions: 10-24-26 Pythagorean Triple**

Concept — South and East are perpendicular; apply Pythagoras.

Step 1 — Right triangle: Leg 1 (South) = 10 km; Leg 2 (East) = 24 km.

Step 2 — Distance:

$$d = \sqrt{10^2 + 24^2} = \sqrt{100 + 576} = \sqrt{676} = 26 \text{ km.}$$

Recognise: $10 : 24 : 26 = 2 \times (5 : 12 : 13)$.

Why other options are wrong:

- (A) 20 km: $20^2 = 400 \neq 676$.
- (C) 28 km: $28^2 = 784 \neq 676$.
- (D) 24 km: That is one of the legs, not the hypotenuse.

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

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

Concept — Track facing direction after each turn.

Step 1 — Start: West.

Step 2 — Turn 90° clockwise: West $\xrightarrow{90^\circ \text{CW}}$ North.

Step 3 — Turn 180° clockwise: North $\xrightarrow{180^\circ \text{CW}}$ South.

Step 4 — Turn 90° counter-clockwise: South $\xrightarrow{90^\circ \text{CCW}}$ East.

Final direction: East.

Why other options are wrong:

- (A) North: That is the direction after Step 2 only; two more turns follow.
- (B) West: The starting direction; three turns have been made.
- (C) South: That is the direction after Step 3; one more turn (CCW) follows.

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



Solution**Q32 — Directions: Noon Shadow Direction**

Concept — At noon in the Northern Hemisphere the sun is due South; a shadow falls opposite to the sun.

Step 1 — At noon, the sun is at its highest point in the south (Northern Hemisphere).

Step 2 — A shadow falls *directly behind* the person — i.e., opposite to the sun.

Step 3 — If the shadow falls behind and the sun is South, the person must be *facing South* (toward the sun), so the shadow falls northward behind them.

Final answer: South.

Why other options are wrong:

- (B) North: If facing North, shadow would be in front (southward) — not directly behind.
- (C) East: Shadow would fall to the West, not directly behind.
- (D) West: Shadow would fall to the East, not directly behind.

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

Solution**Q33 — Syllogism: Engineers / Scientists / Teachers — Only II Follows**

Concept — Venn diagram / logical deduction.

Step 1 — Statement 1: All engineers are scientists ($\text{Engineers} \subset \text{Scientists}$).

Step 2 — Statement 2: Some scientists are teachers.

Conclusion I — Some engineers are teachers: The teachers-scientists overlap may or may not include engineers. **Does NOT necessarily follow.**

Conclusion II — Some teachers are scientists: Statement 2 says some scientists are teachers $\Rightarrow$ by conversion, some teachers are scientists. **Follows.**

Why other options are wrong:

- (B) Only I: Conclusion I is not guaranteed; the teacher-scientists subset may lie entirely outside the engineer subset.
- (C) Both: Conclusion I does not necessarily follow.
- (D) Neither: Conclusion II is a valid converse of Statement 2.

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



Solution

Q34 — Syllogism: Deserts / Oceans / Blue — Only II Follows

Concept — Venn diagram: $\text{Oceans} \subset \text{Blue}$; $\text{Deserts} \cap \text{Oceans} = \emptyset$.

Step 1 — Statement 1: No deserts are oceans (disjoint sets).

Step 2 — Statement 2: All oceans are blue ($\text{Oceans} \subset \text{Blue}$).

Conclusion I — No deserts are blue: We only know deserts and oceans are disjoint; deserts could still be blue through other means. **Does NOT follow.**

Conclusion II — Some blue things are not deserts: All oceans are blue; no oceans are deserts $\Rightarrow$ those blue oceans are not deserts $\Rightarrow$ **Some blue things are not deserts. Follows.**

Why other options are wrong:

- (A) Only I: Conclusion I cannot be established from the given statements.
- (B) Both: Conclusion I does not follow.
- (D) Neither: Conclusion II validly follows from the two statements.

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

Solution

Q35 — Syllogism: Planets / Rings / Spherical — Only I Follows

Concept — Planets $\subset$ Spherical; some Planets have Rings.

Step 1 — Statement 1: Some planets have rings ($\text{Ringed-planets} \subset \text{Planets}$).

Step 2 — Statement 2: All planets are spherical ($\text{Planets} \subset \text{Spherical}$).

Conclusion I — Some spherical things have rings: Ringed planets are spherical (from S2) and have rings (from S1) $\Rightarrow$ **Follows.**

Conclusion II — All spherical things are planets: Not all spherical things need to be planets (a ball is spherical but not a planet). **Does NOT follow.**

Why other options are wrong:

- (A) Neither: Conclusion I is clearly valid.
- (C) Both: Conclusion II is far too broad and does not follow.
- (D) Only II: Conclusion II does not follow; Conclusion I does.

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



Solution

Q36 — Syllogism: Apples / Red / Attractive — Both Follow

Concept — Apples $\subset$ Red $\subset$ Attractive (chain of universal affirmatives).

Step 1 — Statement 1: All apples are red (Apples $\subset$ Red).

Step 2 — Statement 2: All red things are attractive (Red $\subset$ Attractive).

Conclusion I — All apples are attractive: Apples $\subset$ Red $\subset$ Attractive $\Rightarrow$ Apples $\subset$ Attractive. **Follows.**

Conclusion II — Some attractive things are apples: Since all apples are attractive (and apples exist), some of the attractive things are indeed apples. **Follows.**

Why other options are wrong:

- (A) Only I: Conclusion II also follows (partial converse of Conclusion I).
- (B) Only II: Conclusion I also follows from the transitive chain.
- (C) Neither: Both conclusions follow; neither can be rejected.

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

Solution

Q37 — Syllogism: Reptiles / Warm-blooded / Mammals — Only I Follows

Concept — No Reptiles $\cap$ Warm-blooded; some Warm-blooded are Mammals.

Step 1 — Statement 1: No reptiles are warm-blooded (Reptiles $\cap$ Warm-blooded = $\emptyset$).

Step 2 — Statement 2: Some warm-blooded creatures are mammals (Mammals partially in Warm-blooded).

Conclusion I — Some mammals are not reptiles: Those warm-blooded mammals are definitely not reptiles (from S1). **Follows.**

Conclusion II — No reptiles are mammals: The statements do not explicitly state that all reptiles are cold-blooded exclusively; there could theoretically be reptiles that are also mammals through a different link (though biologically false, logically the premises do not establish this). **Cannot be concluded with certainty from these premises alone.**

Why other options are wrong:

- (B) Only II: Conclusion II cannot be established from the given statements.
- (C) Both: Conclusion II does not strictly follow from these two premises.
- (D) Neither: Conclusion I validly follows.



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

Solution

Q38 — Statement-Assumption: Air Quality and Festivals

Concept — An implicit assumption is one that must be true for the statement to be meaningful.

Step 1 — Assumption I: “Festival activities contribute to air pollution.” The statement says AQI *dropped after the festival season*, implying festivals caused the drop. This assumption is implicit — it explains the causal link. **Implicit.**

Step 2 — Assumption II: “The city has a monitoring system for air quality.” The statement says the AQI *dropped significantly* — this measurement implies a monitoring system exists. **Implicit.**

Both assumptions are implicit.

Why other options are wrong:

- (A) Only I: Assumption II is also implicit; without monitoring, no AQI could be measured.
- (B) Neither: Both assumptions are clearly embedded in the statement.
- (C) Only II: Assumption I is also implicit; it explains why festivals affected the AQI.

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

Solution

Q39 — Statement-Conclusion: Carbon Emissions and Climate Change

Concept — A conclusion follows if it is a logical inference from the statement.

Step 1 — Statement: Companies should reduce carbon emissions to address climate change.

Conclusion I: High carbon emissions are a major cause of climate change. The recommendation to reduce emissions *presupposes* that they contribute to climate change. **Follows.**

Conclusion II: Companies are the only source of carbon emissions. The statement says companies *should* reduce — it does not claim they are the *only* source. Agriculture, transport, and households also emit carbon. **Does NOT follow.**

Why other options are wrong:



- (A) Both: Conclusion II is an overstatement not supported by the statement.
- (C) Only II: Conclusion II does not follow; Conclusion I does.
- (D) Neither: Conclusion I clearly follows as the logical premise of the recommendation.

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

Solution

Q40 — Course of Action: Metro Rail and Traffic

Concept — A valid course of action should be practical and directly address the problem.

Step 1 — Statement: Metro inaugurated to ease traffic congestion.

Course I — Encourage citizens to use metro: Directly addresses the problem by reducing private vehicle usage. Practical and proportionate. **Follows.**

Course II — Ban all private vehicles immediately: Extreme, impractical, and disproportionate measure. Citizens still need vehicles for areas not served by the metro. **Does NOT follow.**

Why other options are wrong:

- (A) Both: Course II is extreme and not warranted by the statement.
- (B) Only II: Course II is impractical; Course I is the sensible action.
- (D) Neither: Course I is a logical and necessary follow-up action.

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

Solution

Q41 — Statement-Assumption: Onion Prices

Concept — An implicit assumption must be presupposed for the statement to be relevant/meaningful.

Step 1 — Statement: Onion prices increased 200% in a month.

Assumption I: The supply of onions has decreased. This is a *possible cause* but not an *implicit assumption*; prices can rise for other reasons (demand surge, hoarding). **Not necessarily implicit.**

Assumption II: Onions are an essential commodity. The statement is reported because



it is newsworthy and significant. That significance is implied by the fact that onions are an essential food item. **Implicit.**

Why other options are wrong:

- (A) Only I: Assumption I is a possible explanation, not a necessary presupposition.
- (C) Both: Assumption I is not necessarily embedded in the statement.
- (D) Neither: Assumption II is clearly implicit.

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

Solution

Q42 — Argument Strength: Mandatory Attendance

Concept — A strong argument is relevant, has substantial basis, and directly supports or opposes the statement.

Step 1 — Argument I (YES): Mandatory attendance ensures regular study habits and discipline. This directly supports the policy's educational rationale with a substantive reason. **Strong argument.**

Step 2 — Argument II (NO): Students should have the freedom to choose. This is a general sentiment about freedom without substantial evidence that such freedom leads to better outcomes. It is a weak counter-argument. **Weak argument.**

Why other options are wrong:

- (A) Both strong: Argument II lacks substantive backing; it is an emotional appeal.
- (B) Neither strong: Argument I is clearly a strong and relevant argument.
- (C) Only II strong: Argument II is the weaker argument; it does not address outcomes.

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

Solution

Q43 — Floor Arrangement: Who is on Floor 3?

Concept — Deduce the arrangement from the given clues.

Step 1 — Fixed positions: Mohan = Floor 5; Latha = Floor 2.

Step 2 — Remaining floors 1, 3, 4 for Kaveri, Nanda, Omkar.



Step 3 — Omkar is directly above Kaveri: Possible pairs: (Kaveri=3, Omkar=4) or (Kaveri=1, Omkar=2 — taken by Latha, invalid). $\therefore$ Kaveri = 3, Omkar = 4.

Step 4 — Nanda = 1 (only floor left); Nanda < Kaveri ($1 < 3$)✓; Nanda $\neq$ 4✓.

Final arrangement: Floor 1 = Nanda, Floor 2 = Latha, Floor 3 = **Kaveri**, Floor 4 = Omkar, Floor 5 = Mohan.

Why other options are wrong:

- (A) Nanda: Nanda is on Floor 1, not Floor 3.
- (B) Omkar: Omkar is on Floor 4.
- (D) Latha: Latha is on Floor 2.

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

Solution

Q44 — Floor Arrangement: Floors Between Latha and Mohan

Concept — “Between” means floors strictly between the two given floors.

Step 1 — Latha = Floor 2; Mohan = Floor 5.

Step 2 — Floors between them: Floor 3 and Floor 4 = 2 floors.

Why other options are wrong:

- (A) 1: Only one floor between adjacent floors; floors 2 and 5 have 2 floors between them.
- (B) 4: $5 - 2 + 1 = 4$ counts both endpoints; “between” excludes endpoints.
- (C) 3: $5 - 2 = 3$ counts the gap in floor-numbers, not floors-between.

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

Solution

Q45 — Floor Arrangement: Directly Below Omkar

Concept — The floor directly below Floor n is Floor $n - 1$.

Step 1 — Omkar = Floor 4.

Step 2 — Floor directly below Floor 4 = Floor 3 = **Kaveri.**

Why other options are wrong:



- (B) Nanda: Nanda is on Floor 1, two floors below Omkar.
- (C) Latha: Latha is on Floor 2, two floors below Omkar.
- (D) Mohan: Mohan is on Floor 5, directly *above* Omkar.

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

Solution

Q46 — Floor Arrangement: Nanda and Kaveri Swap Floors

Concept — Swap only the two specified people; all others remain.

Step 1 — Original: Nanda = Floor 1, Kaveri = Floor 3.

Step 2 — After swap: Nanda = Floor 3, Kaveri = Floor 1.

Step 3 — Floor 3 now: Nanda.

Why other options are wrong:

- (A) Omkar: Omkar remains on Floor 4; no change for Omkar.
- (B) Latha: Latha remains on Floor 2; no change for Latha.
- (D) Kaveri: After the swap, Kaveri moves to Floor 1, not Floor 3.

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

Solution

Q47 — Floor Arrangement: Who is on the Ground Floor?

Concept — Ground floor = Floor 1.

Step 1 — From the arrangement: Floor 1 = Nanda.

Why other options are wrong:

- (A) Omkar: Omkar is on Floor 4.
- (C) Kaveri: Kaveri is on Floor 3.
- (D) Latha: Latha is on Floor 2.

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



Solution**Q48 — Floor Arrangement: How Many People Above Kaveri?**

Concept — Count people on floors strictly above Kaveri's floor.

Step 1 — Kaveri = Floor 3. Floors above = Floor 4 and Floor 5.

Step 2 — Floor 4 = Omkar; Floor 5 = Mohan. Total = 2 people.

Why other options are wrong:

- (A) 3: Would mean 3 floors above Floor 3 — but the building has only 5 floors, leaving only 2 above.
- (B) 1: Counts only one of the two people above.
- (C) 0: Incorrect; Omkar and Mohan are both above Kaveri.

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

Solution**Q49 — Cause-Effect: Newspaper Article and Plastic Ban**

Concept — Identify which event logically precedes and drives the other.

Step 1 — Statement I: Newspaper publishes article on harms of plastic pollution (awareness/advocacy event).

Step 2 — Statement II: Municipal corporation bans single-use plastic the following week (policy/action event).

Step 3 — Relationship: Media reporting on plastic pollution raises public awareness and creates pressure on civic authorities. The article (Statement I) directly precedes and causes the plastic ban (Statement II). **Statement I is the cause; Statement II is the effect.**

Why other options are wrong:

- (A) Both effects of common cause: No third common cause is implied in the statements.
- (C) II causes I: The ban happened *after* the article — the sequence is I then II.
- (D) Both independent: The temporal sequence and context clearly show a causal link.

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



Solution**Q50 — Assertion-Reason: Diamond Hardness**

Concept — Check factual accuracy of Assertion and Reason independently, then assess the explanatory link.

Step 1 — Is Assertion (A) true? “Diamond is the hardest naturally occurring substance.” Diamond scores **10** on the Mohs hardness scale — the highest of any natural mineral. **TRUE**.

Step 2 — Is Reason (R) true? “Carbon is the softest element, which is why its allotrope diamond is extremely hard.” This is **FALSE** on two counts:

- Carbon is *not* the softest element; graphite (a carbon allotrope) is soft, but carbon as an element encompasses both hard and soft allotropes.
- The hardness of diamond arises from its *covalent tetrahedral lattice structure* (each carbon atom bonded to four others), not from any softness of carbon.

Assertion A is TRUE; Reason R is FALSE.

Why other options are wrong:

- (A) Both true, R explains A: R is factually incorrect.
- (B) Both true, R not correct: R is false, so this option is also ruled out.
- (D) A false, R true: A is factually correct (diamond is indeed the hardest natural substance).

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



Answer Key

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

