

MAH B.Ed CET Integrated B.Ed-M.Ed Mental Ability

Sample Paper – 6

Duration: 36 Minutes

Maximum Marks: 40

Instructions

- This paper contains **40** Multiple Choice Questions (Single Correct Answer), modelled on the Mental Ability portion of **MAH B.Ed CET Integrated B.Ed-M.Ed** entrance.
- Each correct answer carries **+1 mark**. There is **no negative marking** for incorrect or unattempted answers.
- Only **one** option is correct. Choose carefully.
- Topics: Number Series, Letter Series, Analogies, Coding-Decoding, Classification, Syllogism, Blood Relations, Direction Sense, Dice Problems, Pattern Recognition.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Q1. Which number comes next in the series?

2, 3, 5, 7, 11, ____

- (A) 12
- (B) 13
- (C) 14
- (D) 15

Q2. Find the missing term in the series:

1, 4, 9, 16, 25, ____

- (A) 30
- (B) 32



(C) 36

(D) 40

Q3. What is the next number in the series?

2, 6, 18, 54, _____

(A) 100

(B) 144

(C) 108

(D) 162

Q4. Identify the missing number in the series:

1, 4, 3, 6, 5, _____

(A) 8

(B) 7

(C) 9

(D) 10

Q5. Find the next term:

3, 5, 9, 15, 23, _____

(A) 31

(B) 32

(C) 33

(D) 35

Q6. Complete the series:

0, 2, 6, 12, 20, _____

(A) 28

(B) 30

(C) 42



(D) 56

Q7. Find the next term in the letter series:

D, H, L, P, ____

(A) T

(B) S

(C) Q

(D) W

Q8. Which letter comes next?

A, E, I, O, ____

(A) V

(B) R

(C) W

(D) U

Q9. Identify the next pair in the series:

ZA, YB, XC, WD, ____

(A) VF

(B) VE

(C) WE

(D) VG

Q10. Find the next term in the series:

A1, C3, E5, G7, ____

(A) H8

(B) J10

(C) I9

(D) I8



Q11. Complete the analogy:

Lion : Roar :: Dog : ?

- (A) Growl
- (B) Howl
- (C) Moan
- (D) Bark

Q12. Complete the analogy:

India : Delhi :: France : ?

- (A) Paris
- (B) London
- (C) Berlin
- (D) Rome

Q13. Complete the analogy:

Music : Musician :: Science : ?

- (A) Singer
- (B) Player
- (C) Scientist
- (D) Performer

Q14. Complete the analogy:

Puppy : Dog :: Calf : ?

- (A) Horse
- (B) Cow
- (C) Bull
- (D) Buffalo

Q15. Complete the analogy:

6 : 36 :: 8 : ?



- (A) 48
- (B) 56
- (C) 72
- (D) 64

Q16. Complete the analogy:

12 : 4 :: 18 : ?

- (A) 6
- (B) 4
- (C) 8
- (D) 9

Q17. Complete the analogy:

3 : 6 :: 4 : ?

- (A) 8
- (B) 10
- (C) 12
- (D) 16

Q18. In a certain code, each letter is shifted 3 positions forward in the alphabet.

How is **BIG** coded?

- (A) EKI
- (B) ELJ
- (C) ELI
- (D) DKI

Q19. If **CAT** is coded as 3, **DOG** is coded as 3, then **ELEPHANT** is coded as?

- (A) 6



- (B) 7
- (C) 9
- (D) 8

Q20. If each letter is coded as its position in the alphabet (A=1, B=2, ..., Z=26),
what is the code for **CAT**?

- (A) 24
- (B) 20
- (C) 26
- (D) 22

Q21. In a certain code, each letter is replaced by the next letter in the alphabet.
How is **BALL** coded?

- (A) CBL L
- (B) CBMM
- (C) DCNN
- (D) CBML

Q22. In a code, only the consonants of a word are retained (vowels are dropped).
What is the code for **SIMPLE**?

- (A) SIPL
- (B) SIPLE
- (C) SPLM
- (D) SMPL

Q23. Four words are given. Three belong to the same category. Find the **odd one out**:

Red, Blue, Green, Yellow

- (A) Green



- (B) Red
- (C) Blue
- (D) Yellow

Q24. Three of the following are types of clouds. Which is the **odd one out**?

Cumulus, Stratus, Boulder, Nimbus

- (A) Cumulus
- (B) Stratus
- (C) Boulder
- (D) Nimbus

Q25. Which is the **odd one out** in the following group of letters?

A, E, I, O, K

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

Q26. Three of the following are Indian rivers. Which is the **odd one out**?

Ganga, Yamuna, Amazon, Godavari

- (A) Ganga
- (B) Yamuna
- (C) Godavari
- (D) Amazon

Q27. Statements:

All mangoes are fruits.

All fruits are sweet.

Conclusions:

I. All mangoes are sweet.



II. All sweet things are fruits.

Which conclusion(s) follow(s)?

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

Q28. Statements:

Some doctors are lawyers.

No lawyers are teachers.

Conclusions:

I. Some doctors are not teachers.

II. All doctors are not teachers.

Which conclusion(s) follow(s)?

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

Q29. Statements:

All teachers can read.

Some readers are writers.

Conclusions:

I. Some teachers are writers.

II. All writers are teachers.

Which conclusion(s) follow(s)?

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



Q30. Statements:

No birds are cars.

All cars have wheels.

Conclusions:

I. No birds have wheels.

II. Some things with wheels are not birds.

Which conclusion(s) follow(s)?

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

Q31. “He is the only son of my paternal grandfather.”

How is he related to the speaker?

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

Q32. A is the mother of B. C is the father of A. D is the father of C.

How is D related to B?

- (A) Grandfather
- (B) Father
- (C) Great-grandfather
- (D) Uncle

Q33. Pointing to a girl, Ram says: “Her mother is the only daughter of my wife’s mother.”

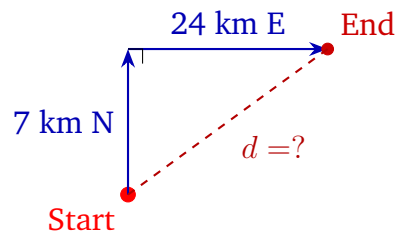
How is the girl related to Ram?

- (A) Niece



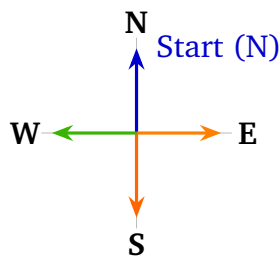
- (B) Daughter
- (C) Sister
- (D) Cousin

Q34. A man walks **7 km North** and then **24 km East**. What is the straight-line distance from his starting point?



- (A) 7 km
- (B) 24 km
- (C) 31 km
- (D) 25 km

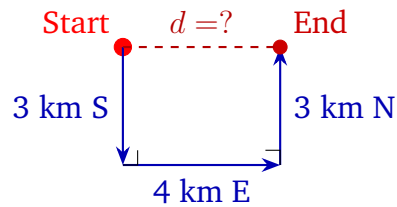
Q35. A person starts facing **North**. He turns **right 90°** three times in succession. In which direction is he finally facing?



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

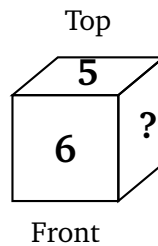
Q36. A man walks **3 km South**, then **4 km East**, then **3 km North**. How far is he from his starting point?





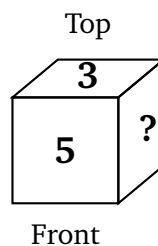
- (A) 3 km
- (B) 7 km
- (C) 4 km
- (D) 6 km

Q37. In a standard die, opposite faces sum to 7 (i.e., 1 & 6, 2 & 5, 3 & 4). On a die, **5 is on top** and **6 faces the viewer (front)**. What number is at the **back**?



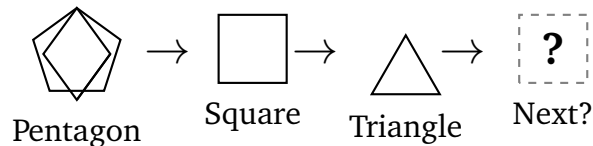
- (A) 2
- (B) 1
- (C) 3
- (D) 4

Q38. A standard die has opposite faces summing to 7. If the **top face shows 3** and the **front face shows 5**, what is the **sum of the bottom face and the back face**?



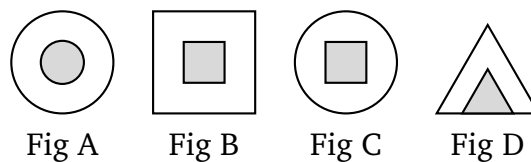
- (A) 7
- (B) 14
- (C) 9
- (D) 6

Q39. Observe the pattern of shapes below. What comes next in the sequence?



- (A) Line segment (2-sided figure)
- (B) Circle
- (C) Hexagon
- (D) Pentagon

Q40. In each figure, a shape is drawn inside another shape. Which figure is the **odd one out** (inner shape different from outer shape)?



- (A) Figure A
- (B) Figure B
- (C) Figure C
- (D) Figure D



Detailed Solutions

Q1.

Solution

Quick Solution: Concept: Prime Number Series. Topic: Number Series. Primes in order after 11 — next prime is 13 (12, 14, 15 are composite). Answer: (B).

Concept — Prime Number Series:

The series lists consecutive prime numbers: 2, 3, 5, 7, 11, ...

Step 1: Recall that a prime number has exactly two factors: 1 and itself.

Step 2: After 11, the next prime is 13 (12 is divisible by 2, 3, 4, 6; 13 is prime).

Why other options are wrong:

- Option A (12): $12 = 2 \times 6 = 3 \times 4$ — not prime.
- Option C (14): $14 = 2 \times 7$ — not prime.
- Option D (15): $15 = 3 \times 5$ — not prime.

Answer: (B)[↑ Go Back to Q 1](#)

Q2.

Solution

Quick Solution: Concept: Perfect Squares Series. Topic: Number Series. Terms are n^2 for $n = 1, 2, \dots, 5$; next is $6^2 = 36$. Answer: (C).

Concept — Perfect Squares Series:

The series is $1^2, 2^2, 3^2, 4^2, 5^2, \dots$

Step 1: 1, 4, 9, 16, 25 correspond to n^2 for $n = 1, 2, 3, 4, 5$.

Step 2: The next term is $6^2 = 36$.

Why other options are wrong:

- Option A (30): Not a perfect square.
- Option B (32): Not a perfect square ($5^2 = 25, 6^2 = 36$).
- Option D (40): Not a perfect square.

Answer: (C)[↑ Go Back to Q 2](#)

Q3.



Solution

Quick Solution: Concept: Geometric Progression ($\times 3$). Topic: Number Series. Each term multiplied by 3; $54 \times 3 = 162$. Answer: (D).

Concept — Geometric Series (Common Ratio = 3):

Each term is obtained by multiplying the previous term by 3.

Step 1: $2 \times 3 = 6$; $6 \times 3 = 18$; $18 \times 3 = 54$; $54 \times 3 = 162$.

Why other options are wrong:

- Option A (100): $54 \times 3 \neq 100$.
- Option B (144): $54 \times 3 \neq 144$.
- Option C (108): $108 = 54 \times 2$ — wrong ratio.

Answer: (D)

[↑ Go Back to Q 3](#)

Q4.

Solution

Quick Solution: Concept: Alternating Operations (+3, -1). Topic: Number Series. After 5, the operation is +3: $5 + 3 = 8$. Answer: (A).

Concept — Alternating Operations (+3, -1):

The series alternates between adding 3 and subtracting 1.

Step 1: $1 \xrightarrow{+3} 4 \xrightarrow{-1} 3 \xrightarrow{+3} 6 \xrightarrow{-1} 5 \xrightarrow{+3} 8$.

Step 2: After 5, we add 3: $5 + 3 = 8$.

Why other options are wrong:

- Option B (7): $5 + 2 = 7$ — wrong operation.
- Option C (9): $5 + 4 = 9$ — wrong operation.
- Option D (10): Not following the pattern.

Answer: (A)

[↑ Go Back to Q 4](#)

Q5.

Solution

Quick Solution: Concept: Constant Second Differences. Topic: Number Series. First diffs 2, 4, 6, 8 (AP); next diff = 10; $23 + 10 = 33$. Answer: (C).

Concept — Second Differences are Constant:

Find the first differences: $5 - 3 = 2$, $9 - 5 = 4$, $15 - 9 = 6$, $23 - 15 = 8$.

The first differences form an arithmetic progression: 2, 4, 6, 8, ... (increasing by 2).

Step 1: Next first difference = $8 + 2 = 10$.



Step 2: Next term = $23 + 10 = 33$.

Why other options are wrong:

- Option A (31): $23 + 8 = 31$ — repeats last difference, not correct.
- Option B (32): Off by 1.
- Option D (35): $23 + 12 = 35$ — wrong difference.

Answer: (C) [↑ Go Back to Q 5](#)

Q6.

Solution

Quick Solution: Concept: $n(n - 1)$ Series. Topic: Number Series. For $n = 6$: $6 \times 5 = 30$. Answer: (B).

Concept — Series of $n(n - 1)$:

Each term equals $n(n - 1)$ for $n = 1, 2, 3, 4, 5, 6, \dots$

Step 1: $1 \times 0 = 0, 2 \times 1 = 2, 3 \times 2 = 6, 4 \times 3 = 12, 5 \times 4 = 20$.

Step 2: Next term: $n = 6$: $6 \times 5 = 30$.

Why other options are wrong:

- Option A (28): $28 = 7 \times 4$ — not matching $n(n - 1)$ for $n = 6$.
- Option C (42): $42 = 7 \times 6$ — this is the term after next ($n = 7$).
- Option D (56): $56 = 8 \times 7$ — two terms ahead.

Answer: (B) [↑ Go Back to Q 6](#)

Q7.

Solution

Quick Solution: Concept: Alphabetical Skip (+4). Topic: Letter Series. P is the 16th letter; $16 + 4 = 20 = T$. Answer: (A).

Concept — Letters at Positions +4:

The series skips 3 letters each time (every 4th letter of the alphabet).

Step 1: D(4), H(8), L(12), P(16), ... Next position: $16 + 4 = 20$.

Step 2: The 20th letter of the alphabet is T.

Why other options are wrong:

- Option B (S): S is the 19th letter — off by one.
- Option C (Q): Q is the 17th letter — only +1 step from P.
- Option D (W): W is the 23rd letter — too far ahead.



Answer: (A)[↑ Go Back to Q 7](#)

Q8.

Solution

Quick Solution: Concept: Vowel Sequence. Topic: Letter Series. English vowels in order: A, E, I, O, U; next after O is U. Answer: (D).

Concept — Vowel Series:

The five vowels in English are: A, E, I, O, U.

Step 1: The series lists vowels in order: A, E, I, O, ...

Step 2: The next (and last) vowel is U.

Why other options are wrong:

- Option A (V): V is a consonant, not a vowel.
- Option B (R): R is a consonant.
- Option C (W): W is a consonant.

Answer: (D)[↑ Go Back to Q 8](#)

Q9.

Solution

Quick Solution: Concept: Reverse+Forward Letter Pairs. Topic: Letter Series. After WD: first letter W→V (backward), second D→E (forward) = VE. Answer: (B).

Concept — Two-Letter Pairs (First from end, second from start):

First letters: Z, Y, X, W, ... (reverse alphabet, decreasing).

Second letters: A, B, C, D, ... (forward alphabet, increasing).

Step 1: After WD, first letter moves back: W → V; second letter moves forward: D → E.

Step 2: Next pair = VE.

Why other options are wrong:

- Option A (VF): F is the 6th letter — skips E.
- Option C (WE): W is repeated instead of moving to V.
- Option D (VG): G is the 7th letter — skips two positions.

Answer: (B)[↑ Go Back to Q 9](#)

Q10.



Solution

Quick Solution: Concept: Odd Letters with Positions. Topic: Letter Series. After G(7), next odd-positioned letter is I at position 9 → I9. Answer: (C).

Concept — Letter + Odd Position Number:

The pattern pairs each odd-positioned letter with its alphabet position number.

Step 1: A(1)→A1, C(3)→C3, E(5)→E5, G(7)→G7.

Step 2: Next odd letter after G: I, at position 9 in the alphabet. Answer: I9.

Why other options are wrong:

- Option A (H8): H is even-positioned (8th letter) — breaks the odd-letter pattern.
- Option B (J10): J is the 10th letter — skips I.
- Option D (I8): I is correct but position should be 9, not 8.

Answer: (C)[↑ Go Back to Q 10](#)

Q11.

Solution

Quick Solution: Concept: Animal–Sound Analogy. Topic: Word Analogies. Lion roars; a Dog barks. Answer: (D).

Concept — Animal : Sound Produced:

The relationship is: *animal* produces a specific *sound*.

Step 1: A Lion *roars*. Similarly, a Dog *barks*.

Step 2: The correct answer is **Bark**.

Why other options are wrong:

- Option A (Growl): Dogs can growl, but the primary/characteristic sound of a dog is a bark.
- Option B (Howl): Howl is associated with wolves or dogs in distress, not the primary sound.
- Option C (Moan): Not a dog sound in standard usage.

Answer: (D)[↑ Go Back to Q 11](#)

Q12.

Solution

Quick Solution: Concept: Country–Capital Analogy. Topic: Word Analogies. France's capital city is Paris. Answer: (A).

Concept — Country : Capital City:



The relationship is: *country* has a specific *capital city*.

Step 1: India's capital is Delhi. Similarly, France's capital is **Paris**.

Why other options are wrong:

- Option B (London): London is the capital of the United Kingdom.
- Option C (Berlin): Berlin is the capital of Germany.
- Option D (Rome): Rome is the capital of Italy.

Answer: (A)

[↑ Go Back to Q 12](#)

Q13.

Solution

Quick Solution: Concept: Field–Practitioner Analogy. Topic: Word Analogies. Music→Musician; Science→Scientist. Answer: (C).

Concept — Field of Study : Person who Practises it:

The relationship is: a person who practises *Music* is called a *Musician*.

Step 1: Similarly, a person who practises *Science* is called a **Scientist**.

Why other options are wrong:

- Option A (Singer): A singer performs music — not a science practitioner.
- Option B (Player): Too vague and not the standard term for a science practitioner.
- Option D (Performer): Associated with arts, not science.

Answer: (C)

[↑ Go Back to Q 13](#)

Q14.

Solution

Quick Solution: Concept: Young One–Adult Analogy. Topic: Word Analogies. Puppy is the young of Dog; Calf is the young of Cow. Answer: (B).

Concept — Young One : Adult Animal:

The relationship is: a *Puppy* is the young one of a *Dog*.

Step 1: A *Calf* is the young one of a **Cow** (or bull/bovine in general; the standard answer for calf is cow).

Why other options are wrong:

- Option A (Horse): The young of a horse is a foal, not a calf.
- Option C (Bull): A bull is the adult male bovine; a calf grows into a cow (female) or bull (male), but the standard pair is calf–cow.
- Option D (Buffalo): The young of a buffalo is also called a calf, but the direct



analogy pairing is with cow.

Answer: (B) [↑ Go Back to Q 14](#)

Q15.

Solution

Quick Solution: Concept: Number–Square Analogy. Topic: Number Analogies.
 $6 \rightarrow 6^2 = 36$; so $8 \rightarrow 8^2 = 64$. Answer: (D).

Concept — Number : Its Square:

The relationship is: $6 \rightarrow 6^2 = 36$.

Step 1: Similarly, $8 \rightarrow 8^2 = 64$.

Why other options are wrong:

- Option A (48): $48 = 8 \times 6$ — wrong operation.
- Option B (56): $56 = 8 \times 7$ — not the square.
- Option C (72): $72 = 8 \times 9$ — not the square.

Answer: (D) [↑ Go Back to Q 15](#)

Q16.

Solution

Quick Solution: Concept: Division Rule ($\div 3$). Topic: Number Analogies. $12 \div 3 = 4$; so $18 \div 3 = 6$. Answer: (A).

Concept — Divide by 3:

The relationship is: $12 \div 3 = 4$.

Step 1: Similarly, $18 \div 3 = 6$.

Why other options are wrong:

- Option B (4): $18 \div 3 \neq 4$; 4 is the result for 12.
- Option C (8): $18 \div 3 \neq 8$.
- Option D (9): $18 \div 2 = 9$ — wrong divisor.

Answer: (A) [↑ Go Back to Q 16](#)

Q17.



Solution

Quick Solution: Concept: $n^2 - n$ Rule. Topic: Number Analogies. $3 \rightarrow 3^2 - 3 = 6$; so $4 \rightarrow 4^2 - 4 = 12$. Answer: (C).

Concept — Rule: $n^2 - n = n(n - 1)$:

For 3: $3^2 - 3 = 9 - 3 = 6$. ✓

Step 1: For 4: $4^2 - 4 = 16 - 4 = 12$.

Why other options are wrong:

- Option A (8): $8 = 4 \times 2$ — not $n^2 - n$.
- Option B (10): $10 = 4 \times 2.5$ — not matching.
- Option D (16): $16 = 4^2$ — misses the subtraction of n .

Answer: (C)

[↑ Go Back to Q 17](#)

Q18.

Solution

Quick Solution: Concept: Caesar Cipher (+3 shift). Topic: Coding-Decoding. B→E, I→L, G→J → code = ELJ. Answer: (B).

Concept — Caesar Cipher (+3 shift):

Each letter is shifted 3 positions forward in the alphabet.

Step 1: B → E (B=2, 2+3=5=E).

I → L (I=9, 9+3=12=L).

G → J (G=7, 7+3=10=J).

Step 2: Code for BIG = **ELJ**.

Why other options are wrong:

- Option A (EKI): K is the 11th letter but I+3=L, not K.
- Option C (ELI): I is the original letter, not the shifted one.
- Option D (DKI): D would require +2 shift, not +3.

Answer: (B)

[↑ Go Back to Q 18](#)

Q19.

Solution

Quick Solution: Concept: Word-Length Code. Topic: Coding-Decoding. CAT=3, DOG=3 (letter count); ELEPHANT has 8 letters → code=8. Answer: (D).

Concept — Code = Number of Letters in the Word:

CAT has 3 letters → coded as 3. DOG has 3 letters → coded as 3.



Step 1: Count letters in ELEPHANT: E-L-E-P-H-A-N-T = 8 letters.

Step 2: Code = 8.

Why other options are wrong:

- Option A (6): Undercounting the letters.
- Option B (7): Off by one.
- Option C (9): Overcounting by one.

Answer: (D)

[↑ Go Back to Q 19](#)

Q20.

Solution

Quick Solution: Concept: Alphabet-Position Sum Code. Topic: Coding-Decoding. $C(3) + A(1) + T(20) = 24$. Answer: (A).

Concept — Code = Sum of Alphabet Position Values:

A=1, B=2, C=3, ..., Z=26.

Step 1: Verify: ACE = $1 + 3 + 5 = 9$. ✓

Step 2: CAT: C=3, A=1, T=20. Sum = $3 + 1 + 20 = 24$.

Why other options are wrong:

- Option B (20): Missing T's value ($3 + 1 + 16 = 20$ would be CAP, not CAT).
- Option C (26): Incorrect addition.
- Option D (22): $3 + 1 + 18 = 22$ — uses R's position instead of T.

Answer: (A)

[↑ Go Back to Q 20](#)

Q21.

Solution

Quick Solution: Concept: Next-Letter Shift (+1). Topic: Coding-Decoding. B→C, A→B, L→M, L→M → CBMM. Answer: (B).

Concept — Each Letter Replaced by Next Letter (+1 shift):

A→B, B→C, C→D, ..., L→M, Z→A.

Step 1: BALL: B→C, A→B, L→M, L→M.

Step 2: Code = CBMM.

Why other options are wrong:

- Option A (CBLL): L is not shifted — error in last two letters.
- Option C (DCNN): D requires B+2; N requires L+2 — wrong shift.



- Option D (CBML): Last L should also become M, not stay L.

Answer: (B)[↑ Go Back to Q 21](#)**Q22.****Solution**

Quick Solution: Concept: Consonant Retention Code. Topic: Coding-Decoding. SIMPLE: drop I and E (vowels); remaining S,M,P,L → SMPL. Answer: (D).

Concept — Retain Only Consonants (Remove Vowels):

Vowels: A, E, I, O, U. All other letters are consonants.

Step 1: SIMPLE: S(cons), I(vowel), M(cons), P(cons), L(cons), E(vowel).

Step 2: Retaining consonants in order: S, M, P, L → **SMPL**.

Why other options are wrong:

- Option A (SIPL): Contains I (a vowel) — not removed.
- Option B (SIPLE): Contains both I and E (vowels) — not removed.
- Option C (SPLM): Letters out of order (M comes before L in SIMPLE).

Answer: (D)[↑ Go Back to Q 22](#)**Q23.****Solution**

Quick Solution: Concept: Primary Colours (RYB model). Topic: Classification. Red, Yellow, Blue are primary; Green is secondary (Blue+Yellow). Odd one out: Green. Answer: (A).

Concept — Primary Colours (RYB model):

The three primary colours in traditional art/pigment model are: **Red, Yellow, Blue**.

Step 1: Green is a *secondary* colour (Blue + Yellow = Green).

Step 2: Red, Blue, Yellow are all primary. **Green** is the odd one out.

Why other options are wrong:

- Option B (Red): Red is a primary colour.
- Option C (Blue): Blue is a primary colour.
- Option D (Yellow): Yellow is a primary colour.

Answer: (A)[↑ Go Back to Q 23](#)**Q24.**

Solution

Quick Solution: Concept: Cloud Types. Topic: Classification. Cumulus, Stratus, Nimbus are clouds; Boulder is a rock — the odd one out. Answer: (C).

Concept — Types of Clouds:

Main cloud types include: Cumulus, Stratus, Nimbus (Nimbostratus/Cumulonimbus), Cirrus, Altostratus, etc.

Step 1: Cumulus, Stratus, and Nimbus are all types of clouds.

Step 2: Boulder is a large rock — not a cloud type. It is the odd one out.

Why other options are wrong:

- Option A (Cumulus): Puffy, heap-like clouds — valid cloud type.
- Option B (Stratus): Flat, layered clouds — valid cloud type.
- Option D (Nimbus): Rain-bearing clouds — valid cloud type.

Answer: (C) [↑ Go Back to Q 24](#)

Q25.

Solution

Quick Solution: Concept: Vowels vs Consonants. Topic: Classification. A, E, I, O are vowels; K is a consonant — the odd one out. Answer: (B).

Concept — Vowels vs Consonants:

Vowels: A, E, I, O, U. All other letters are consonants.

Step 1: A, E, I, O are all vowels. K is a consonant.

Step 2: K is the odd one out.

Why other options are wrong:

- Option A (A): A is a vowel.
- Option C (E): E is a vowel.
- Option D (O): O is a vowel.

Answer: (B) [↑ Go Back to Q 25](#)

Q26.

Solution

Quick Solution: Concept: Indian Rivers. Topic: Classification. Ganga, Yamuna, Godavari are Indian rivers; Amazon is in South America — the odd one out. Answer: (D).

Concept — Indian Rivers vs Foreign Rivers:

Major Indian rivers include Ganga, Yamuna, Godavari, Krishna, Brahmaputra, etc.

Step 1: Ganga, Yamuna, and Godavari are all rivers in India.

Step 2: Amazon is a river in South America (Brazil) — the odd one out.

Why other options are wrong:

- Option A (Ganga): Sacred river of North India.
- Option B (Yamuna): Flows through Delhi, Agra — major Indian river.
- Option C (Godavari): “Dakshina Ganga” — major river of peninsular India.

Answer: (D)

[↑ Go Back to Q 26](#)

Q27.

Solution

Quick Solution: Concept: Universal Affirmative Syllogism. Topic: Syllogism. All mangoes $\subseteq$ fruits $\subseteq$ sweet $\Rightarrow$ Conclusion I valid; converse not implied $\Rightarrow$ only I follows. Answer: (A).

Concept — Universal Affirmative Syllogism:

Premises: (1) All mangoes are fruits. (2) All fruits are sweet.

Step 1 — Conclusion I: By transitivity, All mangoes $\subset$ fruits $\subset$ sweet things. Therefore **All mangoes are sweet** — TRUE.

Step 2 — Conclusion II: “All sweet things are fruits” would require the converse of premise 2 to hold universally. The premises do not guarantee this (there can be sweet things that are not fruits, e.g., sugar). — FALSE.

Answer: Only Conclusion I follows.

Why other options are wrong:

- Option B: Conclusion II does not follow from given premises.
- Option C: Both cannot follow since Conclusion II is invalid.
- Option D: Conclusion I definitely follows.

Answer: (A)

[↑ Go Back to Q 27](#)

Q28.

Solution

Quick Solution: Concept: Partial-Universal Syllogism. Topic: Syllogism. Doctor-lawyers are not teachers $\Rightarrow$ some doctors not teachers (I: true); cannot generalise to all doctors (II: false) $\Rightarrow$ only I. Answer: (C).

Concept — Partial and Universal Negation:



Premises: (1) Some doctors are lawyers. (2) No lawyers are teachers.

Step 1 — Conclusion I: The doctors who are lawyers (from premise 1) are not teachers (from premise 2). So **some doctors are not teachers** — TRUE.

Step 2 — Conclusion II: “All doctors are not teachers” would mean no doctor is a teacher. This cannot be concluded — other doctors (who are not lawyers) might still be teachers. — FALSE (not definite).

Answer: Only Conclusion I follows.

Why other options are wrong:

- Option A: Conclusion II is not necessarily true.
- Option B: Conclusion II cannot be definitively established.
- Option D: Conclusion I does definitively follow.

Answer: (C) [↑ Go Back to Q 28](#)

Q29.

Solution

Quick Solution: Concept: Undistributed Middle Syllogism. Topic: Syllogism. Writing readers need not be teachers (I: uncertain); all writers=teachers is plainly false (II) ⇒ neither follows. Answer: (B).

Concept — Particular Affirmative with Universal Affirmative:

Premises: (1) All teachers can read. (2) Some readers are writers.

Step 1 — Conclusion I: Premise 2 says “some readers are writers” but we don’t know if those readers are specifically teachers. Conclusion I (some teachers are writers) cannot be guaranteed. — UNCERTAIN.

Step 2 — Conclusion II: “All writers are teachers” is clearly not inferable. — FALSE.

Answer: Neither conclusion necessarily follows.

Why other options are wrong:

- Option A: Some teachers *could* be writers, but it does not *necessarily* follow.
- Option C: Conclusion II is definitely false.
- Option D: Neither conclusion is valid.

Answer: (B) [↑ Go Back to Q 29](#)

Q30.



Solution

Quick Solution: Concept: Negative Premise Syllogism. Topic: Syllogism. Cars have wheels and are not birds $\Rightarrow$ some wheel-things are not birds (II: true); “no birds have wheels” is not provable (I: false) $\Rightarrow$ only II. Answer: (D).

Concept — Negation and Partial Inference:

Premises: (1) No birds are cars. (2) All cars have wheels.

Step 1 — Conclusion I: “No birds have wheels” — This CANNOT be concluded. While no bird is a car, birds could have wheels through some other classification. Premise 2 talks only about cars. — CANNOT CONCLUDE.

Step 2 — Conclusion II: Cars have wheels (premise 2), and no cars are birds (premise 1). So **some things with wheels (namely, cars) are not birds** — TRUE.

Answer: Only Conclusion II follows.

Why other options are wrong:

- Option A: Conclusion I cannot be established.
- Option B: Conclusion I is invalid.
- Option C: Conclusion II does follow.

Answer: (D)[↑ Go Back to Q 30](#)

Q31.

Solution

Quick Solution: Concept: Paternal Grandfather's Son. Topic: Blood Relations. My paternal grandfather's only son = my father. Answer: (A).

Concept — Paternal Grandfather's Son:

“He is the only son of my paternal grandfather.”

Step 1: My paternal grandfather is my father's father. The only son of my paternal grandfather is *my father* (assuming the speaker's father is an only son).

Step 2: He is the speaker's **Father**.

Why other options are wrong:

- Option B (Uncle): An uncle would be another son of the grandfather, but the premise says “only son.”
- Option C (Grandfather): The grandfather's son is one generation below the grandfather.
- Option D (Brother): A brother would be a son of the speaker's parents, not of the grandfather.

Answer: (A)[↑ Go Back to Q 31](#)

Q32.

Solution

Quick Solution: Concept: Three-Generation Chain. Topic: Blood Relations.
 $D \rightarrow C \rightarrow A \rightarrow B$: C is B's grandfather; D is C's father $\Rightarrow$ D is B's great-grandfather.
 Answer: (C).

Concept — Three-Generation Chain:

Given: A is B's mother. C is A's father. D is C's father.

Step 1: B's mother = A. A's father = C (so C is B's grandfather). C's father = D.

Step 2: D is C's father and C is B's grandfather $\Rightarrow$ D is B's **great-grandfather**.

Why other options are wrong:

- Option A (Grandfather): Grandfather would be C, not D.
- Option B (Father): Father of B is not in the chain described.
- Option D (Uncle): No sibling relationship is mentioned.

Answer: (C)[↑ Go Back to Q 32](#)

Q33.

Solution

Quick Solution: Concept: Relationship Decoding. Topic: Blood Relations. Wife's mother's only daughter = wife; girl's mother = Ram's wife $\Rightarrow$ the girl is Ram's daughter. Answer: (B).

Concept — Decode the Relationship Chain:

"Her mother is the only daughter of my wife's mother."

Step 1: My wife's mother = my mother-in-law. The only daughter of my mother-in-law = my wife.

Step 2: The girl's mother = Ram's wife $\Rightarrow$ the girl is Ram's **daughter**.

Why other options are wrong:

- Option A (Niece): Niece would be the daughter of Ram's sibling, not Ram's wife.
- Option C (Sister): Sister implies same parents — not applicable here.
- Option D (Cousin): No cousin relationship is established.

Answer: (B)[↑ Go Back to Q 33](#)

Q34.



Solution

Quick Solution: Concept: Pythagorean Displacement. Topic: Direction Sense. 7 km N and 24 km E form a right triangle; $\sqrt{7^2 + 24^2} = \sqrt{625} = 25$ km. Answer: (D).

Concept — Pythagoras Theorem for Displacement:

The man walks 7 km North and then 24 km East — these form two legs of a right-angled triangle.

Step 1: Straight-line distance (hypotenuse):

$$d = \sqrt{7^2 + 24^2} = \sqrt{49 + 576} = \sqrt{625} = 25 \text{ km}$$

Note: 7, 24, 25 is a Pythagorean triple.

Why other options are wrong:

- Option A (7 km): Only the North leg, not the total displacement.
- Option B (24 km): Only the East leg, not the total displacement.
- Option C (31 km): $7 + 24 = 31$ — adds distances, not the displacement.

Answer: (D)[↑ Go Back to Q 34](#)**Q35.****Solution**

Quick Solution: Concept: Compass Turns (Right=Clockwise). Topic: Direction Sense. Starting North, three 90° right turns: N→E→S→W; final direction is West. Answer: (A).

Concept — Compass Turns (Right = Clockwise):

Each right turn rotates 90° clockwise.

Step 1: Start facing North.

Turn 1 (right 90°): North → **East**.

Turn 2 (right 90°): East → **South**.

Turn 3 (right 90°): South → **West**.

Step 2: Final direction = **West**.

Why other options are wrong:

- Option B (North): After 4 right turns you face North again — only 3 turns here.
- Option C (East): After 1 right turn from North.
- Option D (South): After 2 right turns from North.

Answer: (A)[↑ Go Back to Q 35](#)**Q36.**

Solution

Quick Solution: Concept: Cancelling Opposite Directions. Topic: Direction Sense. 3 km S and 3 km N cancel; net displacement = 4 km East. Answer: (C).

Concept — Cancelling Opposite Directions:

The man walks 3 km South, then 4 km East, then 3 km North.

Step 1: Net North–South displacement: 3 km South + 3 km North = 0 (they cancel).

Step 2: Net East–West displacement: 4 km East (unchanged).

Step 3: Distance from start = $\sqrt{0^2 + 4^2} = 4$ km.

Why other options are wrong:

- Option A (3 km): Only one of the North/South legs; they cancel.
- Option B (7 km): $3 + 4 = 7$ — adds all distances without cancellation.
- Option D (6 km): No basis in the path given.

Answer: (C) [↑ Go Back to Q 36](#)

Q37.

Solution

Quick Solution: Concept: Opposite Faces Sum to 7. Topic: Dice Problems. Back face is opposite front (6): $7 - 6 = 1$. Answer: (B).

Concept — Standard Die: Opposite Faces Sum to 7:

Opposite pairs: 1 & 6; 2 & 5; 3 & 4.

Step 1: Top = 5; Front = 6 (faces the viewer).

Step 2: Back face is opposite the front face. Opposite of 6 = $7 - 6 = 1$.

Why other options are wrong:

- Option A (2): 2 is opposite to 5 (the top face), not the front.
- Option C (3): 3 is opposite to 4, not to 6.
- Option D (4): 4 is opposite to 3, not to 6.

Answer: (B) [↑ Go Back to Q 37](#)

Q38.

Solution

Quick Solution: Concept: Opposite Faces Sum to 7 (Double Application). Topic: Dice Problems. Bottom = $7 - 3 = 4$; Back = $7 - 5 = 2$; Sum = 6. Answer: (D).

Concept — Using Opposite-Face Rule Twice:

Standard die: opposite faces sum to 7.

Step 1: Bottom face = $7 - \text{Top} = 7 - 3 = 4$.

Step 2: Back face = $7 - \text{Front} = 7 - 5 = 2$.

Step 3: Sum of bottom and back = $4 + 2 = 6$.

Why other options are wrong:

- Option A (7): Only one pair sums to 7.
- Option B (14): $7 + 7 = 14$ — two full opposite pairs; the question asks for the sum of just two specific faces.
- Option C (9): $4 + 5 = 9$ — incorrectly uses front instead of back.

Answer: (D)

[↑ Go Back to Q 38](#)

Q39.

Solution

Quick Solution: Concept: Decreasing Polygon Sides. Topic: Pattern Recognition. $5 \rightarrow 4 \rightarrow 3$ sides; next is 2-sided figure (line segment). Answer: (A).

Concept — Decreasing Number of Sides:

The sequence shows shapes with decreasing number of sides.

Step 1: Pentagon (5 sides) $\rightarrow$ Square (4 sides) $\rightarrow$ Triangle (3 sides) $\rightarrow$?

Step 2: Each step reduces the number of sides by 1. After a triangle (3 sides), the next figure has $3 - 1 = 2$ sides, which is a **line segment** (a degenerate two-sided figure / digon).

Why other options are wrong:

- Option B (Circle): A circle has no straight sides — breaks the polygon pattern.
- Option C (Hexagon): Has 6 sides — goes in the wrong direction.
- Option D (Pentagon): Has 5 sides — goes back, not forward.

Answer: (A)

[↑ Go Back to Q 39](#)

Solution

Quick Solution: Concept: Same Inner and Outer Shape Rule. Topic: Pattern Recognition. Fig A/B/D have matching inner and outer shapes; Fig C has circle outer but square inner — shapes differ. Answer: (C).

Concept — Inner Shape Must Match Outer Shape:

The rule: in each figure, the inner shape is the same type as the outer shape.



Step 1:

- Q40.**
- Fig A: Outer = Circle, Inner = Circle. *Same*.
 - Fig B: Outer = Square, Inner = Square. *Same*.
 - Fig C: Outer = Circle, Inner = **Square**. *Different* — breaks the rule.
 - Fig D: Outer = Triangle, Inner = Triangle. *Same*.

Step 2: Figure C is the odd one out.

Why other options are wrong:

- Option A (Fig A): Both shapes are circles — follows the rule.
- Option B (Fig B): Both shapes are squares — follows the rule.
- Option D (Fig D): Both shapes are triangles — follows the rule.

Answer: (C)

[↑ Go Back to Q 40](#)

Answer Key

Q No.	Ans	Q No.	Ans	Q No.	Ans	Q No.	Ans	Q No.	Ans
1	B	2	C	3	D	4	A	5	C
6	B	7	A	8	D	9	B	10	C
11	D	12	A	13	C	14	B	15	D
16	A	17	C	18	B	19	D	20	A
21	B	22	D	23	A	24	C	25	B
26	D	27	A	28	C	29	B	30	D
31	A	32	C	33	B	34	D	35	A
36	C	37	B	38	D	39	A	40	C

