

Bihar B.Ed CET Logical & Analytical Reasoning

Sample Paper – 5

Duration: 25 Minutes | Maximum Marks: 25

Instructions

- This paper contains **25 questions** carrying **1 mark** each.
- All questions are compulsory.
- Each question has **four** options (A), (B), (C), (D). Choose the most appropriate answer.
- There is **no negative marking**.
- Use of calculators and electronic devices is not permitted.
- Read each question carefully before answering.

Q1. Find the missing term in the series:

1, 4, 9, 16, 25, _____

- (A) 25
- (B) 36
- (C) 49
- (D) 32

Q2. Find the next group of letters in the series: BCDE, FGHI, JKLM, _____

- (A) NOPQ
- (B) MNOP
- (C) OPQR
- (D) PQRS

Q3. Choose the correct analogy:

Thermometer : Temperature :: Barometer : _____

- (A) Rain



- (B) Pressure
- (C) Wind
- (D) Humidity

Q4. Choose the correct analogy:

$$3 : 9 :: 7 : \underline{\hspace{2cm}}$$

- (A) 21
- (B) 14
- (C) 42
- (D) 49

Q5. Which of the following is the odd one out?

- (A) Mango
- (B) Papaya
- (C) Guava
- (D) Potato

Q6. In a certain code, **FISH** is written as **GJTI**. Using the same code, how will **BIRD** be written?

- (A) CISE
- (B) CIRD
- (C) CJSE
- (D) BJSE

Q7. A is the father of B. B is the brother of C. C is the mother of D. How is A related to D?

- (A) Grandfather
- (B) Father

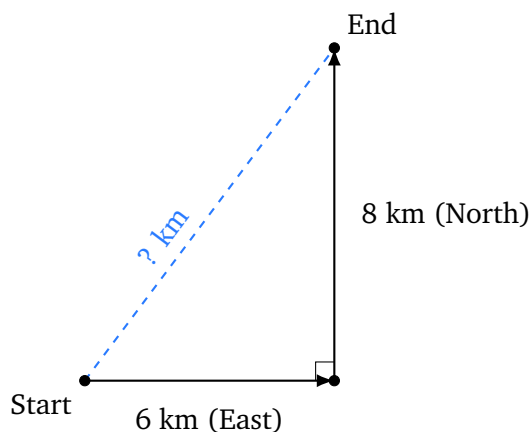


- (C) Uncle
- (D) Great-grandfather

Q8. Riya is 8th from the top and 12th from the bottom in a class. How many students are there in the class?

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

Q9. A person walks 6 km towards the East and then 8 km towards the North. What is the straight-line distance from his starting point?



- (A) 6 km
- (B) 8 km
- (C) 10 km
- (D) 14 km

Q10. In a row of 60 students, Kiran is 22nd from the left end. What is her position from the right end?

- (A) 37th
- (B) 38th
- (C) 40th



(D) 39th

Q11. Statements:

- All roses are flowers.
- All flowers have fragrance.

Conclusions:

- I. All roses have fragrance.
- II. Some things having fragrance are roses.

Which of the following is correct?

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

Q12. Statements:

- Some birds can fly.
- No fish can fly.

Conclusions:

- I. Some birds are not fish.
- II. No bird is a fish.

Which of the following is correct?

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

Q13. Statement: “Regular exercise leads to a healthy lifestyle.”

Conclusions:

- I. People who exercise regularly are healthy.



II. People who do not exercise are always unhealthy.

Which conclusion(s) follow?

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

Q14. Statement: “Plant more trees to save the environment.”

Assumptions:

- I. Trees help maintain environmental balance.
- II. The environment is currently at risk.

Which assumption(s) is/are implicit?

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

Q15. Statement: “Should plastic bags be banned completely?”

Arguments:

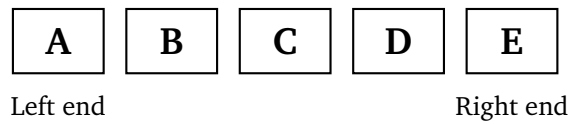
- I. Yes, they are a major cause of environmental pollution.
- II. No, they are convenient and affordable for common people.

Which argument(s) is/are strong?

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

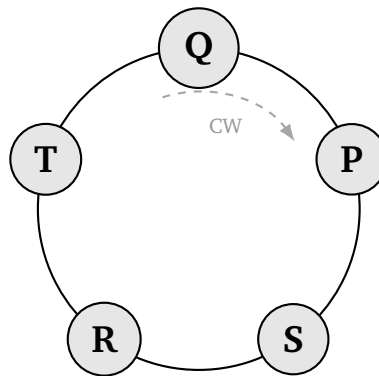
Q16. In a row of 5 people — A, B, C, D, E — A is at the extreme left. B is to the immediate right of A. C is to the immediate right of B. D is to the right of C. E is at the extreme right. Who sits at the extreme right end?





- (A) B
- (B) C
- (C) D
- (D) E

Q17. Five friends P, Q, R, S, T sit around a circular table, all facing the centre. P is to the immediate right of Q. S is to the immediate right of P. R is between S and T. Who sits to the immediate left of R?



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

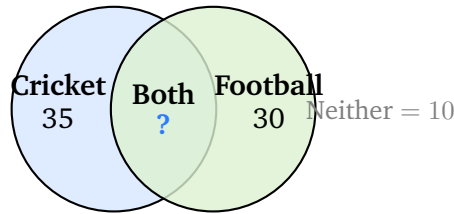
Q18. If @ means +, # means $\times$, \$ means $-$, and % means $\div$, find the value of:

$$10 @ 2 \# 3 \$ 4 \% 2$$

- (A) 12
- (B) 10
- (C) 16
- (D) 14



Q19. In a group of 60 people, 35 like cricket, 30 like football, and 10 like neither. How many people like both cricket and football?

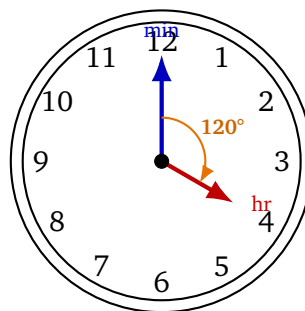


- (A) 5
- (B) 10
- (C) 15
- (D) 20

Q20. If January 1, 2024 is a Monday, what day of the week is January 1, 2025?

- (A) Monday
- (B) Tuesday
- (C) Wednesday
- (D) Thursday

Q21. What is the angle between the minute hand and the hour hand of a clock at 4:00?



- (A) 90°
- (B) 120°
- (C) 150°
- (D) 60°



Q22. Find the next term in the series: **B2, D4, F6, H8, _____**

- (A) I9
- (B) J10
- (C) K10
- (D) J12

Q23. Which of the following is **NOT** a perfect square?

- (A) 121
- (B) 144
- (C) 169
- (D) 180

Q24. Find the missing number (?) in the following table:

Col 1	Col 2	Col 3
2	4	8
3	9	27
4	16	?

- (A) 32
- (B) 48
- (C) 64
- (D) 256

Q25. On a standard die (opposite faces sum to 7), if 6 is on top, which number is at the bottom?

- (A) 1
- (B) 2
- (C) 3
- (D) 5



Detailed Solutions

Sol. 1.

Solution

Concept: Perfect Square Number Series

The series is formed by squaring consecutive natural numbers:

$$1^2 = 1, \quad 2^2 = 4, \quad 3^2 = 9, \quad 4^2 = 16, \quad 5^2 = 25, \quad 6^2 = 36$$

The term after $5^2 = 25$ is $6^2 = 36$.

Why other options are wrong:

- (A) 25 — already present in the series as 5^2 ; repeating would break the pattern.
- (C) 49 — equals 7^2 , which comes two positions later, not the immediate next term.
- (D) 32 — is not a perfect square ($\sqrt{32} \approx 5.66$); has no place in this pattern.

Final Answer: B

Answer: (B) [← Go Back to Q 1](#)

Sol. 2.

Solution

Concept: Consecutive Letter Group Series

Each group contains 4 consecutive alphabet letters, and the groups follow one after another without any gap:

Group	Letters	Position
BCDE	B, C, D, E	2–5
FGHI	F, G, H, I	6–9
JKLM	J, K, L, M	10–13
NOPQ	N, O, P, Q	14–17

After M (13th letter), the next group begins at N (14th): **NOPQ**.

Why other options are wrong:

- (B) MNOP — starts at M, which was the last letter of the previous group; creates an overlap.
- (C) OPQR — skips N entirely; does not follow the consecutive pattern.
- (D) PQRS — skips two letters (N and O); breaks the pattern further.



Final Answer:

Answer: (A) [← Go Back to Q 2](#)

Sol. 3.

Solution

Concept: Instrument–Measurement Analogy

The relationship is: *Instrument* measures *Quantity*.

Thermometer → measures Temperature

Barometer → measures atmospheric **Pressure**

A barometer is used to measure atmospheric pressure and is crucial in weather forecasting.

Why other options are wrong:

- (A) Rain — rainfall is measured by a *rain gauge* (pluviometer), not a barometer.
- (C) Wind — wind speed/direction is measured by an *anemometer* or wind vane.
- (D) Humidity — atmospheric humidity is measured by a *hygrometer*.

Final Answer:

Answer: (B) [← Go Back to Q 3](#)

Sol. 4.

Solution

Concept: Squaring Analogy

The rule: the second number is the **square** of the first number.

$$3 : 9 \implies 3^2 = 9 \quad \checkmark$$

$$7 : ? \implies 7^2 = 49$$

Why other options are wrong:

- (A) 21 — equals 3×7 ; applies multiplication by 3, not squaring.
- (B) 14 — equals 2×7 ; applies doubling, not squaring.



- (C) 42 — equals 6×7 ; no consistent logical basis for this factor.

Final Answer: D

Answer: (D) [← Go Back to Q 4](#)

Sol. 5.

Solution

Concept: Odd One Out — Fruits vs. Vegetables

The common category is **fruits** (parts of a plant that develop from a flower and contain seeds):

- Mango — tropical fruit ✓
- Papaya — tropical fruit ✓
- Guava — tropical fruit ✓
- **Potato** — a stem tuber (vegetable), grows underground; NOT a fruit ✗

Potato is the odd one out because it belongs to an entirely different botanical category.

Why other options are wrong:

- (A), (B), (C) — Mango, Papaya, and Guava are all fruits and belong to the same category.

Final Answer: D

Answer: (D) [← Go Back to Q 5](#)

Sol. 6.

Solution

Concept: Coding–Decoding (Each Letter Shifted +1)

Verification with FISH → GJTI:

$$F \xrightarrow{+1} G, \quad I \xrightarrow{+1} J, \quad S \xrightarrow{+1} T, \quad H \xrightarrow{+1} I \quad \checkmark$$

Applying the same rule to BIRD:

$$B \xrightarrow{+1} C, \quad I \xrightarrow{+1} J, \quad R \xrightarrow{+1} S, \quad D \xrightarrow{+1} E$$

$$\Rightarrow \text{CJSE}$$

Why other options are wrong:



- (A) CISE — “I” is not shifted (should be J); the second letter is wrong.
- (B) CIRD — no letter is shifted from BIRD except the first; inconsistent.
- (D) BJSE — B is not shifted (should be C); the first letter is wrong.

Final Answer: C

Answer: (C) [← Go Back to Q 6](#)

Sol. 7.

Solution

Concept: Blood Relations

Tracing the family tree step by step:

- A is the **father** of B.
- B is the **brother** of C $\Rightarrow$ A is also the **father** of C (parent of both siblings).
- C is the **mother** of D.

Therefore A (father of C) is the **grandfather** of D (C's child).

$$A \xrightarrow{\text{father}} C \xrightarrow{\text{mother}} D \Rightarrow A \text{ is } \mathbf{\text{grandfather}} \text{ of } D$$

Why other options are wrong:

- (B) Father — A is C's father, not D's; there is one generation between A and D.
- (C) Uncle — would require A to be a sibling of one of D's parents; A is a parent, not a sibling.
- (D) Great-grandfather — requires four generations; only three exist here (A, C, D).

Final Answer: A

Answer: (A) [← Go Back to Q 7](#)

Sol. 8.

Solution

Concept: Position/Rank Formula

When the rank from the top and the rank from the bottom are both given:

$$\text{Total students} = \text{Rank from top} + \text{Rank from bottom} - 1$$

$$= 8 + 12 - 1 = 19$$



The reason for subtracting 1 is that Riya herself is counted in both the “from top” and “from bottom” counts, so she must be subtracted once to avoid double-counting.

Why other options are wrong:

- (A) 18 — uses $8 + 12 - 2$; subtracts 2, which has no justification.
- (C) 20 — uses $8 + 12 = 20$; adds without subtracting for Riya; double-counts her.
- (D) 21 — adds an extra 1; no valid derivation.

Final Answer:

Answer: (B) [← Go Back to Q 8](#)

Sol. 9.

Solution

Concept: Pythagoras Theorem in Direction and Distance

The eastward and northward legs are perpendicular, forming a right-angled triangle:

$$\text{Horizontal (East)} = 6 \text{ km}, \quad \text{Vertical (North)} = 8 \text{ km}$$

By the Pythagorean theorem:

$$\text{Straight-line distance} = \sqrt{6^2 + 8^2} = \sqrt{36 + 64} = \sqrt{100} = 10 \text{ km}$$

This is the classic (3, 4, 5) Pythagorean triple scaled by a factor of 2: (6, 8, 10).

Why other options are wrong:

- (A) 6 km — only the eastward leg; ignores the northward displacement entirely.
- (B) 8 km — only the northward leg; ignores the eastward displacement entirely.
- (D) 14 km — equals $6 + 8$, the total *path* walked; not the straight-line (direct) distance.

Final Answer:

Answer: (C) [← Go Back to Q 9](#)



Sol. 10.

Solution**Concept: Position from the Opposite End**

$$\begin{aligned}\text{Position from right} &= \text{Total students} - \text{Position from left} + 1 \\ &= 60 - 22 + 1 = 39\end{aligned}$$

Adding 1 accounts for Kiran herself: the students to her right = $60 - 22 = 38$, so her rank from the right is $38 + 1 = 39$.

Why other options are wrong:

- (A) 37th — uses $60 - 22 - 1 = 37$; subtracts an extra 1; incorrect formula.
- (B) 38th — uses $60 - 22 = 38$; counts only students to her right, omitting Kiran herself.
- (C) 40th — uses $60 - 22 + 2 = 40$; adds an extra 1 without justification.

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

Sol. 11.

Solution**Concept: Syllogism — Universal Affirmative Propositions**

$$\text{All Roses} \subset \text{All Flowers} \subset \text{All Fragrant Things}$$

Conclusion I: “All roses have fragrance.”

Since every rose is a flower and every flower is fragrant, every rose is fragrant.

Follows (✓).**Conclusion II:** “Some things having fragrance are roses.”

Since roses are a (non-empty) subset of fragrant things, at least some fragrant things are roses. This is the converse of a valid universal statement and holds as a particular. **Follows** (✓).

Why other options are wrong:

- (A) Only I — incorrect; Conclusion II is also a valid logical deduction.
- (B) Only II — incorrect; Conclusion I is the primary and most direct inference.
- (C) Neither — both conclusions are logically valid from the given premises.

Final Answer: D

Answer: (D) ← [Go Back to Q 11](#)

Sol. 12.

Solution

Concept: Syllogism — Particular Affirmative and Universal Negative

Premises:

- Some birds can fly.
- No fish can fly.

Conclusion I: “Some birds are not fish.”

Those birds that can fly cannot be fish (because no fish can fly). Hence at least some birds are not fish. **Follows** (✓).

Conclusion II: “No bird is a fish.”

The premises establish only that flying birds are not fish. Birds that *cannot* fly may or may not overlap with fish — the premises do not address this. Conclusion II goes beyond what the premises guarantee. **Does not follow** (×).

Why other options are wrong:

- (B) Only II — II is an over-generalisation not supported by the premises.
- (C) Both follow — II cannot be validly derived; only I follows.
- (D) Neither — Conclusion I is a valid deduction.

Final Answer: A

Answer: (A) ← [Go Back to Q 12](#)

Sol. 13.

Solution

Concept: Statement and Conclusions (Direct Inference vs. Over-Generalisation)

Statement: “Regular exercise leads to a healthy lifestyle.”

Conclusion I: “People who exercise regularly are healthy.”

This is a direct and reasonable inference from the statement — if exercise leads to health, regular exercisers are healthy. **Follows** (✓).

Conclusion II: “People who do not exercise are *always* unhealthy.”

The statement says exercise promotes health; it does not say exercise is the *only* path to health. Other factors — balanced diet, adequate sleep, good genetics — can also maintain health. The absolute word “always” makes this an extreme



over-generalisation. **Does not follow** (×).

Why other options are wrong:

- (B) Only II — II is unjustified by the statement; I is the valid conclusion.
- (C) Both — Conclusion II cannot be drawn from the given statement alone.
- (D) Neither — Conclusion I is a straightforward and valid inference.

Final Answer:

Answer: (A) [← Go Back to Q 13](#)

Sol. 14.

Solution

Concept: Statement and Implicit Assumptions

Statement: “Plant more trees to save the environment.”

Assumption I: “Trees help maintain environmental balance.”

The advice to plant trees specifically *to save* the environment necessarily presupposes that trees are beneficial to the environment. Without this assumption, planting trees would have no relevance to saving the environment. **Implicit** (✓).

Assumption II: “The environment is currently at risk.”

The word “**save**” implies there is something to save *from* a threat. You only need to save something that is in danger. Hence the statement implicitly assumes the environment is at risk. **Implicit** (✓).

Why other options are wrong:

- (A) Only I — overlooks the implication of “save,” which points to assumed environmental risk.
- (B) Only II — overlooks the foundational assumption that trees are beneficial to the environment.
- (D) Neither — both assumptions are clearly and necessarily embedded in the statement.

Final Answer:

Answer: (C) [← Go Back to Q 14](#)



Sol. 15.

Solution**Concept: Strength of Arguments**

An argument is **strong** if it is (a) directly related to the question, (b) not trivial or vague, and (c) logically sound and practically significant.

Statement: Should plastic bags be banned completely?

Argument I: “Yes — they are a major cause of environmental pollution.”

This is a well-established fact, directly relevant to the question, and addresses a significant public concern. **Strong** (✓).

Argument II: “No — they are convenient and affordable for common people.”

This is a genuine socio-economic concern that directly addresses the practical impact of a ban on everyday life. It is logically sound and significant. **Strong** (✓).

A question can have two strong arguments on opposite sides — that is what makes the issue a genuine policy debate.

Why other options are wrong:

- (A) Only I — ignores the legitimate economic and practical concern raised by Argument II.
- (B) Only II — ignores the substantial and well-documented environmental harm in Argument I.
- (D) Neither — both arguments are substantive, directly on-topic, and logically valid.

Final Answer:

Answer: (C) [← Go Back to Q 15](#)

Sol. 16.

Solution**Concept: Linear Seating Arrangement**

Placing each person in sequence from left to right using the given clues:

1. A is at the extreme left $\Rightarrow$ Position 1.
2. B is immediately right of A $\Rightarrow$ Position 2.
3. C is immediately right of B $\Rightarrow$ Position 3.
4. D is to the right of C $\Rightarrow$ Position 4.
5. E is at the extreme right $\Rightarrow$ Position 5.





E is at the extreme right end.

Why other options are wrong:

- (A) B — B is at position 2, not the rightmost.
- (B) C — C is at position 3, not the rightmost.
- (C) D — D is at position 4; E is one place further to D's right.

Final Answer: D

Answer: (D) [← Go Back to Q 16](#)

Sol. 17.

Solution

Concept: Circular Seating Arrangement (All Facing Centre)

When all persons face the centre, **right** is the **clockwise** direction.

Building the arrangement step by step:

- P is immediately right (clockwise) of Q.
- S is immediately right (clockwise) of P.
- R is between S and T $\Rightarrow$ after S comes R, then T.

Clockwise order: $Q \rightarrow P \rightarrow S \rightarrow R \rightarrow T \rightarrow Q$ (and back)

To find the person **immediately left** of R: in clockwise order, the person *before* R is the one to R's immediate left.

$$\dots \rightarrow S \rightarrow \mathbf{R} \rightarrow T \rightarrow \dots$$

The person immediately left of R = S.

Why other options are wrong:

- (A) P — P is two seats to R's left (P-S-R); not the immediate neighbour.
- (B) Q — Q is three seats to R's left; not adjacent to R.
- (D) T — T is immediately to R's *right* (clockwise), not the left.

Final Answer: C

Answer: (C) [← Go Back to Q 17](#)



Sol. 18.

Solution**Concept: Symbol Substitution with BODMAS**

Step 1 — Replace symbols with actual operators:

$$10 @ 2 \# 3 \$ 4 \% 2 \longrightarrow 10 + 2 \times 3 - 4 \div 2$$

Step 2 — Apply BODMAS (multiplication and division before addition and subtraction):

$$\begin{aligned} &= 10 + (2 \times 3) - (4 \div 2) \\ &= 10 + 6 - 2 \\ &= 14 \end{aligned}$$

Why other options are wrong:

- (A) 12 — result of incorrect left-to-right evaluation ignoring BODMAS.
- (B) 10 — possibly from computing $10 + 6 - 2 \neq 10$; arithmetic error.
- (C) 16 — from omitting the $4 \div 2$ subtraction term: $10 + 6 = 16$.

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

Sol. 19.

Solution**Concept: Inclusion–Exclusion Principle****Given:** Total = 60, $n(\text{Cricket}) = 35$, $n(\text{Football}) = 30$, $n(\text{Neither}) = 10$ **Step 1 — Find those who like at least one sport:**

$$n(C \cup F) = \text{Total} - \text{Neither} = 60 - 10 = 50$$

Step 2 — Apply the inclusion–exclusion formula:

$$n(C \cup F) = n(C) + n(F) - n(C \cap F)$$

$$50 = 35 + 30 - n(C \cap F)$$

$$n(C \cap F) = 65 - 50 = 15$$

Why other options are wrong:

- (A) 5 — uses $35 + 30 - 60 = 5$; forgets to subtract the 10 who like neither before applying the formula.
- (B) 10 — equals the number who like neither; a coincidental number, not the overlap.
- (D) 20 — overcounts due to incorrect arithmetic or wrong formula application.

Final Answer:

Answer: (C) [← Go Back to Q 19](#)

Sol. 20.

Solution

Concept: Calendar — Odd Days Method

Key fact: 2024 is a **leap year** (since $2024 \div 4 = 506$, with no century exception). A leap year has **366 days**.

Step 1 — Calculate odd days:

$$366 = 52 \times 7 + 2$$

There are **2 odd days** (i.e., 2 extra days beyond complete weeks).

Step 2 — Find the day:

$$\text{Monday} + 2 \text{ days} = \text{Wednesday}$$

So January 1, 2025 falls on a **Wednesday**.

Why other options are wrong:

- (A) Monday — correct for a non-leap year ($365 \text{ days} = 52 \times 7 + 1 \text{ odd day}$ gives Tuesday; Monday repeats after 7 years cycle).
- (B) Tuesday — corresponds to 1 odd day; would apply if 2024 had 365 days.
- (D) Thursday — corresponds to 3 odd days; 2024 has only 2 odd days.

Final Answer:

Answer: (C) [← Go Back to Q 20](#)



Sol. 21.

Solution**Concept: Clock Angle Formula**

At exactly **4:00** (i.e., 4 hours, 0 minutes):

- **Minute hand:** at the 12 $\Rightarrow$ 0 from the 12-o'clock position.
- **Hour hand:** at the 4 $\Rightarrow 4 \times 30 = 120$ from the 12-o'clock position.

Using the standard formula:

$$\theta = \left| 30H - \frac{11}{2}M \right| = \left| 30 \times 4 - \frac{11}{2} \times 0 \right| = |120 - 0| = 120$$

Why other options are wrong:

- (A) 90° — is the angle at **3:00** (hour hand at 3 = $3 \times 30 = 90$).
- (C) 150° — is the angle at **5:00** ($5 \times 30 = 150$).
- (D) 60° — is the angle at **2:00** ($2 \times 30 = 60$).

Final Answer: B

Answer: (B) [← Go Back to Q 21](#)

Sol. 22.

Solution**Concept: Alphanumeric Series (Two Independent Patterns)**

Term	Letter	Number	Rule
B2	B (2nd)	2	Letter: +2 each step; Number: +2 each step
D4	D (4th)	4	
F6	F (6th)	6	
H8	H (8th)	8	
J10	J (10th)	10	Next: J is 2 after H; 10 is 2 after 8

Both the **letter** (B, D, F, H, **J** — every alternate letter, skipping one each time) and the **number** (2, 4, 6, 8, **10** — even numbers) follow independent +2 patterns.

Why other options are wrong:

- (A) I9 — I is adjacent to H (not skipping one); 9 is odd, breaking the even-number pattern.
- (C) K10 — K skips J, missing the correct next letter in the alternating sequence.
- (D) J12 — J is correct but 12 skips 10 in the number sequence.

Final Answer: B



Answer: (B) ← [Go Back to Q 22](#)

Sol. 23.

Solution

Concept: Identifying Perfect Squares

A perfect square is an integer that equals the square of another integer. Checking each option:

- (A) $121 = 11^2$ ✓ perfect square
- (B) $144 = 12^2$ ✓ perfect square
- (C) $169 = 13^2$ ✓ perfect square
- (D) 180: $\sqrt{180} = \sqrt{36 \times 5} = 6\sqrt{5} \approx 13.416 \dots$ × **not** a perfect square

The prime factorisation of 180 is $2^2 \times 3^2 \times 5^1$. Since the prime factor 5 appears to an *odd* power (1), 180 cannot be a perfect square (all prime factors must appear to even powers).

Final Answer: D

Answer: (D) ← [Go Back to Q 23](#)

Sol. 24.

Solution

Concept: Missing Number in Grid — Powers Pattern

Examining each row with $n = \text{Col 1 value}$:

Row	Col 1 (n)	Col 2 (n^2)	Col 3 (n^3)
Row 1	2	$2^2 = 4$	$2^3 = 8$
Row 2	3	$3^2 = 9$	$3^3 = 27$
Row 3	4	$4^2 = 16$	$4^3 = ?$

The pattern per row: Col 2 = n^2 , Col 3 = n^3 . For Row 3, $n = 4$:

$$4^3 = 4 \times 4 \times 4 = 64$$

Why other options are wrong:

- (A) 32 — equals 2^5 ; does not equal 4^3 .
- (B) 48 — equals 4×12 ; no power-based justification for this row.
- (D) 256 — equals 4^4 ; one power too high.



Final Answer: **Answer:** (C) [← Go Back to Q 24](#)

Sol. 25.

Solution**Concept: Standard Die — Opposite Face Rule**

On a standard die, opposite faces always sum to 7:

$$1 \leftrightarrow 6, \quad 2 \leftrightarrow 5, \quad 3 \leftrightarrow 4$$

If 6 is on top, the face directly opposite (at the bottom) is:

$$7 - 6 = 1$$

Why other options are wrong:

- (B) 2 — is opposite to 5 ($2 + 5 = 7$), not to 6.
- (C) 3 — is opposite to 4 ($3 + 4 = 7$), not to 6.
- (D) 5 — is opposite to 2 ($5 + 2 = 7$), not to 6.

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

Answer Key

Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans	Q.No	Ans
1	B	2	A	3	B	4	D	5	D
6	C	7	A	8	B	9	C	10	D
11	D	12	A	13	A	14	C	15	C
16	D	17	C	18	D	19	C	20	C
21	B	22	B	23	D	24	C	25	A

