MH CET LAW Logical & Analytical Reasoning

Sample Paper – 1

Duration: 24 Minutes **Maximum Marks: 30**

Instructions

- This paper contains **30** Multiple Choice Questions modelled on the Logical & Analytical Reasoning section of **MH CET LAW**.
- Each correct answer carries **+1 mark**. There is **no negative marking** for incorrect or unattempted answers.
- Only **one** option is correct per question. Choose carefully.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Q1. Which number comes next in the series: 5, 11, 19, 29, 41, ?

(A) 55

(B) 52

(C) 53

(D) 57

Q2. Find the next term in the letter series: D, G, J, M, P, ?

(A) R

(B) S

(C) T

(D) U

Q3. What is the next number in the Fibonacci-type series: 1, 1, 2, 3, 5, 8, ?

(A) 11

(B) 12

(C) 13

(D) 14

Q4. In a certain code language, TRAIN is coded as VTCKP. Using the same rule, what is the code for HOUSE?

(A) IPVTF

(B) KQXUH

(C) IQWUF

(D) JQWUG

Q5. If each letter of the alphabet is assigned its position number (A=1, B=2, . . . , Z=26), what is the number code for the word FIRE?

(A) 6-9-18-5

(B) 5-8-17-4

(C) 7-10-19-6

(D) 6-8-18-5

Q6. Pointing to Neha, Rajan says, "Her father is the only son of my father." How is Rajan related to Neha?

(A) Uncle

(B) Father

(C) Brother

(D) Grandfather

Q7. T is Q's father. R is Q's sister. S is R's mother. V is T's father. How is V related to Q?

(A) Uncle

(B) Father

(C) Grandfather

(D) Brother

Q8. Ravi faces North. He walks 8m, then turns right and walks 6m, then turns right again and walks 5m, then turns left. Which direction is Ravi now facing?

(A) North

(B) South

(C) West

(D) East

Q9. Mohan starts from point P and walks 12m South. He then turns East and walks 5m. How far is he from the starting point P?

(A) 13m

(B) 17m

(C) 15m

(D) 11m

Q10. **Statements:** All flowers are trees. All trees are rivers.
Conclusions:
I. All flowers are rivers.
II. All rivers are flowers.
Which conclusion(s) follow?

(A) Only II follows

(B) Only I follows

(C) Both I and II follow

(D) Neither I nor II follows

Q11. **Statements:** Some cats are dogs. All dogs are birds.
Conclusions:
I. Some cats are birds.

II. All birds are cats.
Which conclusion(s) follow?

(A) Only II follows

(B) Both I and II follow

(C) Only I follows

(D) Neither follows

Q12. **Statements:** No glass is silver. All silver is gold.
Conclusions:
I. No glass is gold.
II. Some gold is not glass.
Which conclusion(s) follow?

(A) Only I follows

(B) Both I and II follow

(C) Neither follows

(D) Only II follows

Q13. **Statement:** "Reading newspapers daily keeps a person well-informed about current events."
Conclusions:
I. Regular newspaper readers are better informed about current affairs.
II. All current events are reported in newspapers.
Which conclusion(s) follow?

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q14. **Statement:** "Switch off the lights when leaving the room."
Assumptions:

I. Lights waste electricity when no one is in the room.
II. Everyone always forgets to switch off lights.
Which assumption(s) is/are implicit?

(A) Only II is implicit
(B) Only I is implicit
(C) Both I and II are implicit
(D) Neither I nor II is implicit

Q15. **Statement:** "Should junk food be banned in school canteens?"
Arguments:
I. *Yes* — Junk food causes obesity and serious health problems in children.
II. *No* — Students have the right to choose what they eat.
Which argument(s) is/are strong?

(A) Only Argument I is strong
(B) Only Argument II is strong
(C) Both Arguments I and II are strong
(D) Neither Argument I nor II is strong

Q16. **Problem:** River water is getting highly polluted due to factory effluents being discharged into it.
Courses of Action:
I. The government should immediately shut down all factories near the river.
II. Factories should be required to install effluent treatment plants before discharging waste into the river.
Which course(s) of action should be followed?

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

Q17. Six persons A, B, C, D, E, and F are seated in a row. F and E are at the two ends. C is 3rd from the left. A is immediately to the left of C. B is immediately to the right of C. D is between B and F. Who sits second from the right?

(A) D

(B) B

(C) F

(D) E

Q18. Six persons P, Q, R, S, T, and U are seated around a circular table, all facing the centre. P is to the immediate right of Q. S is to the immediate left of T. Going clockwise, the order includes U, R, Q (R is between U and Q). T is not adjacent to Q. Who sits directly opposite R?

(A) Q

(B) S

(C) T

(D) U

Q19. Five boxes A, B, C, D, and E are arranged by weight. B is heavier than A but lighter than D. E is the heaviest. C is lighter than A. D is lighter than E. Which box is the third heaviest?

(A) D

(B) A

(C) B

(D) C

Q20. Illiterate : Ignorant :: Literate : ?

(A) Foolish

(B) Confused

(C) Intelligent

(D) Educated

Q21. ACE : BDF :: GIK : ?

(A) HJL

(B) HIJ

(C) FHJ

(D) GHI

Q22. Find the odd one out: Rose, Lotus, Jasmine, Mango, Lily

(A) Lily

(B) Mango

(C) Jasmine

(D) Rose

Q23. Find the odd one out: 16, 25, 36, 50, 64

(A) 25

(B) 36

(C) 50

(D) 64

Q24. Which of the following is a likely effect of "heavy rainfall for three consecutive days in a city"?

(A) City residents buy more umbrellas

(B) Low-lying areas get flooded

(C) City parks become waterlogged

(D) All of the above

Q25. **Statement:** "The city's air quality index has dropped to hazardous levels during winter every year for the past five years."

Which of the following conclusions is most strongly supported by this statement?

(A) Poor air quality during winter is a recurring and predictable problem in this city.

(B) Air quality is hazardous only in winter everywhere.

(C) There are no industrial activities in the city.

(D) Winters will become shorter in the future.

Q26. Study the two events and determine the relationship:
Event I: The price of cooking gas cylinders increased significantly.
Event II: Many households started using electric induction cookers more frequently.

(A) Event II is the cause of Event I

(B) Event I is the cause of Event II

(C) Both are effects of a common cause

(D) The two events are independent

Q27. What is the angle between the hour hand and the minute hand of a clock at 4:40?

(A) 80°

(B) 90°

(C) 100°

(D) 110°

Q28. If '$+$' means '$\div$', '$\div$' means '$-$', '$-$' means '$\times$', and '$\times$' means '$+$', then what is the value of: $15 + 3 - 2 \times 4 \div 6$?

(A) 5

(B) 6

(C) 7

(D) 8

Q29. **Question:** Is the two-digit number N a multiple of both 4 and 6?
Statement 1: N is divisible by 12.
Statement 2: $N = 48$.
Which statement(s) is/are sufficient to answer the question?

(A) Either statement alone is sufficient

(B) Statement 1 alone is sufficient but not Statement 2

(C) Both statements together are needed

(D) Neither statement is sufficient

Q30. A Venn diagram has three overlapping circles labelled "Graduates", "Employed", and "Own a Car". The region where all three circles overlap contains 10 people. The region where only "Graduates" and "Employed" overlap (excluding "Own a Car") contains 15 people. What does the region where only "Graduates" and "Own a Car" overlap (excluding "Employed") represent?

(A) People who are Graduates, Employed, and Car owners

(B) People who are Graduates and Car owners but not Employed

(C) People who are only Employed

(D) People who are only Graduates

Q1.

Solution

Concept — Number Series with Arithmetic Differences: When the differences between consecutive terms themselves form an arithmetic progression, each difference increases by a constant amount. This pattern allows prediction of the next term reliably.

Step 1 — Compute consecutive differences: $11-5=6$, $19-11=8$, $29-19=10$, $41-29=12$. The differences are 6, 8, 10, 12, increasing by 2 each time.

Step 2 — Find next term: The next difference $= 12+2 = 14$. So next term $= 41+14 = \mathbf{55}$.

Why other options are wrong:

- Option (B): 52 implies a difference of 11, which breaks the +2 increment pattern.
- Option (C): 53 implies a difference of 12, which repeats the previous difference rather than increasing.
- Option (D): 57 implies a difference of 16, skipping 14 in the arithmetic progression.

Final Answer: Next term $= 41+14 = 55 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q1

Q2.

Solution

Concept — Letter Series with Constant Skip: Each letter in the series is obtained by moving a fixed number of positions forward in the alphabet. Identifying the skip value gives the next letter directly.

Step 1 — Determine the pattern: D(4), G(7), J(10), M(13), P(16). The difference between positions: $7-4=3$, $10-7=3$, $13-10=3$, $16-13=3$. Each letter advances by **3**.

Step 2 — Find next letter: P is the 16th letter. $16+3=19$, and the 19th letter is **S**.

Why other options are wrong:

- Option (A): R is the 18th letter, implying a skip of 2, not 3.
- Option (C): T is the 20th letter, implying a skip of 4.

- Option (D): U is the 21st letter, implying a skip of 5.

Final Answer: Next letter after P (skip $+3$) $=$ S $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Fibonacci Sequence: In the Fibonacci sequence, each term is the sum of the two immediately preceding terms. Recognising this rule allows straightforward calculation of any next term.

Step 1 — Verify the pattern: $1+1=2$ ✓, $1+2=3$ ✓, $2+3=5$ ✓, $3+5=8$ ✓. Every term equals the sum of the previous two.

Step 2 — Compute next term: $5+8=$ **13**.

Why other options are wrong:

- Option (A): 11 would equal $8+3$, incorrectly skipping the term 5.
- Option (B): 12 has no basis in the Fibonacci addition rule.
- Option (D): 14 would equal $8+6$, incorrectly using 6 instead of 5.

Final Answer: $5+8=13 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q3

Q4.

Solution

Concept — Coding by Letter Shift (+2): Each letter in the original word is replaced by the letter two positions ahead in the alphabet (A→C, B→D, . . . , Y→A, Z→B). Apply the same shift uniformly to every letter.

Step 1 — Verify with TRAIN → VTCKP: T+2=V, R+2=T, A+2=C, I+2=K, N+2=P. Gives VTCKP. Confirmed ✓.

Step 2 — Encode HOUSE: H+2=J, O+2=Q, U+2=W, S+2=U, E+2=G $\Rightarrow$ **JQWUG**.

Why other options are wrong:

- Option (A): IPVTF applies a $+1$ shift instead of $+2$.

- Option (B): KQXUH applies +3 to H but inconsistent shifts to other letters.
- Option (C): IQWUF shifts H to I (+1) and E to F (+1), mixing +1 with +2 shifts.

Final Answer: HOUSE coded as JQWUG $\Rightarrow$ D

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Letter-to-Number Coding (Alphabetical Position): The standard coding assigns each letter its ordinal position in the English alphabet: A=1, B=2, C=3, . . . , Z=26. The code is the sequence of these position numbers.

Step 1 — Find position of each letter in FIRE: F=6, I=9, R=18, E=5.

Step 2 — Write the code: The number code for FIRE is **6-9-18-5**.

Why other options are wrong:

- Option (B): 5-8-17-4 subtracts 1 from each position (E, H, Q, D), not FIRE.
- Option (C): 7-10-19-6 adds 1 to each position (G, J, S, F), not FIRE.
- Option (D): 6-8-18-5 encodes I as 8 (position of H), which is incorrect.

Final Answer: F(6), I(9), R(18), E(5) $\Rightarrow$ **6-9-18-5** $\Rightarrow$ A

Answer: (A) Go Back to Q5

Q6.

Solution

Concept — Blood Relations (Self-Reference): When a person says "the only son of my father," they are referring to themselves (assuming they are the only son). This simplifies the relation to a direct connection.

Step 1 — Interpret the statement: "The only son of Rajan's father" = Rajan himself (he is the only son of his own father).

Step 2 — Establish relation: Since Rajan = Neha's father, Rajan is Neha's **Father**.

Why other options are wrong:

- Option (A): Uncle would mean Rajan's brother is Neha's father, but the statement points to Rajan himself.

- Option (C): Brother implies they share a parent; the statement makes Rajan Neha's father.
- Option (D): Grandfather would add an extra generation not indicated in the statement.

Final Answer: Rajan is Neha's Father $\Rightarrow$ B

Answer: (B) Go Back to Q6

Q7.

Solution

Concept — Blood Relations (Multi-step Chain): Build a family tree step by step using each clue, then read the target relationship directly from the completed tree.

Step 1 — Build the family tree: T is Q's father; R is Q's sister (same father T); S is R's mother $\Rightarrow$ S is T's wife and also Q's mother; V is T's father $\Rightarrow$ V is Q's paternal grandfather.

Step 2 — Identify V's relation to Q: V $\xrightarrow{\text{father}}$ T $\xrightarrow{\text{father}}$ Q. V is Q's **Grandfather**.

Why other options are wrong:

- Option (A): Uncle would require V to be T's brother, not T's father.
- Option (B): Father applies to T, not V.
- Option (D): Brother would place V in the same generation as Q, which contradicts the clues.

Final Answer: V is Q's Grandfather $\Rightarrow$ C

Answer: (C) Go Back to Q7

Q8.

Solution

Concept — Direction Sense (Tracking Turns): Track the facing direction after each turn. A right turn rotates 90° clockwise; a left turn rotates 90° anticlockwise. Only the turns affect the facing direction, not the distance walked.

Step 1 — Track each move: Start: **North**. Walk 8m North. Turn right $\Rightarrow$ facing **East**. Walk 6m East. Turn right $\Rightarrow$ facing **South**. Walk 5m South. Turn left $\Rightarrow$ facing **East**.

Step 2 — Final direction: After the left turn from South, Ravi faces **East**.

Why other options are wrong:

- Option (A): North was the starting direction, changed by the first right turn.
- Option (B): South was the direction before the final left turn.
- Option (C): West would result from a right turn at South, but Ravi turned left.

Final Answer: Ravi is facing East $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Direction Sense (Straight-line Distance via Pythagoras): When two displacements are perpendicular (one North-South, one East-West), the resultant straight-line distance is found using the Pythagorean theorem.

Step 1 — Identify perpendicular components: Mohan walks 12m South (vertical component) and 5m East (horizontal component). These are at right angles to each other.

Step 2 — Apply Pythagoras:

$$\text{Distance} = \sqrt{12^2 + 5^2} = \sqrt{144 + 25} = \sqrt{169} = \mathbf{13}\,\text{m}.$$

Why other options are wrong:

- Option (B): 17m $= 12 + 5$ uses simple addition, ignoring the right-angle geometry.
- Option (C): 15m would require legs of 9 and 12 (a 3-4-5 triple scaled by 3), not 12 and 5.
- Option (D): 11m has no valid Pythagorean basis with these two distances.

Final Answer: Distance $= \sqrt{144 + 25} = 13\,\text{m} \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Syllogism (Universal Affirmative – Transitive Rule): If all A are B and all B are C, then all A are C. The converse (all C are A) does not follow unless explicitly stated.

Step 1 — Evaluate Conclusion I: All flowers are trees + All trees are rivers $\Rightarrow$ All flowers are rivers. **Follows** ✓.

Step 2 — Evaluate Conclusion II: "All rivers are flowers" is the reverse of the derived statement. Rivers include trees and flowers, but may contain non-flowers. **Does not follow** $\times$.

Why other options are wrong:

- Option (A): Only II follows — II is invalid; it is an unwarranted converse.
- Option (C): Both follow — II cannot be derived from the given premises.
- Option (D): Neither follows — I is valid by the standard transitive syllogism rule.

Final Answer: Only Conclusion I follows $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Syllogism (Particular + Universal Affirmative): "Some A are B" combined with "All B are C" gives "Some A are C." A universal conclusion (All C are A) cannot be drawn from a particular premise.

Step 1 — Evaluate Conclusion I: Some cats are dogs + All dogs are birds $\Rightarrow$ Some cats are birds. **Follows** ✓.

Step 2 — Evaluate Conclusion II: "All birds are cats" requires every bird to be a cat. Since only some cats are dogs (birds), many birds may not be cats at all. **Does not follow** $\times$.

Why other options are wrong:

- Option (A): Only II follows — II is invalid; it is an over-generalisation.
- Option (B): Both follow — II cannot be derived from a particular premise.
- Option (D): Neither follows — I is a standard valid syllogistic conclusion.

Final Answer: Only Conclusion I follows $\Rightarrow$ C

Answer: (C) Go Back to Q11

Q12.

Solution

Concept — Syllogism (Universal Negative + Universal Affirmative): "No A is B" and "All B is C" means the B-part of C is definitely not A. Hence some C (the B-portion) is not A. But "No A is C" does not follow because C may have members beyond B.

Step 1 — Evaluate Conclusion I (No glass is gold): Silver is all gold, and no glass is silver. However, gold may include non-silver items that could be glass. So "No glass is gold" is not guaranteed. **Does not follow** $\times$.

Step 2 — Evaluate Conclusion II (Some gold is not glass): All silver is gold, and no glass is silver. Therefore the silver-items (which are gold) are not glass $\Rightarrow$ some gold is not glass. **Follows** $\checkmark$.

Why other options are wrong:

- Option (A): Only I follows — I does not necessarily follow from the premises.
- Option (B): Both follow — I is not a valid conclusion here.
- Option (C): Neither follows — II does follow by the reasoning above.

Final Answer: Only Conclusion II follows $\Rightarrow$ D

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Statement-Conclusion (Direct vs. Over-extended Inference): A valid conclusion must follow directly and reasonably from the statement without adding unjustified universality or claims beyond what is stated.

Step 1 — Evaluate Conclusion I: The statement says daily newspaper reading keeps one "well-informed about current events," directly implying regular readers are better informed about current affairs. **Follows** $\checkmark$.

Step 2 — Evaluate Conclusion II: "All current events are reported in newspapers" is a sweeping claim. The statement only says newspapers help with information,

not that every event is covered. **Does not follow** $\times$.

Why other options are wrong:

- Option (B): Only II follows — II is an unjustified over-generalisation.
- Option (C): Both follow — II is too sweeping to be a valid conclusion.
- Option (D): Neither follows — I is a direct, well-supported inference.

Final Answer: Only Conclusion I follows $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Statement-Assumption (Implicit vs. Extreme Assumption): An implicit assumption is necessarily true for the statement to be meaningful. Assumptions that are extreme or claim universal behaviour are generally not implicit.

Step 1 — Evaluate Assumption I: The instruction to "switch off lights" is sensible only if lights left on waste electricity. This is the natural, essential justification for the instruction. **Implicit** $\checkmark$.

Step 2 — Evaluate Assumption II: "Everyone always forgets" is an extreme universal claim. The instruction is a prudent reminder, not a statement that forgetfulness is universal. **Not implicit** $\times$.

Why other options are wrong:

- Option (A): Only II is implicit — II is too extreme to be genuinely implicit.
- Option (C): Both are implicit — II is not an implicit assumption.
- Option (D): Neither is implicit — I is clearly implicit in the instruction.

Final Answer: Only Assumption I is implicit $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Strong vs. Weak Arguments: A strong argument is directly relevant to the statement, logically sound, and raises a substantial point. Both supporting and opposing arguments can be strong if they address genuine concerns.

Step 1 — Evaluate Argument I (Yes): Junk food causing obesity and serious health problems in children is a well-established, substantive public health concern directly relevant to school canteen policy. **Strong** ✓.

Step 2 — Evaluate Argument II (No): Students' right to personal choice is a genuine and non-trivial concern about individual autonomy, directly relevant to the policy question. **Strong** ✓.

Why other options are wrong:

- Option (A): Only Argument I is strong — Argument II raises a valid autonomy concern.
- Option (B): Only Argument II is strong — Argument I raises a valid health concern.
- Option (D): Neither is strong — both arguments are substantive and directly relevant.

Final Answer: Both Arguments I and II are strong ⇒ C

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Course of Action (Practical vs. Extreme): A valid course of action must directly address the problem, be proportionate, and avoid causing greater harm. Extreme measures that damage livelihoods without solving the root cause are not advisable.

Step 1 — Evaluate Course I: Shutting down *all* factories is extreme, economically damaging, and does not address the root cause (lack of effluent treatment). Disproportionate and impractical. **Not advisable** ×.

Step 2 — Evaluate Course II: Requiring effluent treatment plants directly tackles the pollution source while allowing industrial activity to continue. Practical, proportionate, and effective. **Advisable** ✓.

Why other options are wrong:

- Option (A): Only I — Course I is an extreme overreaction.
- Option (B): Both — Course I is unnecessarily drastic and counterproductive.
- Option (C): Neither — Course II is clearly a practical and effective solution.

Final Answer: Only Course of Action II should be followed $\Rightarrow$ $\boxed{D}$

Answer: (D) Go Back to Q16

Q17.

Solution

Concept — Linear Seating Arrangement: Assign seats numbered 1 to 6 from left to right and place each person using the clues sequentially until the arrangement is uniquely determined.

Step 1 — Place using clues: F and E are at the two ends (seats 1 and 6). C is 3rd from left $\Rightarrow$ seat 3. A is immediately left of C $\Rightarrow$ seat 2. B is immediately right of C $\Rightarrow$ seat 4. D is between B (seat 4) and F (end). If F is at seat 6, D is at seat 5, and E is at seat 1.

Arrangement: **E(1) – A(2) – C(3) – B(4) – D(5) – F(6)**.

Step 2 — Find 2nd from right: Seat 5 from left = seat 2 from right = **D**.

Why other options are wrong:

- Option (B): B is at seat 4 (3rd from right).
- Option (C): F is at seat 6 (1st from right, i.e. rightmost).
- Option (D): E is at seat 1 (leftmost).

Final Answer: D sits second from the right $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Circular Seating Arrangement: In a 6-person circular arrangement (all facing centre), the person directly opposite any given person is exactly 3 seats away in either direction.

Step 1 — Build the arrangement (clockwise): The clue states U, R, Q appear clockwise in that order. P is immediately right of Q $\Rightarrow$ clockwise: ...U, R, Q, P, ... Remaining: S and T. S is immediately left of T $\Rightarrow$ S, T consecutive clockwise. T is not adjacent to Q, so T is at position 6 (adjacent to U at 1), S at position 5.

Clockwise: **U(1) – R(2) – Q(3) – P(4) – S(5) – T(6)**.

Step 2 — Find person opposite R: R is at position 2. Position opposite $= 2+3 = 5$ = **S**.

Why other options are wrong:

- Option (A): Q is at position 3, sitting opposite position 6 (T).
- Option (C): T is at position 6, sitting opposite position 3 (Q).
- Option (D): U is at position 1, sitting opposite position 4 (P).

Final Answer: S sits directly opposite R $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q18

Q19.

Solution

Concept — Ranking/Ordering Puzzle: Translate each comparative clue into an inequality, then chain all inequalities to produce a complete ordering from heaviest to lightest.

Step 1 — Compile inequalities: E is the heaviest: $E > D, B, A, C$. $D < E$: $E > D$. $D > B > A$. $A > C$.

Step 2 — Complete order: $E > D > B > A > C$.

Rank 1 = E, Rank 2 = D, Rank **3 = B**, Rank 4 = A, Rank 5 = C. The third heaviest is **B**.

Why other options are wrong:

- Option (A): D is the 2nd heaviest, not 3rd.
- Option (B): A is the 4th heaviest (2nd lightest).

- Option (D): C is the lightest (5th rank).

Final Answer: 3rd heaviest box is B $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q19

Q20.

Solution

Concept — Word Analogy (Attribute Relationship): Identify the logical relationship between the first pair of words, then apply the exact same relationship to find the missing word in the second pair.

Step 1 — Identify the relationship: Illiterate (cannot read/write) $\rightarrow$ Ignorant (lacks knowledge). The attribute of being illiterate leads to/is characterised by ignorance.

Step 2 — Apply to second pair: Literate (can read/write) $\rightarrow$ the corresponding positive attribute = **Educated** (possesses knowledge and learning).

Why other options are wrong:

- Option (A): Foolish refers to poor judgment, not a direct attribute of literacy.
- Option (B): Confused implies uncertainty, unrelated to the ability to read and write.
- Option (C): Intelligent refers to innate cognitive ability, not the direct result of being literate.

Final Answer: Literate is to Educated as Illiterate is to Ignorant $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q20

Q21.

Solution

Concept — Letter Analogy (Uniform Shift): Each letter in the first group is shifted by the same number of positions to get the corresponding letter in the second group. Apply the identical shift to the third group.

Step 1 — Find the shift: ACE $\rightarrow$ BDF. A(1)$\rightarrow$B(2), C(3)$\rightarrow$D(4), E(5)$\rightarrow$F(6). Each letter shifts by **+1**.

Step 2 — Apply +1 shift to GIK: G(7)$\rightarrow$H(8), I(9)$\rightarrow$J(10), K(11)$\rightarrow$L(12). Result: **HJL**.

Why other options are wrong:

- Option (B): HIJ are three consecutive letters; the original group GIK has gaps of 2, not 1.
- Option (C): FHJ shifts G, I, K backward by 1 (-1 shift), the wrong direction.
- Option (D): GHI are consecutive letters starting from G with no shift applied.

Final Answer: GIK shifted $+1$ gives HJL $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q21

Q22.

Solution

Concept — Classification / Odd One Out (Category Membership): Identify the common category shared by most items, then find the one item that belongs to a different category.

Step 1 — Categorise each item: Rose = flower, Lotus = flower, Jasmine = flower, Lily = flower. These four are all **flowers**.

Step 2 — Identify the odd one: Mango is a **fruit/fruit tree**, belonging to a different botanical category from flowers.

Why other options are wrong:

- Option (A): Lily is a flower — it belongs to the common group.
- Option (C): Jasmine is a flower — it belongs to the common group.
- Option (D): Rose is a flower — it belongs to the common group.

Final Answer: Mango is the odd one out $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q22

Q23.

Solution

Concept — Classification / Odd One Out (Perfect Squares): A perfect square is the square of an integer. Check each number to determine whether it satisfies this condition.

Step 1 — Check each number: $16 = 4^2$ ✓, $25 = 5^2$ ✓, $36 = 6^2$ ✓, $64 = 8^2$ ✓. For 50: $\sqrt{50} \approx 7.07$, not an integer, so 50 is **not a perfect square**.

Step 2 — Identify the odd one: 50 is the only number in the list that is not a perfect square.

Why other options are wrong:

- Option (A): $25 = 5^2$ is a perfect square.
- Option (B): $36 = 6^2$ is a perfect square.
- Option (D): $64 = 8^2$ is a perfect square.

Final Answer: 50 is the odd one out (not a perfect square) $\Rightarrow$ C

Answer: (C) Go Back to Q23

Q24.

Solution

Concept — Cause and Effect (Multiple Simultaneous Effects): A single cause can produce several effects at the same time. When each listed option is a plausible and direct consequence of the given cause, the combined option ("All of the above") is the correct answer.

Step 1 — Evaluate each effect: (A) Residents buy more umbrellas during heavy rain — plausible consumer behaviour ✓. (B) Low-lying areas get flooded after prolonged rain — well-established meteorological effect ✓. (C) Parks become waterlogged after three days of rain — plausible environmental effect ✓.

Step 2 — Combine: All three effects (A), (B), and (C) are likely consequences of heavy rainfall for three consecutive days. **All of the above** is the most complete and accurate answer.

Why other options are wrong:

- Option (A) alone: Correct but incomplete; flooding and waterlogging are equally likely.
- Option (B) alone: Correct but incomplete; umbrella purchases and park waterlogging also occur.
- Option (C) alone: Correct but incomplete; other effects are equally valid consequences.

Final Answer: All three are likely effects $\Rightarrow$ D

Answer: (D) Go Back to Q24

Q25.

Solution

Concept — Statement and Inference (Evidence-Based Conclusion): A valid inference must be directly and logically supported by the data in the statement, without adding unjustified generalisations, unrelated claims, or conclusions about other places or times.

Step 1 — Analyse the statement: The AQI has dropped to hazardous levels *during winter, every year, for the past five years*. This indicates a **consistent, winter-specific, recurring pattern** in this particular city.

Step 2 — Evaluate each option:

- (A) Winter poor air quality is recurring and predictable here — directly supported ✓.
- (B) Hazardous only in winter *everywhere* — generalises beyond this city ×.
- (C) No industrial activities in the city — contradicts what would cause hazardous AQI ×.
- (D) Winters will become shorter — completely unrelated to AQI data ×.

Final Answer: Option (A) is most strongly supported by the statement ⇒ $\boxed{\text{A}}$

Answer: (A) Go Back to Q25

Q26.

Solution

Concept — Cause and Effect (Economic Causation): When one event creates a condition (such as higher cost) that motivates a behavioural response, the first event is the cause and the second event is the effect. The direction of causation follows the economic incentive.

Step 1 — Analyse the events: Event I: Gas cylinder prices rose significantly (a cost increase). Event II: Households used electric induction cookers more frequently (a behavioural shift).

Step 2 — Determine causation: Higher gas costs make cooking with gas more expensive. Rational households respond by switching to cheaper electric alternatives. Event I directly caused Event II through the price-incentive mechanism.

Why other options are wrong:

- Option (A): Increased cooker use does not cause gas prices to rise; this reverses the logic.

- Option (C): There is no stated common external cause; the causal link is direct.
- Option (D): The two events are clearly linked through economic behaviour, not independent.

Final Answer: Event I is the cause of Event II $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q26

Q27.

Solution

Concept — Clock Angle Formula: The hour hand moves at 0.5° per minute; the minute hand moves at 6° per minute. Calculate each hand's angular position from 12 o'clock and take the absolute difference.

Step 1 — Hour hand position at 4:40:

$$4 \times 30^\circ + 40 \times 0.5^\circ = 120^\circ + 20^\circ = 140^\circ.$$

Step 2 — Minute hand position at 4:40 and angle:

$$40 \times 6^\circ = 240^\circ. \quad \text{Angle} = |240^\circ - 140^\circ| = \mathbf{100}^\circ.$$

Why other options are wrong:

- Option (A): 80° results from ignoring the hour hand's movement past the 4 o'clock mark.
- Option (B): 90° is the angle at approximately 4:54, not 4:40.
- Option (D): 110° arises from a calculation error in the hour hand position.

Final Answer: Angle $= |240^\circ - 140^\circ| = 100^\circ \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q27

Q28.

Solution

Concept — Mathematical Operations (Symbol Substitution): Replace each operator symbol with its actual meaning as given, then evaluate the resulting expression using standard BODMAS/PEMDAS rules (division and multiplication before addition and subtraction).

Step 1 — Substitute symbols in $15 + 3 - 2 \times 4 \div 6$**:**

$$+ \to \div, \quad - \to \times, \quad \times \to +, \quad \div \to -$$

Expression becomes: $15 \div 3 \times 2 + 4 - 6$.

Step 2 — Evaluate using BODMAS (left to right):

$$15 \div 3 = 5; \quad 5 \times 2 = 10; \quad 10 + 4 = 14; \quad 14 - 6 = \mathbf{8}.$$

Why other options are wrong:

- Option (A): 5 results from computing only $15 \div 3$ and ignoring the remaining operations.
- Option (B): 6 results from an incorrect order of operations after substitution.
- Option (C): 7 results from an arithmetic slip in the final subtraction step.

Final Answer: $15 \div 3 \times 2 + 4 - 6 = 8 \Rightarrow$ D

Answer: (D) Go Back to Q28

Q29.

Solution

Concept — Data Sufficiency: Test each statement independently to determine whether it alone provides enough information to answer the question. Only combine statements if neither is individually sufficient.

Step 1 — Test Statement 1 alone (N **is divisible by 12):** Since $12 = 4 \times 3$ and $12 = 6 \times 2$, any multiple of 12 is divisible by both 4 and 6. The question is answered: **Yes**. Statement 1 is **sufficient alone** ✓.

Step 2 — Test Statement 2 alone ($N = 48$**):** $48 \div 4 = 12$ ✓; $48 \div 6 = 8$ ✓. The question is answered: **Yes**. Statement 2 is **sufficient alone** ✓.

Since either statement alone is sufficient, the answer is Option (A).

Why other options are wrong:

- Option (B): Statement 2 is also sufficient on its own (48 satisfies both conditions).
- Option (C): Both together are not needed since each statement individually answers the question.
- Option (D): Both statements are sufficient, so "neither" is incorrect.

Final Answer: Either statement alone is sufficient $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q29

Q30.

Solution

Concept — Venn Diagram (Intersection Regions): In a three-circle Venn diagram, each pairwise overlapping region (excluding the central all-three zone) represents people who belong to exactly those two sets and *not* the third set.

Step 1 — Identify the region: The region where only "Graduates" and "Own a Car" overlap, *excluding* the "Employed" circle, contains people who are simultaneously inside the Graduates circle and the Own a Car circle but *outside* the Employed circle.

Step 2 — Interpret: These are people who have **graduated and own a car but are not currently employed**.

Why other options are wrong:

- Option (A): The all-three overlap (Graduates $\cap$ Employed $\cap$ Car owners) is the central zone with 10 people, not this region.
- Option (C): "Only Employed" is the part of the Employed circle outside both other circles.
- Option (D): "Only Graduates" is the part of the Graduates circle outside both other circles.

Final Answer: The region represents Graduates who own a Car but are not Employed $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q30

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	B	3	C	4	D	5	A
6	B	7	C	8	D	9	A	10	B
11	C	12	D	13	A	14	B	15	C
16	D	17	A	18	B	19	C	20	D
21	A	22	B	23	C	24	D	25	A
26	B	27	C	28	D	29	A	30	B