RIE CEE Reasoning Ability

Sample Paper – 5

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: $2,\ 5,\ 7,\ 12,\ 19,\ ?$

(A) 29

(B) 31

(C) 33

(D) 26

Q2. Find the next term in the series: $48,\ 24,\ 27,\ 13.5,\ 16.5,\ ?$

(A) 9.5

(B) 7.75

(C) 8.25

(D) 8.5

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

(A) U

(B) T

(C) V

(D) S

Q4. Find the next term in the series: $5,\ 8,\ 14,\ 26,\ 50,\ ?$

(A) 96

(B) 100

(C) 92

(D) 98

Q5. Find the next term in the series: $B2,\ E5,\ H8,\ K11,\ ?$

(A) M14

(B) N14

(C) N13

(D) O14

Q6. $36 : 18 :: 50 :?$

(A) 25

(B) 24

(C) 30

(D) 26

Q7. If $LAMP : PEQT$, then $WIND :?$

(A) ANRH

(B) AMQH

(C) AMRH

(D) AMRG

Q8. Japan is to Tokyo as France is to:

(A) Berlin

(B) Rome

(C) Madrid

(D) Paris

Q9. Choose the number that does not belong with the others: $14,\ 22,\ 35,\ 48,\ 60$

(A) 22

(B) 35

(C) 48

(D) 60

Q10. Choose the odd letter pair:

(A) GK

(B) AD

(C) JM

(D) PS

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

(A) Apple

(B) Banana

(C) Guava

(D) Carrot

Q12. In a certain code, $LAMP$ is written as $NCOR$. How is $DESK$ written in that code?

(A) FGUL

(B) FHUM

(C) FGUM

(D) EGUM

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

(A) 6-18-15-7

(B) 6-17-15-7

(C) 6-18-14-7

(D) 5-18-15-7

Q14. In a code language $PLANET$ is written as $NJYLCR$. How is $GARDEN$ written in the same code?

(A) EXPBCL

(B) EYPBCL

(C) EYPBDL

(D) FYPBCL

Q15. Pointing to a photograph, a woman said, "He is the only son of the mother of my brother." How is the boy in the photograph related to the woman?

(A) Father

(B) Son

(C) Cousin

(D) Brother

Q16. P is the husband of Q. R is the only daughter of Q. S is the brother of P. How is S related to R?

(A) Father

(B) Brother

(C) Uncle

(D) Cousin

Q17. Anil said to Sunil, "The brother of my mother is your father." How is Anil's mother related to Sunil?

(A) Aunt

(B) Mother

(C) Sister

(D) Grandmother

Q18. Statements: All apples are fruits. All fruits are sweet.
Conclusions: I. All sweet things are apples. II. All apples are sweet.

(A) Both I and II follow

(B) Only II follows

(C) Only I follows

(D) Neither I nor II follows

Q19. Statements: Some pens are objects. All objects are useful.
Conclusions: I. All pens are useful. II. Some pens are useful.

(A) Both I and II follow

(B) Only I follows

(C) Only II follows

(D) Neither I nor II follows

Q20. Statements: No teacher is lazy. All teachers are people.
Conclusions: I. No person is lazy. II. Some people are not lazy.

(A) Both I and II follow

(B) Only I follows

(C) Neither I nor II follows

(D) Only II follows

Q21. Statement: A large number of candidates were caught using unfair means during the entrance examination.
Courses of action: I. The examination should be cancelled for all candidates without enquiry. II. The board should strengthen invigilation and use of CCTV in examination halls.

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q22. Statement: "Spend your summer in the cool hills of our valley resort." — a tourism advertisement.
Assumptions: I. The valley resort has a pleasant summer climate. II. Some people travel to escape the summer heat.

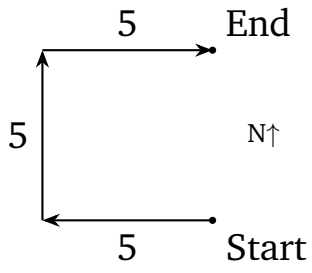
(A) Only I is implicit

(B) Only II is implicit

(C) Both I and II are implicit

(D) Neither I nor II is implicit

Q23. A man starts from a point, walks 5 km West, turns right and walks 5 km North, then turns right and walks 5 km East. How far and in which direction is he now from the starting point?



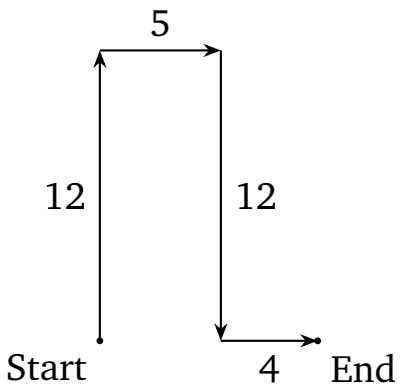
(A) 5 km North

(B) 5 km South

(C) 10 km North

(D) 5 km East

Q24. A boy walks 12 m North, turns right and walks 5 m, turns right and walks 12 m, then turns left and walks 4 m. How far is he from the starting point?



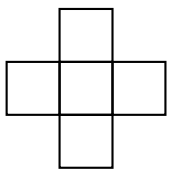
(A) 5 m East

(B) 4 m East

(C) 17 m East

(D) 9 m East

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



(A) 4

(B) 6

(C) 5

(D) 7

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

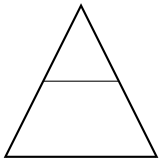
(A) ↗ (points North-East)

(B) ↙ (points South-West)

(C) ↘ (points South-East)

(D) ↖ (points North-West)

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



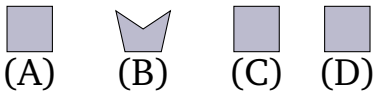
(A) 4

(B) 5

(C) 3

(D) 2

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



(A) Figure A

(B) Figure B

(C) Figure C

(D) Figure D

Q29. Five people V, W, X, Y and Z are sitting in a row facing North. V is at the extreme right end. Y is immediately to the left of V. W sits at the extreme left end. Z is immediately to the right of W. Who sits exactly in the middle of the row?

(A) Z

(B) Y

(C) W

(D) X

Q30. In a class of 50 students, Meena's rank is 18th from the bottom. What is her rank from the top?

(A) 33rd

(B) 32nd

(C) 34th

(D) 31st

Detailed Solutions

Q1.

Solution

Concept — Number series (Fibonacci-like): Test whether each term equals the sum of the two terms before it.

Step 1 — Check the rule: $2 + 5 = 7$, which matches the third term.

Step 2 — Continue checking: $5 + 7 = 12$, which matches the fourth term.

Step 3 — Confirm: $7 + 12 = 19$, which matches the fifth term, so each term is the sum of the previous two.

Step 4 — Find the next term: $12 + 19 = 31$.

Why other options are wrong:

- 29 and 33 do not equal $12 + 19$.
- 26 uses only a single previous term and breaks the rule.

Final Answer: The next term is $31 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Number series (alternate operations): Look for two operations applied in turn, one halving and one adding.

Step 1 — First operation: $48 \div 2 = 24$.

Step 2 — Second operation: $24 + 3 = 27$.

Step 3 — Repeat: $27 \div 2 = 13.5$, then $13.5 + 3 = 16.5$.

Step 4 — Next operation: The next step is a halving: $16.5 \div 2 = 8.25$.

Why other options are wrong:

- 9.5 and 8.5 are not exactly half of 16.5.
- 7.75 wrongly subtracts before halving.

Final Answer: The next term is $8.25 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q2

Q3.

Solution

Concept — Letter series (constant gap): Convert letters to positions and check for a fixed jump.

Step 1 — Positions: $E = 5$, $I = 9$, $M = 13$, $Q = 17$.

Step 2 — Gaps: $9 - 5 = 4$, $13 - 9 = 4$, $17 - 13 = 4$. The gap is a constant 4.

Step 3 — Next letter: $17 + 4 = 21 = U$.

Why other options are wrong:

- T (20) uses a gap of 3; S (19) uses a gap of 2; V (22) uses a gap of 5.

Final Answer: The next letter is $U \Rightarrow$ A

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — Number series (multiply and subtract): Test a rule of the form "previous term $\times 2 -$ constant".

Step 1 — Test the rule: $5 \times 2 - 2 = 8$.

Step 2 — Continue: $8 \times 2 - 2 = 14$; $14 \times 2 - 2 = 26$; $26 \times 2 - 2 = 50$.

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

Step 4 — Apply to the last term: $50 \times 2 - 2 = 100 - 2 = 98$.

Why other options are wrong:

- 100 forgets the -2; 96 and 92 use the wrong constant.

Final Answer: The next term is $98 \Rightarrow$ D

Answer: (D) Go Back to Q4

Q5.

Solution

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

Step 1 — Letters: B, E, H, K increase by 3 each time, so the next is N.

Step 2 — Numbers: $2, 5, 8, 11$ increase by 3 each time, so the next is 14.

Step 3 — Combine: The next term is $N14$.

Why other options are wrong:

- M14 uses the wrong letter; N13 uses the wrong number; O14 skips a letter.

Final Answer: The next term is $N14 \Rightarrow$ B

Answer: (B) Go Back to Q5

Q6.

Solution

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

Step 1 — Rule: $36 \div 2 = 18$, so the rule is "halve the number".

Step 2 — Apply: $50 \div 2 = 25$.

Why other options are wrong:

- 24, 30 and 26 are not half of 50.

Final Answer: $50 : 25 \Rightarrow$ A

Answer: (A) Go Back to Q6

Q7.

Solution

Concept — Letter analogy (shift $+4$): Compare the position shift between the two words.

Step 1 — Find the shift: $L \to P$ $(+4)$, $A \to E$ $(+4)$, $M \to Q$ $(+4)$, $P \to T$ $(+4)$. The rule is $+4$ to each letter.

Step 2 — Apply to WIND: $W \to A$ (wraps around, $23+4 = 27 \equiv 1 = A$), $I \to M$, $N \to R$, $D \to H$, giving $AMRH$.

Why other options are wrong:

- ANRH shifts I wrongly; AMQH shifts N wrongly; AMRG shifts D wrongly.

Final Answer: $WIND \to AMRH \Rightarrow$ C

Answer: (C) Go Back to Q7

Q8.

Solution

Concept — Word analogy (country : capital): Match each country to its capital city.

Step 1 — First pair: Tokyo is the capital of Japan.

Step 2 — Apply: The capital of France is Paris.

Why other options are wrong:

- Berlin is the capital of Germany; Rome of Italy; Madrid of Spain.

Final Answer: France is to Paris $\Rightarrow$ D

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Classification of numbers: Look for one property shared by all but one.

Step 1 — Test for even numbers: $14, 22, 48, 60$ are all even (divisible by 2).

Step 2 — Check 35: 35 is odd, so it does not share the "even" property.

Step 3 — Conclusion: 35 is the odd one out.

Why other options are wrong:

- 22, 48 and 60 are all even numbers, so they belong together.

Final Answer: 35 does not belong $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q9

Q10.

Solution

Concept — Letter-pair classification: Find the gap between the two letters of each pair.

Step 1 — Gaps: AD: $A(1) \to D(4)$, gap 3. JM: $J(10) \to M(13)$, gap 3. PS: $P(16) \to S(19)$, gap 3. GK: $G(7) \to K(11)$, gap 4.

Step 2 — Conclusion: Three pairs have a gap of 3; GK has a gap of 4, so it is the odd one.

Why other options are wrong:

- AD, JM and PS all have a gap of 3 between the letters.

Final Answer: GK is the odd pair $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q10

Q11.

Solution

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

Step 1 — Identify the items: Apple, Banana and Guava are all fruits.

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

Why other options are wrong:

- Apple, Banana and Guava share the category "fruit".

Final Answer: Carrot does not belong $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) 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: $L \to N$ $(+2)$, $A \to C$ $(+2)$, $M \to O$ $(+2)$, $P \to R$ $(+2)$. The shift is $+2$.

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 shifts K wrongly; FHUM shifts E wrongly; EGUM shifts D wrongly.

Final Answer: $DESK \to FGUM \Rightarrow \boxed{\text{C}}$

Answer: (C) 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: $F = 6$, $R = 18$, $O = 15$, $G = 7$.

Step 2 — Write the code: $FROG$ = 6-18-15-7.

Why other options are wrong:

- 6-17-15-7 puts $R = 17$; 6-18-14-7 puts $O = 14$; 5-18-15-7 puts $F = 5$.

Final Answer: $FROG$ = 6-18-15-7 $\Rightarrow$ A

Answer: (A) Go Back to Q13

Q14.

Solution

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

Step 1 — Find the shift: $P \to N$ (-2), $L \to J$ (-2), $A \to Y$ (-2, wraps to the end of the alphabet), $N \to L$ (-2), $E \to C$ (-2), $T \to R$ (-2). The shift is -2.

Step 2 — Apply to GARDEN: $G \to E$, $A \to Y$, $R \to P$, $D \to B$, $E \to C$, $N \to L$, giving $EYPBCL$.

Why other options are wrong:

- EXPBCL shifts A wrongly; EYPBDL shifts E wrongly; FYPBCL shifts G wrongly.

Final Answer: $GARDEN \to EYPBCL \Rightarrow$ 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 — "the mother of my brother": The mother of the woman's brother is the woman's own mother.

Step 2 — "the only son of (my mother)": The only son of the woman's mother is the woman's brother.

Why other options are wrong:

- Father, Son and Cousin do not match "mother's only son".

Final Answer: The boy is the woman's brother $\Rightarrow$ D

Answer: (D) 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 husband of Q, so P and Q are a married couple. R is the only daughter of Q, so R is the daughter of P and Q. S is the brother of P.

Step 2 — Relate S to R: S is the brother of R's father, so S is R's uncle (paternal).

Why other options are wrong:

- Father and Brother place S in the wrong generation; Cousin is not supported by the links.

Final Answer: S is R's uncle $\Rightarrow$ C

Answer: (C) Go Back to Q16

Q17.

Solution

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

Step 1 — "the brother of my mother": The brother of Anil's mother is Anil's maternal uncle.

Step 2 — Use the clue: This maternal uncle is Sunil's father. So Anil's mother is the sister of Sunil's father.

Step 3 — Relate Anil's mother to Sunil: The sister of one's father is one's aunt, so Anil's mother is Sunil's aunt.

Why other options are wrong:

- Mother and Grandmother place her in the wrong generation; Sister would make her Sunil's sibling.

Final Answer: Anil's mother is Sunil's aunt $\Rightarrow$ 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 sweet things are apples" reverses the chain and is not valid; sweet is the widest class, so I does not follow.

Step 2 — Conclusion II: All apples are fruits and all fruits are sweet, so all apples are sweet. II follows.

Why other options are wrong:

- Any option accepting I is wrong, since the reverse statement does not follow.
- Neither I nor II is wrong because II is clearly valid.

Final Answer: Only II follows $\Rightarrow$ B

Answer: (B) 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: "All pens are useful" is too strong; only some pens are known to be objects, so I does not follow.

Step 2 — Conclusion II: Some pens are objects and all objects are useful, so those pens are useful. "Some pens are useful" follows.

Why other options are wrong:

- Options accepting I are wrong, since "all pens" is not established.
- Neither I nor II is wrong because II is valid.

Final Answer: Only II follows $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q19

Q20.

Solution

Concept — Syllogism (no + all): Test each conclusion against a possible diagram.

Step 1 — Conclusion I: "No person is lazy" is too strong; people who are not teachers could still be lazy, so I does not follow.

Step 2 — Conclusion II: No teacher is lazy and all teachers are people, so those teacher-people are not lazy; hence "some people are not lazy" follows.

Why other options are wrong:

- Options claiming I follows are wrong; "person" is wider than "teacher".
- Neither I nor II is wrong because II is valid.

Final Answer: Only II follows $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q20

Q21.

Solution

Concept — Course of action: A course of action should be practical, fair, and should genuinely address the problem.

Step 1 — Course I: Cancelling the exam for all candidates without enquiry punishes the honest candidates too, so it is unfair and does not follow.

Step 2 — Course II: Strengthening invigilation and adding CCTV directly prevents future malpractice, so it is a sensible action. II follows.

Why other options are wrong:

- Any option accepting I is wrong, as blanket cancellation is unjust.
- Neither I nor II is wrong because II clearly helps.

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

Answer: (B) 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.

Step 1 — Assumption I: Inviting people to a "cool" summer resort assumes the place actually has a pleasant summer climate; otherwise the appeal fails. I is implicit.

Step 2 — Assumption II: The advertisement targets people who want to escape the heat, so it assumes some people travel for that reason. II is implicit.

Why other options are wrong:

- Dropping either assumption is wrong, since both underlie the advertisement.

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

Answer: (C) 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: 5 km West.

Step 2 — Turn right, Leg 2: Facing West, a right turn points North; walk 5 km North.

Step 3 — Turn right, Leg 3: Facing North, a right turn points East; walk 5 km East. The 5 km East cancels the 5 km West.

Step 4 — Net position: Only the 5 km North remains, so he is 5 km North of the start.

Why other options are wrong:

- 5 km South reverses the direction; 10 km North doubles the vertical leg; 5 km East ignores the cancellation.

Final Answer: 5 km North $\Rightarrow$ A

Answer: (A) Go Back to Q23

Q24.

Solution

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

Step 1 — List the legs: 12 m North, then 5 m East (right turn while facing North), then 12 m South (right turn while facing East), then 4 m East (left turn while facing South).

Step 2 — Vertical movement: 12 m North and 12 m South cancel out.

Step 3 — Horizontal movement: 5 m East + 4 m East = 9 m East.

Why other options are wrong:

- 5 m and 4 m use only one horizontal leg; 17 m wrongly adds a vertical leg.

Final Answer: 9 m East $\Rightarrow$ D

Answer: (D) Go Back to Q24

Q25.

Solution

Concept — Counting squares: Count squares of every possible size in the figure.

Step 1 — Small squares: The plus shape is made of 5 unit cells (one centre, plus one on each side), each a unit square.

Step 2 — Larger squares: A plus shape has no 2×2 block of four cells, so there is no larger square.

Step 3 — Total: 5 squares in all.

Why other options are wrong:

- 4 misses one arm; 6 and 7 over-count squares that do not exist in a plus shape.

Final Answer: 5 squares $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q25

Q26.

Solution

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

Step 1 — Read the figures: The arrow points North-East, then South-East, then South-West — a 45° clockwise turn each step.

Step 2 — Next figure: A further 45° clockwise turn from South-West points North-West.

Why other options are wrong:

- North-East and South-East repeat earlier figures; South-West is the current figure, not the next.

Final Answer: The arrow points North-West $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q26

Q27.

Solution

Concept — Counting triangles: A triangle cut by a line parallel to the base creates triangles of two sizes.

Step 1 — The whole triangle: The big outer triangle is one triangle.

Step 2 — The small top triangle: The horizontal midline cuts off a smaller triangle at the top, giving a second triangle.

Step 3 — Total: The lower part is a trapezium, not a triangle, so there are 2 triangles in all.

Why other options are wrong:

- 4, 5 and 3 over-count; the lower trapezium is not a triangle and no extra lines exist.

Final Answer: 2 triangles $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) 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 squares; figure B is a shaded pentagon (five sides).

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

Why other options are wrong:

- A, C and D are all four-sided squares, 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.

Step 1 — Ends: V is at the extreme right (position 5) and W is at the extreme left (position 1).

Step 2 — Place Y: Y is immediately to the left of V, so Y is at position 4.

Step 3 — Place Z and X: Z is immediately to the right of W, so Z is at position 2. The only seat left, position 3, goes to X.

Step 4 — Read the order: The row is W, Z, X, Y, V; the middle seat (position 3) is X.

W	Z	X	Y	V

Why other options are wrong:

- Z is at position 2, Y at position 4 and W at the end — none is in the middle.

Final Answer: X sits in the middle $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q29

Q30.

Solution

Concept — Rank from the other end: For a single line, rank from top + rank from bottom = total +1.

Step 1 — Known values: Total students $= 50$, rank from bottom $= 18$.

Step 2 — Apply the formula: Rank from top $= 50 - 18 + 1 = 33$.

Why other options are wrong:

- 32 forgets the "+1"; 34 and 31 misapply the formula.

Final Answer: Meena's rank from the top is 33rd $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q30

Answer Key

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