RIE CEE Reasoning Ability

Sample Paper – 7

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: $5,\ 20,\ 80,\ 320,\ ?$

(A) 960

(B) 1280

(C) 1600

(D) 640

Q2. Find the next term in the series: $4,\ 6,\ 10,\ 16,\ 24,\ ?$

(A) 36

(B) 30

(C) 38

(D) 34

Q3. Find the next term in the letter series: $B,\ D,\ H,\ J,\ N,\ ?$

(A) P

(B) Q

(C) O

(D) R

Q4. Find the next term in the series: $2,\ 6,\ 12,\ 20,\ 30,\ 42,\ ?$

(A) 54

(B) 50

(C) 56

(D) 58

Q5. Find the next term in the series: $B1,\ E4,\ H9,\ K16,\ ?$

(A) M25

(B) N25

(C) N24

(D) O25

Q6. $5 : 30 :: 8 :?$

(A) 72

(B) 64

(C) 80

(D) 56

Q7. If $RAT : UDW$, then $SUN :?$

(A) VWQ

(B) UXP

(C) VXP

(D) VXQ

Q8. Bird is to Nest as Bee is to:

(A) Honey

(B) Flower

(C) Hive

(D) Sting

Q9. Choose the number that does not belong with the others: $16,\ 24,\ 30,\ 36,\ 48$

(A) 30

(B) 24

(C) 36

(D) 48

Q10. Choose the odd letter pair:

(A) AF

(B) CH

(C) KP

(D) RX

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

(A) Ruby

(B) Copper

(C) Emerald

(D) Sapphire

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

(A) GHVM

(B) GHUN

(C) GHVN

(D) FHVN

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

(A) 7-15-12-4

(B) 7-14-12-4

(C) 7-15-11-4

(D) 6-15-12-4

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

(A) EKMVDQ

(B) EKNVDP

(C) EKNUDQ

(D) EKNVDQ

Q15. Pointing to a photograph, a woman said, "He is the father of my daughter's mother." How is the man in the photograph related to the woman?

(A) Husband

(B) Brother

(C) Father

(D) Father-in-law

Q16. P is the mother of Q. Q is the sister of R. S is the father of P. How is R related to S?

(A) Son

(B) Grandson

(C) Father

(D) Grandfather

Q17. Meena said, "That boy is the son of my grandfather's only child." How is the boy related to Meena?

(A) Brother

(B) Father

(C) Uncle

(D) Cousin

Q18. Statements: All parrots are birds. All birds are animals.
Conclusions: I. All parrots are animals. II. Some animals are parrots.

(A) Only I follows

(B) Only II follows

(C) Neither I nor II follows

(D) Both I and II follow

Q19. Statements: Some sofas are chairs. All chairs are furniture.
Conclusions: I. Some sofas are furniture. II. All furniture are chairs.

(A) Both I and II follow

(B) Only I follows

(C) Only II follows

(D) Neither I nor II follows

Q20. Statements: No dancer is a singer. All dancers are performers.
Conclusions: I. No performer is a singer. II. Some performers are not singers.

(A) Both I and II follow

(B) Only I follows

(C) Neither I nor II follows

(D) Only II follows

Q21. Statement: There has been a long power cut in the residential colony during the peak summer days.
Courses of action: I. The electricity board should immediately repair the fault and restore supply. II. The residents should permanently stop using all electrical appliances.

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q22. Statement: "Insure your home with us today and protect your family's future." — an advertisement by an insurance company.
Assumptions: I. People are concerned about the future security of their family. II. Insurance can provide a measure of financial protection.

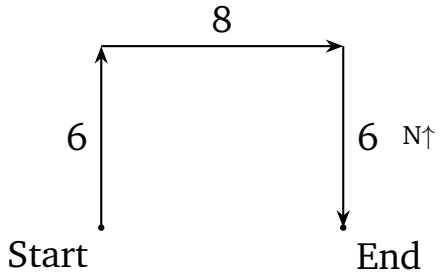
(A) Only I is implicit

(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 6 km North, turns right and walks 8 km, then turns right again and walks 6 km. How far and in which direction is he now from the starting point?



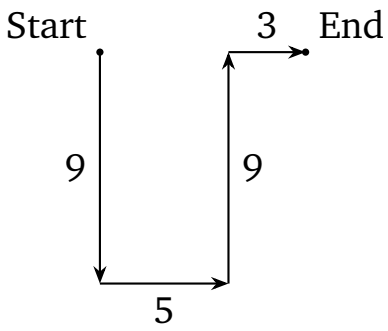
(A) 6 km East

(B) 8 km East

(C) 8 km West

(D) 14 km East

Q24. A girl walks 9 m South, turns left and walks 5 m, turns left and walks 9 m, then turns right and walks 3 m. How far is she from the starting point?



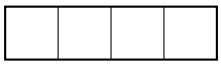
(A) 5 m East

(B) 3 m East

(C) 18 m East

(D) 8 m East

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



(A) 4

(B) 5

(C) 3

(D) 8

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

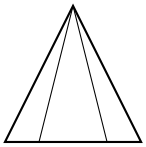
(A) ↑ (points North)

(B) ← (points West)

(C) ↓ (points South)

(D) → (points East)

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



(A) 4

(B) 5

(C) 3

(D) 6

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 R, S, T, U, V and W are sitting in a row facing North. R is at the extreme left end. W is at the extreme right end. T is third from the left. S sits immediately to the right of R. V sits immediately to the left of W. Who sits immediately to the right of T?

(A) U

(B) V

(C) S

(D) T

Q30. In a class of 45 students, Anil's rank is 19th from the top. What is his rank from the bottom?

(A) 26th

(B) 28th

(C) 27th

(D) 25th

Detailed Solutions

Q1.

Solution

Concept — Number series (constant multiplier): When each term is a fixed multiple of the previous one, find that ratio first.

Step 1 — Find the ratio: $20 \div 5 = 4$, $80 \div 20 = 4$, $320 \div 80 = 4$.

Step 2 — The rule holds: Each term is the previous term $\times 4$.

Step 3 — Apply to the last term: $320 \times 4 = 1280$.

Why other options are wrong:

- 960 is 320×3; 1600 is 320×5; 640 is 320×2 — none use the $\times 4$ rule.

Final Answer: The next term is $1280 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Number series (growing differences): Study the differences between consecutive terms.

Step 1 — Write the differences: $6 - 4 = 2$, $10 - 6 = 4$, $16 - 10 = 6$, $24 - 16 = 8$.

Step 2 — Spot the pattern: The differences are $2, 4, 6, 8$, increasing by 2 each time.

Step 3 — Find the next difference: The next difference is $8 + 2 = 10$.

Step 4 — Add to the last term: $24 + 10 = 34$.

Why other options are wrong:

- 30 uses a difference of 6; 36 uses 12; 38 over-shoots — none use the difference 10.

Final Answer: The next term is $34 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q2

Q3.

Solution

Concept — Letter series (alternating gaps): Convert letters to positions and check whether the gaps alternate.

Step 1 — Positions: $B = 2$, $D = 4$, $H = 8$, $J = 10$, $N = 14$.

Step 2 — Gaps: $4 - 2 = 2$, $8 - 4 = 4$, $10 - 8 = 2$, $14 - 10 = 4$. The gaps alternate $+2, +4, +2, +4$.

Step 3 — Next gap and letter: The next gap is $+2$, so position $= 14 + 2 = 16 = P$.

Why other options are wrong:

- Q (17) and R (18) use the wrong gap; O (15) misses position 16.

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

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — Product pattern $n(n+1)$: Test whether each term equals $n \times (n+1)$ for $n = 1, 2, 3, \ldots$

Step 1 — Match the form: $1 \times 2 = 2$, $2 \times 3 = 6$, $3 \times 4 = 12$, $4 \times 5 = 20$, $5 \times 6 = 30$, $6 \times 7 = 42$.

Step 2 — Next term: For $n = 7$: $7 \times 8 = 56$.

Why other options are wrong:

- 54 and 58 are near 56 but break the rule; 50 is far off the $n(n+1)$ value.

Final Answer: The next term is $56 \Rightarrow$ C

Answer: (C) Go Back to Q4

Q5.

Solution

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

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

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

Step 3 — Combine: The next term is $N25$.

Why other options are wrong:

- M25 uses the wrong letter; N24 uses the wrong number; O25 skips a letter.

Final Answer: The next term is $N25 \Rightarrow$ B

Answer: (B) Go Back to Q5

Q6.

Solution

Concept — Number analogy: Find the rule joining the first pair, then apply it to the second.

Step 1 — Rule: $5 \times 6 = 30$, that is $n \times (n + 1)$.

Step 2 — Apply: For 8: $8 \times 9 = 72$.

Why other options are wrong:

- 64 is 8×8; 80 is 8×10; 56 is 8×7 — none use $n(n + 1)$.

Final Answer: $8 : 72 \Rightarrow$ A

Answer: (A) Go Back to Q6

Q7.

Solution

Concept — Letter analogy (shift): Find the position shift applied to each letter of the first word.

Step 1 — Find the shift: $R \to U$ $(+3)$, $A \to D$ $(+3)$, $T \to W$ $(+3)$. The rule is $+3$ to each letter.

Step 2 — Apply to SUN: $S \to V$, $U \to X$, $N \to Q$, giving VXQ.

Why other options are wrong:

- VWQ shifts U by 2; UXP shifts S by 2; VXP shifts N by 2.

Final Answer: $SUN \to VXQ \Rightarrow$ D

Answer: (D) Go Back to Q7

Q8.

Solution

Concept — Word analogy (creature : home): Match each creature to the place it lives in.

Step 1 — First pair: A bird lives in a nest.

Step 2 — Apply: A bee lives in a hive, so Bee $\to$ Hive.

Why other options are wrong:

- Honey is what a bee makes; Flower is where it feeds; Sting is a body part — none is its home.

Final Answer: Bee is to Hive $\Rightarrow$ C

Answer: (C) Go Back to Q8

Q9.

Solution

Concept — Classification of numbers: Look for one shared property that all but one number has.

Step 1 — Test multiples of 4: $16 = 4 \times 4$, $24 = 4 \times 6$, $36 = 4 \times 9$, $48 = 4 \times 12$ are all multiples of 4.

Step 2 — Check 30: $30 \div 4 = 7.5$, so 30 is not a multiple of 4.

Step 3 — Conclusion: 30 is the odd one out.

Why other options are wrong:

- 24, 36 and 48 are all exact multiples of 4, so they belong together.

Final Answer: 30 does not belong $\Rightarrow$ A

Answer: (A) Go Back to Q9

Q10.

Solution

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

Step 1 — Gaps: AF: $A(1) \rightarrow F(6)$, gap 5. CH: $C(3) \rightarrow H(8)$, gap 5. KP: $K(11) \rightarrow P(16)$, gap 5. RX: $R(18) \rightarrow X(24)$, gap 6.

Step 2 — Conclusion: Three pairs have a gap of 5; RX has a gap of 6, so it is the odd one.

Why other options are wrong:

- AF, CH and KP all have a gap of 5 between the letters.

Final Answer: RX is the odd pair $\Rightarrow$ D

Answer: (D) Go Back to Q10

Q11.

Solution

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

Step 1 — Identify the items: Ruby, Emerald and Sapphire are all precious gemstones (jewels).

Step 2 — The outsider: Copper is a metal, not a gemstone.

Why other options are wrong:

- Ruby, Emerald and Sapphire share the category "gemstone".

Final Answer: Copper does not belong $\Rightarrow$ 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: $L \to O$ $(+3)$, $A \to D$ $(+3)$, $M \to P$ $(+3)$, $P \to S$ $(+3)$. The shift is $+3$.

Step 2 — Apply to DESK: $D \to G$, $E \to H$, $S \to V$, $K \to N$, giving $GHVN$.

Why other options are wrong:

- GHVM, GHUN and FHVN each shift one letter incorrectly.

Final Answer: $DESK \to GHVN \Rightarrow$ 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: $G = 7$, $O = 15$, $L = 12$, $D = 4$.

Step 2 — Write the code: $GOLD$ = 7-15-12-4.

Why other options are wrong:

- 7-14-12-4 puts $O = 14$; 7-15-11-4 puts $L = 11$; 6-15-12-4 puts $G = 6$.

Final Answer: $GOLD$ = 7-15-12-4 $\Rightarrow$ A

Answer: (A) Go Back to Q13

Q14.

Solution

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

Step 1 — Find the shift: $G \to F$ (-1), $A \to Z$ (-1, wrapping round), $R \to Q$ (-1), $D \to C$ (-1). The shift is -1.

Step 2 — Apply to FLOWER: $F \to E$, $L \to K$, $O \to N$, $W \to V$, $E \to D$, $R \to Q$, giving $EKNVDQ$.

Why other options are wrong:

- EKMVDQ shifts O wrongly; EKNVDP shifts R wrongly; EKNUDQ shifts W wrongly.

Final Answer: $FLOWER \to EKNVDQ \Rightarrow$ D

Answer: (D) Go Back to Q14

Q15.

Solution

Concept — Blood relations (work inwards): Resolve the innermost phrase first.

Step 1 — "my daughter's mother": The mother of the woman's own daughter is the woman herself.

Step 2 — "the father of (the woman)": So the man is the father of the woman.

Why other options are wrong:

- Husband, Brother and Father-in-law do not match "the woman's own father".

Final Answer: The man is the woman's father $\Rightarrow$ C

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Blood relations (build the tree): Lay out each clue as a link, using the maternal side.

Step 1 — Note the links: P is Q's mother. Q is R's sister, so P is also R's mother. S is P's father.

Step 2 — Relate R to S: S is the father of R's mother (P), so S is R's maternal grandfather. R is therefore S's grandchild. As R is the brother of Q (a male child of P), R is S's grandson.

Why other options are wrong:

- Son and Father reverse a generation; Grandfather reverses the direction.

Final Answer: R is S's grandson $\Rightarrow$ B

Answer: (B) Go Back to Q16

Q17.

Solution

Concept — Blood relations (decode the phrase): Resolve "grandfather's only child" first.

Step 1 — "my grandfather's only child": The grandfather's only child is Meena's own parent (her father).

Step 2 — "the son of (my father)": The son of Meena's father is Meena's brother.

Why other options are wrong:

- Father and Uncle are the wrong generation; Cousin would need a different parent.

Final Answer: The boy is Meena's brother $\Rightarrow$ 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 parrots are birds and all birds are animals, so all parrots are animals. I follows.

Step 2 — Conclusion II: If all parrots are animals, then at least those parrots are animals, so some animals are parrots. 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 sofas are chairs, and all chairs are furniture, so those sofas are furniture. "Some sofas are furniture" follows.

Step 2 — Conclusion II: "All furniture are chairs" reverses the given "all chairs are furniture" and is not valid.

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): Test each conclusion against a possible diagram.

Step 1 — Conclusion II: All dancers are performers and no dancer is a singer. The dancers are performers who are not singers, so "some performers are not singers" must hold. II follows.

Step 2 — Conclusion I: "No performer is a singer" is too strong: a performer who is not a dancer could still be a singer, so I does not follow.

Why other options are wrong:

- Options claiming I follows are wrong; "performer" is wider than "dancer".

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 and should genuinely address the problem.

Step 1 — Course I: Repairing the fault and restoring supply directly removes the power cut, so it is a sensible action. I follows.

Step 2 — Course II: Permanently stopping all electrical appliances is extreme and impractical; it punishes the residents instead of fixing the supply, so it does not follow.

Why other options are wrong:

- Any option accepting II is wrong, as it does not solve the power problem.

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

Answer: (A) Go Back to Q21

Q22.

Solution

Concept — Implicit assumptions: An assumption is something taken for granted that must hold for the statement to make sense.

Step 1 — Assumption I: The advertisement appeals to "protect your family's future", which assumes people care about their family's future security. I is implicit.

Step 2 — Assumption II: Offering insurance for protection assumes that insurance can in fact provide financial protection; otherwise the offer is meaningless. 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 and combine the moves.

Step 1 — Leg 1: 6 km North.

Step 2 — Turn right, Leg 2: Facing North, a right turn points East; walk 8 km East.

Step 3 — Turn right, Leg 3: Facing East, a right turn points South; walk 6 km South. The 6 km South cancels the 6 km North.

Step 4 — Net position: Only the 8 km East remains, so he is 8 km East of the start.

Why other options are wrong:

- 6 km East uses the wrong leg; 14 km East adds legs that cancel; 8 km West reverses the direction.

Final Answer: 8 km East $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q23

Q24.

Solution

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

Step 1 — List the legs: 9 m South, then 5 m East (left turn while facing South), then 9 m North (left turn while facing East), then 3 m East (right turn while facing North).

Step 2 — Vertical movement: 9 m South and 9 m North cancel out.

Step 3 — Horizontal movement: 5 m East + 3 m East = 8 m East.

Why other options are wrong:

- 5 m and 3 m use only one horizontal leg; 18 m wrongly adds the vertical legs.

Final Answer: 8 m East $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q24

Q25.

Solution

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

Step 1 — Shape of the figure: The figure is a single row of 4 unit cells, i.e. a 4×1 strip.

Step 2 — Unit squares: Each of the 4 cells is a 1×1 square, giving 4 squares.

Step 3 — Larger squares: A larger square would need height 2, but the strip is only 1 cell tall, so there are no 2×2 squares.

Step 4 — Total: $4 + 0 = 4$ squares.

Why other options are wrong:

- 5 and 8 count rectangles that are not squares; 3 misses one unit cell.

Final Answer: 4 squares $\Rightarrow$ A

Answer: (A) 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 West, then North, then East — a 90° clockwise turn each step (West $\rightarrow$ North $\rightarrow$ East).

Step 2 — Next figure: A further 90° clockwise turn from East points South.

Why other options are wrong:

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

Final Answer: The arrow points South $\Rightarrow$ C

Answer: (C) Go Back to Q26

Q27.

Solution

Concept — Counting triangles: A triangle split by two lines from the apex gives triangles of more than one size.

Step 1 — Small triangles: The two lines from the apex to the base divide the figure into 3 small triangles along the base.

Step 2 — Medium triangles: Combining two adjacent small triangles gives a larger triangle; there are 2 such pairs (left two and right two).

Step 3 — Whole triangle: The complete outer triangle is 1 more triangle.

Step 4 — Total: $3 + 2 + 1 = 6$ triangles.

Why other options are wrong:

- 4 and 5 miss some of the combined triangles; 3 counts only the smallest ones.

Final Answer: 6 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 circles; figure B is a shaded star.

Step 2 — Conclusion: The star 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.

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

Step 2 — Place S: S sits immediately to the right of R, so S is at position 2.

Step 3 — Place T: T is third from the left, so T is at position 3.

Step 4 — Place V and U: V sits immediately to the left of W, so V is at position 5. The only seat left, position 4, goes to U.

Step 5 — Read the order: The row is R, S, T, U, V, W. The person immediately to the right of T (position 3) is U at position 4.

R	S	T	U	V	W

Why other options are wrong:

- V is at position 5 and S at position 2, not next to T; T is not to its own right.

Final Answer: U sits immediately to the right of T $\Rightarrow$ A

Answer: (A) 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 = 45, rank from top = 19.

Step 2 — Apply the formula: Rank from bottom = $45 - 19 + 1 = 27$.

Why other options are wrong:

- 26 forgets the "+1"; 28 and 25 misapply the formula.

Final Answer: Anil's rank from the bottom is 27th $\Rightarrow$ C

Answer: (C) Go Back to Q30

Answer Key

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