RIE CEE Reasoning Ability

Sample Paper – 2

Duration: 45 Minutes **Maximum Marks: 60**

Instructions

- This paper contains **30** Multiple Choice Questions (Single Correct Answer), modelled on the **Reasoning Ability** section of the **RIE CEE** (NCERT Regional Institutes of Education Common Entrance Exam).
- Each correct answer carries **+2 marks**. There is a penalty of -0.5 **mark** for every incorrect answer. Unattempted questions carry **0 marks**.
- Only **one** option is correct. Choose carefully before marking, since wrong answers are penalised.
- The actual exam is a **Computer Based Test (CBT)**; attempt this paper in one timed sitting of 45 minutes.
- Use of mobile phones, calculators, or electronic gadgets is not permitted.

Q1. Find the next term in the series: $2,\ 5,\ 10,\ 17,\ 26,\ ?$

(A) 35

(B) 37

(C) 36

(D) 38

Q2. Find the next term in the series: $2,\ 6,\ 18,\ 54,\ ?$

(A) 162

(B) 108

(C) 150

(D) 216

Q3. Find the next term in the letter series: $B,\ H,\ M,\ Q,\ ?$

(A) U

(B) S

(C) T

(D) V

Q4. Find the next term in the series: $4,\ 6,\ 12,\ 14,\ 28,\ ?$

(A) 32

(B) 56

(C) 42

(D) 30

Q5. Find the next term in the series: $Z1,\ X4,\ V9,\ T16,\ ?$

(A) R20

(B) S25

(C) R25

(D) P25

Q6. $6 : 36 :: 8 :?$

(A) 64

(B) 48

(C) 72

(D) 56

Q7. If $LAMP : NCOR$, then $DESK :?$

(A) FGUL

(B) FHUM

(C) EGUM

(D) FGUM

Q8. Cow is to Calf as Horse is to:

(A) Cub

(B) Foal

(C) Kid

(D) Lamb

Q9. Choose the number that does not belong with the others: $17,\ 23,\ 29,\ 31,\ 33$

(A) 33

(B) 23

(C) 29

(D) 17

Q10. Choose the odd letter pair:

(A) AE

(B) EI

(C) BD

(D) OU

Q11. Choose the word that does not belong with the others:

(A) Carrot

(B) Apple

(C) Potato

(D) Onion

Q12. In a certain code, SUN is written as RTM. How is $MOON$ written in that code?

(A) LNMM

(B) LNNN

(C) KNNM

(D) LNNM

Q13. If each letter is coded by its position in the English alphabet, then $FACE$ is coded as:

(A) 6-1-3-5

(B) 6-1-4-5

(C) 5-1-3-5

(D) 6-1-3-6

Q14. In a code language $RIVER$ is written as $WNAJW$. How is $LAKE$ written in the same code?

(A) QFOJ

(B) QFPJ

(C) QFPI

(D) PFPJ

Q15. Pointing to a photograph, a woman said, "She is the only daughter of my mother's husband." How is the woman in the photograph related to the speaker?

(A) Mother

(B) Daughter

(C) Herself

(D) Cousin

Q16. P is the brother of Q. R is the brother of P. S is the father of R. How is Q related to S's brother?

(A) Nephew

(B) Son

(C) Uncle

(D) Niece or nephew (child of S's sibling)

Q17. Pointing to a boy, Sita said, "He is the son of the father of my son." How is the boy related to Sita?

(A) Son

(B) Brother

(C) Nephew

(D) Husband

Q18. Statements: All sparrows are birds. All birds are creatures.
Conclusions: I. All sparrows are creatures. II. Some creatures are sparrows.

(A) Only I follows

(B) Only II follows

(C) Neither I nor II follows

(D) Both I and II follow

Q19. Statements: Some pencils are colours. All colours are bright.
Conclusions: I. Some pencils are bright. II. All bright things are pencils.

(A) Both I and II follow

(B) Only I follows

(C) Only II follows

(D) Neither I nor II follows

Q20. Statements: No metal is wood. All iron is metal.
Conclusions: I. No iron is wood. II. Some metals are iron.

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q21. Statement: There are long traffic jams on the main road of the city every evening during peak office hours.
Courses of action: I. The traffic police should regulate and divert traffic during peak hours. II. The main road should be permanently closed to all vehicles.

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q22. Statement: "Open a savings account with us and earn the highest interest in the city." — an advertisement by a bank.
Assumptions: I. People are interested in earning interest on their savings. II. No other bank in the city offers any interest at all.

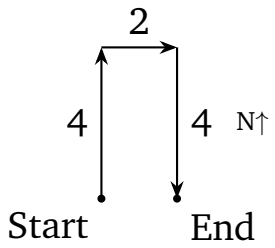
(A) Both I and II are implicit

(B) Only I is implicit

(C) Only II is implicit

(D) Neither I nor II is implicit

Q23. A man starts from a point, walks 4 km North, turns right and walks 2 km, then turns right again and walks 4 km. How far and in which direction is he now from the starting point?



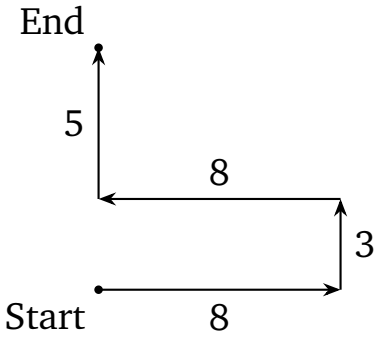
(A) 4 km East

(B) 2 km West

(C) 2 km East

(D) 6 km East

Q24. A girl walks 8 m East, turns left and walks 3 m, turns left and walks 8 m, then turns right and walks 5 m. How far is she from the starting point?



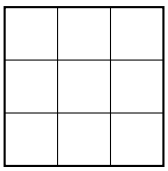
(A) 3 m North

(B) 5 m North

(C) 11 m North

(D) 8 m North

Q25. How many squares are there in the figure given below?



(A) 9

(B) 13

(C) 16

(D) 14

Q26. The arrow rotates in a fixed pattern. Which direction should the arrow point in the next figure?

→ ↑ ← ?

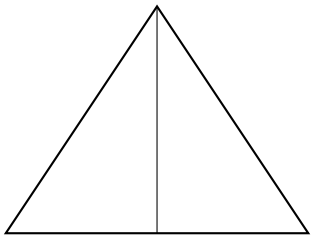
(A) ↓ (points South)

(B) → (points East)

(C) ↑ (points North)

(D) ← (points West)

Q27. How many triangles are there in the figure given below?



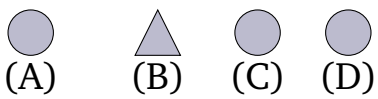
(A) 2

(B) 4

(C) 3

(D) 5

Q28. Choose the figure that is different from the other three.



(A) Figure A

(B) Figure B

(C) Figure C

(D) Figure D

Q29. Six friends P, Q, R, S, T and U are sitting in a row facing North. U is at the extreme right end. P is third from the left. Q is to the immediate left of P. R is at the extreme left end. T is to the immediate right of P. Who sits between T and U?

(A) S

(B) Q

(C) R

(D) P

Q30. In a row of 35 students, Meena is 15th from the left end. What is her position from the right end?

(A) 20th

(B) 21st

(C) 22nd

(D) 19th

Detailed Solutions

Q1.

Solution

Concept — Number series (perfect squares plus one): Test whether each term is one more than a perfect square.

Step 1 — Match n^2+1: $1^2+1=2$, $2^2+1=5$, $3^2+1=10$, $4^2+1=17$, $5^2+1=26$.

Step 2 — The rule holds: Each term is n^2+1 for $n=1,2,3,4,5$.

Step 3 — Next term: For $n=6$: $6^2+1=36+1=37$.

Why other options are wrong:

- 36 is 6^2 but forgets the $+1$; 35 and 38 do not fit n^2+1.

Final Answer: The next term is $37 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Number series (constant multiplier): If each term is a fixed multiple of the one before it, find that multiplier.

Step 1 — Find the ratio: $6 \div 2=3$, $18 \div 6=3$, $54 \div 18=3$.

Step 2 — The rule holds: Each term is the previous term $\times 3$.

Step 3 — Apply to the last term: $54 \times 3=162$.

Why other options are wrong:

- 108 is 54×2; 216 is 54×4; 150 fits no clean rule here.

Final Answer: The next term is $162 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q2

Q3.

Solution

Concept — Letter series (decreasing gaps): Convert letters to alphabet positions and study how the gaps change.

Step 1 — Positions: $B = 2$, $H = 8$, $M = 13$, $Q = 17$.

Step 2 — Gaps: $8 - 2 = 6$, $13 - 8 = 5$, $17 - 13 = 4$. The gaps decrease by 1 each time.

Step 3 — Next gap and letter: Next gap $= 3$, so position $= 17 + 3 = 20 = T$.

Why other options are wrong:

- U (21) and V (22) use too large a gap; S (19) uses a gap of 2.

Final Answer: The next letter is $T \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q3

Q4.

Solution

Concept — Number series (alternate operations): Some series alternate between two operations; check each step in turn.

Step 1 — Examine the steps: $4 + 2 = 6$, $6 \times 2 = 12$, $12 + 2 = 14$, $14 \times 2 = 28$.

Step 2 — Spot the pattern: The operations alternate: $+2$, $\times 2$, $+2$, $\times 2$, $\ldots$

Step 3 — Next operation: After $\times 2$ comes $+2$: $28 + 2 = 30$.

Why other options are wrong:

- 56 wrongly does 28×2; 42 and 32 break the alternating pattern.

Final Answer: The next term is $30 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Alphanumeric series: Treat the letter part and the number part as two separate series.

Step 1 — Letters: Z, X, V, T step back by 2 each time ($Z = 26, X = 24, V = 22, T = 20$), so next is $R = 18$.

Step 2 — Numbers: $1, 4, 9, 16$ are the perfect squares $1^2, 2^2, 3^2, 4^2$, so next is $5^2 = 25$.

Step 3 — Combine: The next term is $R25$.

Why other options are wrong:

- R20 uses the wrong number; S25 and P25 use the wrong letter.

Final Answer: The next term is $R25 \Rightarrow$ C

Answer: (C) Go Back to Q5

Q6.

Solution

Concept — Number analogy (square): Find the rule connecting the first pair, then apply it to the second.

Step 1 — Rule: $6^2 = 36$, so the rule is "square the number".

Step 2 — Apply: For 8: $8^2 = 64$.

Why other options are wrong:

- 48 is 8×6; 72 is 8×9; 56 is 8×7 — none square the number.

Final Answer: $8 : 64 \Rightarrow$ A

Answer: (A) Go Back to Q6

Q7.

Solution

Concept — Letter analogy (shift $+2$): Compare each letter's position shift between the two words.

Step 1 — Find the shift: $L \to N$ $(+2)$, $A \to C$ $(+2)$, $M \to O$ $(+2)$, $P \to R$ $(+2)$. The rule is $+2$ to each letter.

Step 2 — Apply to DESK: $D \to F$, $E \to G$, $S \to U$, $K \to M$, giving $FGUM$.

Why other options are wrong:

- FGUL, FHUM and EGUM each shift one letter incorrectly.

Final Answer: $DESK \to FGUM \Rightarrow$ D

Answer: (D) Go Back to Q7

Q8.

Solution

Concept — Word analogy (animal : its young): A calf is the young of a cow; match each animal to the correct name for its young.

Step 1 — First pair: Cow $\to$ Calf (the young of a cow).

Step 2 — Apply: The young of a horse is a foal, so Horse $\to$ Foal.

Why other options are wrong:

- Cub is the young of a lion or bear; Kid is a young goat; Lamb is a young sheep.

Final Answer: Horse is to Foal $\Rightarrow$ B

Answer: (B) Go Back to Q8

Q9.

Solution

Concept — Classification of numbers (prime vs composite): Check which numbers are prime.

Step 1 — Test each number: $17, 23, 29, 31$ are all prime (no divisors other than 1 and themselves).

Step 2 — Check 33: $33 = 3 \times 11$, so it is composite, not prime.

Step 3 — Conclusion: 33 is the odd one out.

Why other options are wrong:

- 17, 23 and 29 are all primes, so they belong together.

Final Answer: 33 does not belong $\Rightarrow$ A

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Letter-pair classification: Each correct pair is built from consecutive vowels; find the pair that is not.

Step 1 — Identify the vowels: The vowels in order are A, E, I, O, U.

Step 2 — Test each pair: AE (vowels A and E), EI (vowels E and I), OU (vowels O and U) are all pairs of consecutive vowels. BD uses two consonants.

Step 3 — Conclusion: BD is the odd pair.

Why other options are wrong:

- AE, EI and OU are each a pair of neighbouring vowels.

Final Answer: BD is the odd pair $\Rightarrow$ C

Answer: (C) Go Back to Q10

Q11.

Solution

Concept — Word classification: Group the items by category and find the outsider.

Step 1 — Identify the items: Carrot, Potato and Onion are all vegetables.

Step 2 — The outsider: Apple is a fruit, not a vegetable.

Why other options are wrong:

- Carrot, Potato and Onion share the category "vegetable".

Final Answer: Apple does not belong $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q11

Q12.

Solution

Concept — Coding by letter shift: Find the constant shift from the plain word to its code.

Step 1 — Find the shift: $S \to R$ (-1), $U \to T$ (-1), $N \to M$ (-1). The shift is -1.

Step 2 — Apply to MOON: $M \to L$, $O \to N$, $O \to N$, $N \to M$, giving $LNNM$.

Why other options are wrong:

- LNMM, LNNN and KNNM each shift one letter incorrectly.

Final Answer: $MOON \to LNNM \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Positional coding: Replace each letter by its position number ($A = 1, B = 2, \ldots, Z = 26$).

Step 1 — Decode each letter: $F = 6$, $A = 1$, $C = 3$, $E = 5$.

Step 2 — Write the code: $FACE = 6\text{-}1\text{-}3\text{-}5$.

Why other options are wrong:

- 6-1-4-5 puts $C = 4$; 5-1-3-5 puts $F = 5$; 6-1-3-6 puts $E = 6$.

Final Answer: $FACE = 6\text{-}1\text{-}3\text{-}5 \Rightarrow$ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Coding by fixed shift: Determine the shift from $RIVER$ to $WNAJW$ and reuse it.

Step 1 — Find the shift: $R \to W$ ($+5$), $I \to N$ ($+5$), $V \to A$ ($+5$, wrapping past Z), $E \to J$ ($+5$), $R \to W$ ($+5$). The shift is $+5$.

Step 2 — Apply to LAKE: $L \to Q$, $A \to F$, $K \to P$, $E \to J$, giving $QFPJ$.

Why other options are wrong:

- QFOJ puts $K \to O$ ($+4$); QFPI puts $E \to I$; PFPJ puts $L \to P$.

Final Answer: $LAKE \to QFPJ \Rightarrow$ B

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Blood relations (work inwards): Break the statement into small steps, starting from the innermost phrase.

Step 1 — "my mother's husband": The speaker's mother's husband is the speaker's own father.

Step 2 — "the only daughter of my father": The only daughter of the speaker's father is the speaker herself (assuming she is her father's only daughter).

Why other options are wrong:

- Mother, Daughter and Cousin do not match "father's only daughter".

Final Answer: The photograph is of the speaker herself $\Rightarrow$ C

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Blood relations (build the tree): Lay out each clue as a link in a family tree.

Step 1 — Note the links: P is the brother of Q, and R is the brother of P, so P, Q and R are siblings. S is the father of R, so S is also the father of P and Q.

Step 2 — Identify "S's brother": S's brother is the paternal uncle of P, Q and R.

Step 3 — Relate Q to S's brother: Q is the child of S, so Q is the nephew (or niece) of S's brother. Since the gender of Q is not stated, Q is the niece or nephew of S's brother.

Why other options are wrong:

- Son and Uncle reverse the relation; "Nephew" alone assumes Q is male, which the data do not state.

Final Answer: Q is the niece or nephew of S's brother $\Rightarrow$ D

Answer: (D) Go Back to Q16

Q17.

Solution

Concept — Blood relations (decode the phrase): Resolve "the father of my son" first.

Step 1 — "the father of my son": The father of Sita's son is Sita's husband.

Step 2 — "the son of (Sita's husband)": The son of Sita's husband is Sita's own son.

Step 3 — How the boy relates to Sita: Therefore the boy is Sita's son.

Why other options are wrong:

- Brother, Nephew and Husband do not fit "son of my husband".

Final Answer: The boy is Sita's son $\Rightarrow$ A

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Syllogism (chain rule): "All A are B" plus "All B are C" gives "All A are C".

Step 1 — Conclusion I: All sparrows are birds and all birds are creatures, so all sparrows are creatures. I follows.

Step 2 — Conclusion II: If all sparrows are creatures, then those sparrows are creatures, so some creatures are sparrows. II follows (valid conversion of "all").

Why other options are wrong:

- Any option dropping I or II is wrong, since both conclusions are valid.

Final Answer: Both I and II follow $\Rightarrow$ D

Answer: (D) Go Back to Q18

Q19.

Solution

Concept — Syllogism (some + all): "Some A are B" plus "All B are C" gives "Some A are C".

Step 1 — Conclusion I: Some pencils are colours, and all colours are bright, so those pencils are bright. "Some pencils are bright" follows.

Step 2 — Conclusion II: "All bright things are pencils" reverses the relation and is not supported by the statements.

Why other options are wrong:

- Options including II are wrong, because the reverse statement does not follow.

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

Answer: (B) Go Back to Q19

Q20.

Solution

Concept — Syllogism (no + all): Combine a negative and a universal statement carefully.

Step 1 — Conclusion I: All iron is metal and no metal is wood, so no iron is wood. I follows.

Step 2 — Conclusion II: All iron is metal, so the iron items are metals; hence some metals are iron. II follows.

Step 3 — Conclusion: Both I and II follow.

Why other options are wrong:

- Options dropping either conclusion are wrong, since both are valid.

Final Answer: Both I and II follow $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q20

Q21.

Solution

Concept — Course of action: A course of action should be practical and should genuinely address the problem without creating a bigger one.

Step 1 — Course I: Regulating and diverting traffic during peak hours directly eases the jams, so it is a sensible action. I follows.

Step 2 — Course II: Permanently closing the main road to all vehicles is extreme and would cut off a vital route, so it does not follow.

Why other options are wrong:

- Any option accepting II is wrong, since a permanent closure is impractical.

Final Answer: Only I follows $\Rightarrow$ A

Answer: (A) Go Back to Q21

Q22.

Solution

Concept — Implicit assumptions: An assumption is something taken for granted that must be true for the statement to make sense. Extreme or unstated claims are not assumptions.

Step 1 — Assumption I: Advertising a high interest rate assumes that people care about earning interest; otherwise the appeal is pointless. I is implicit.

Step 2 — Assumption II: Claiming the highest interest does not require that no other bank gives any interest at all; this is an extreme claim, not an assumption. II is not implicit.

Why other options are wrong:

- Any option accepting II is wrong, since it over-states what the advertisement implies.

Final Answer: Only I is implicit $\Rightarrow$ B

Answer: (B) Go Back to Q22

Q23.

Solution

Concept — Direction sense (net displacement): Track each leg on a grid and combine the moves.

Step 1 — Leg 1: 4 km North.

Step 2 — Turn right, Leg 2: Facing North, a right turn points East; walk 2 km East.

Step 3 — Turn right, Leg 3: Facing East, a right turn points South; walk 4 km South. The 4 km South cancels the 4 km North.

Step 4 — Net position: Only the 2 km East remains, so he is 2 km East of the start.

Why other options are wrong:

- 4 km East and 6 km East add wrong legs; 2 km West reverses the direction.

Final Answer: 2 km East $\Rightarrow$ C

Answer: (C) Go Back to Q23

Q24.

Solution

Concept — Direction sense (cancel opposite legs): East and West distances cancel; North and South distances cancel.

Step 1 — List the legs: 8 m East, then 3 m North (left turn while facing East), then 8 m West (left turn while facing North), then 5 m North (right turn while facing West).

Step 2 — Horizontal movement: 8 m East and 8 m West cancel out.

Step 3 — Vertical movement: 3 m North + 5 m North = 8 m North.

Why other options are wrong:

- 3 m and 5 m use only one vertical leg; 11 m wrongly adds a horizontal leg.

Final Answer: 8 m North $\Rightarrow$ D

Answer: (D) Go Back to Q24

Q25.

Solution

Concept — Counting squares in a grid: Count squares of every possible size in an $n \times n$ grid using $n^2 + (n-1)^2 + \cdots + 1^2$.

Step 1 — Unit (1×1) squares: A 3×3 grid has $3 \times 3 = 9$ unit squares.

Step 2 — 2×2 squares: There are $2 \times 2 = 4$ of these.

Step 3 — 3×3 square: The whole outer boundary is 1 large square.

Step 4 — Total: $9 + 4 + 1 = 14$ squares.

Why other options are wrong:

- 9 counts only the unit squares; 13 misses one; 16 over-counts.

Final Answer: 14 squares $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q25

Q26.

Solution

Concept — Figure series (rotation): Identify the fixed angle and direction of rotation between successive figures.

Step 1 — Read the figures: The arrow points East, then North, then West — a 90° anticlockwise turn each step.

Step 2 — Next figure: A further 90° anticlockwise turn from West points South.

Why other options are wrong:

- East, North and West repeat earlier figures instead of continuing the rotation.

Final Answer: The arrow points South $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q26

Q27.

Solution

Concept — Counting triangles: A triangle with one median (a line from the apex to the midpoint of the base) splits into smaller triangles; count every size.

Step 1 — Small triangles: The median divides the big triangle into 2 smaller triangles (left and right).

Step 2 — Large triangle: The whole outer triangle is 1 triangle.

Step 3 — Total: $2 + 1 = 3$ triangles.

Why other options are wrong:

- 2 counts only the small triangles and forgets the whole; 4 and 5 over-count.

Final Answer: 3 triangles $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q27

Q28.

Solution

Concept — Odd figure out: Compare the shapes and find the one with a different form.

Step 1 — Compare: Figures A, C and D are shaded circles; figure B is a shaded triangle.

Step 2 — Conclusion: The triangle is the odd figure.

Why other options are wrong:

- A, C and D are all circles of the same kind, so they belong together.

Final Answer: Figure B is different $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q28

Q29.

Solution

Concept — Linear seating: Fix the ends first, then place the remaining people using the clues. Number the seats 1 to 6 from the left.

Step 1 — Ends: R is at the extreme left (seat 1) and U is at the extreme right (seat 6).

Step 2 — Place P: P is third from the left, so P is at seat 3.

Step 3 — Place Q and T: Q is immediately left of P, so Q is at seat 2. T is immediately right of P, so T is at seat 4.

Step 4 — Place S: The only seat left is seat 5, which goes to S.

Step 5 — Read the order: The row is R, Q, P, T, S, U. Between T (seat 4) and U (seat 6) sits S (seat 5).

R	Q	P	T	S	U

Why other options are wrong:

- Q is at seat 2, R at seat 1 and P at seat 3 — none lies between T and U.

Final Answer: S sits between T and U $\Rightarrow$ A

Answer: (A) Go Back to Q29

Q30.

Solution

Concept — Position from the other end: For a single row, position from left + position from right = total +1.

Step 1 — Known values: Total students = 35, position from left = 15.

Step 2 — Apply the formula: Position from right = $35 - 15 + 1 = 21$.

Why other options are wrong:

- 20 forgets the "+1"; 22 and 19 misapply the formula.

Final Answer: Meena's position from the right is 21st $\Rightarrow$ B

Answer: (B) Go Back to Q30

Answer Key

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