NMAT Logical Reasoning

Sample Paper – 1

Duration: 40 Minutes **Maximum Marks: 108**

Instructions

- This paper contains **36** Multiple Choice Questions (Single Correct Answer), modelled on the Logical Reasoning section of **NMAT** by GMAC.
- Each correct answer carries **+3 marks**. There is **no negative marking** for incorrect or unattempted answers, so attempt every question.
- Only **one** option is correct. Choose the most appropriate answer.
- NMAT is a computer-based test with sectional time limits; attempt this practice paper in one timed sitting of about **40 minutes**.
- Use of mobile phones, calculators or electronic gadgets is strictly prohibited.

Part A: Coding-Decoding and Series

Q1. In a certain code language, **CAT** is written as **DBU**. How will **DOG** be written in the same code?

(A) EPG

(B) EPH

(C) DPH

(D) EOH

Q2. If **FACE** is coded as **6135** (each letter replaced by its position in the English alphabet), then how is **HEAD** coded?

(A) 8515

(B) 8514

(C) 8541

(D) 8154

Q3. Find the next term in the letter series: **Z, W, T, Q, ____**

(A) P

(B) O

(C) N

(D) M

Q4. Find the next term in the number series: **2, 6, 12, 20, 30, ____**

(A) 42

(B) 40

(C) 44

(D) 38

Q5. Which letter lies exactly midway between the 8th letter from the left and the 14th letter from the left of the English alphabet?

(A) L

(B) J

(C) K

(D) M

Q6. In a certain code, the digits are represented by letters as follows: 1 =P, 2 =Q, 3 =R, 4 =S, 5 =T. What is the code for the number **4 2 5 3**?

(A) S Q R T

(B) S Q T R

(C) Q S T R

(D) S T Q R

Part B: Arrangements and Puzzles

Directions (Q7–Q9): Six friends P, Q, R, S, T and U are seated around a circular table facing the centre.

- P sits to the immediate left of S.
- U sits to the immediate left of P.
- R sits second to the left of P.
- T sits to the immediate right of Q.
- S sits second to the right of U.

(A person's left is the seat next to them in the clockwise direction, and their right is the seat next to them in the anticlockwise direction.)

Q7. Who sits to the immediate right of T?

(A) Q

(B) U

(C) P

(D) R

Q8. How many persons sit between P and T when counted clockwise starting from P?

(A) Two

(B) Three

(C) One

(D) Four

Q9. Which of the following pairs of persons are immediate neighbours?

(A) P and R

(B) Q and U

(C) U and R

(D) S and T

Directions (Q10–Q12): Seven people A, B, C, D, E, F and G live on seven different floors of a building. The lowest floor is numbered 1 and the topmost is numbered 7.

- D lives on the topmost (seventh) floor.
- E lives on the lowest floor.
- B lives on the second floor from the bottom.
- A lives immediately above C, and C lives below F.
- G lives immediately above F.
- Exactly one floor lies between C and F.

Q10. Who lives on the fifth floor?

(A) A

(B) C

(C) G

(D) F

Q11. How many floors are there between A and G?

(A) One

(B) Two

(C) Three

(D) None

Q12. Who lives immediately above A?

(A) C

(B) F

(C) G

(D) B

Part C: Blood Relations and Direction Sense

Q13. Pointing to a photograph, a man said, "She is the daughter of the only son of my grandfather." How is the woman in the photograph related to the man?

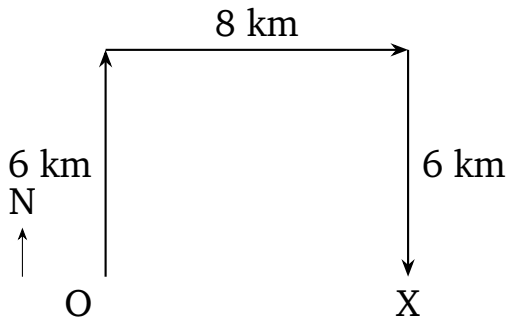
(A) Mother

(B) Daughter

(C) Aunt

(D) Sister

Q14. A man starts from point O and walks 6 km towards the North. He then turns right and walks 8 km, and again turns right and walks 6 km to reach point X. How far, and in which direction, is X from O?



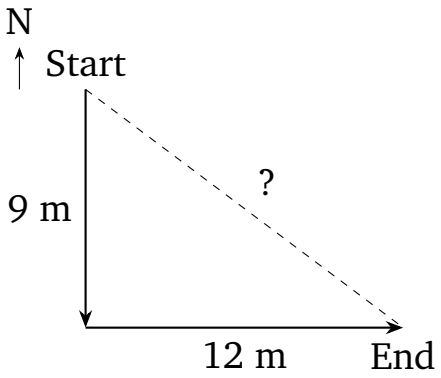
(A) 10 km, North-East

(B) 6 km, East

(C) 14 km, East

(D) 8 km, East

Q15. Riya walks 9 m towards the South, then turns left and walks 12 m. How far is she now from her starting point?



(A) 21 m

(B) 15 m

(C) 12 m

(D) 9 m

Q16. A is the brother of B. B is the son of C. D is the mother of A. How is C related to D?

(A) Brother

(B) Son

(C) Husband

(D) Father

Q17. A man is facing North. He turns 135° in the clockwise direction and then turns 180° in the anticlockwise direction. Which direction is he facing now?

(A) South-East

(B) South-West

(C) North-West

(D) North-East

Part D: Syllogisms

Q18. **Statements:** All pens are books. All books are tables.
Conclusions:

I. All pens are tables.
II. Some tables are pens.
Which of the conclusions follow(s)?

(A) Only conclusion I follows
(B) Only conclusion II follows
(C) Neither I nor II follows
(D) Both I and II follow

Q19. **Statements:** Some cats are dogs. All dogs are animals.
Conclusions:
I. Some cats are animals.
II. All animals are cats.
Which of the conclusions follow(s)?

(A) Only conclusion II follows
(B) Both I and II follow
(C) Only conclusion I follows
(D) Neither I nor II follows

Q20. **Statements:** No flower is a stone. All stones are hard.
Conclusions:
I. Some hard things are not flowers.
II. All flowers are hard.
Which of the conclusions follow(s)?

(A) Only conclusion I follows
(B) Only conclusion II follows
(C) Both I and II follow
(D) Neither I nor II follows

Q21. **Statements:** Some doctors are engineers. Some engineers are teachers.
Conclusions:
I. Some doctors are teachers.

II. Some teachers are doctors.
Which of the conclusions follow(s)?

(A) Only conclusion I follows

(B) Only conclusion II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q22. **Statements:** All roses are flowers. All flowers are plants.
Conclusions:
I. All roses are plants.
II. Some plants are not roses.
Which of the conclusions follow(s)?

(A) Only conclusion I follows

(B) Only conclusion II follows

(C) Both I and II follow

(D) Neither I nor II follows

Part E: Critical Reasoning and Verbal Logic

Q23. **Statement:** "Visit our new coffee shop for the best espresso in town." — an advertisement.
Which of the following is an assumption **implicit** in the statement?

(A) Nobody in the town drinks tea.

(B) The coffee shop is the oldest in town.

(C) People are likely to be drawn by the promise of the best espresso.

(D) Espresso cannot be made at home.

Q24. **Argument:** The city should build more cycle lanes, because this will reduce traffic congestion.
Which of the following, if true, most **strengthens** the argument?

(A) Cycle lanes are expensive to build.

(B) Most residents of the city own a car.

(C) Cycling is good for personal health.

(D) In similar cities, adding cycle lanes led many commuters to switch from cars to bicycles.

Q25. **Argument:** Our factory should replace its current machine with machine X, because machine X works faster.
Which of the following, if true, most **weakens** the argument?

(A) Machine X is made by a well-known company.

(B) Machine X breaks down so often that its average daily output is lower than that of the current machine.

(C) Machine X is slightly cheaper than the current machine.

(D) The workers already know how to operate machine X.

Q26. **Statement:** A large number of students fail in mathematics every year in a particular school.
Which of the following is the most appropriate **course of action**?

(A) The school should identify the weak students and arrange extra coaching classes for them.

(B) The school should remove mathematics from its syllabus.

(C) The school should expel all the students who fail.

(D) The school should ignore the poor results.

Q27. **Statement I:** The government sharply increased the tax on cigarettes this year.
Statement II: The sale of cigarettes fell this year.
Which of the following best describes the relationship between the two statements?

(A) Statement II is the cause and Statement I is its effect.

(B) Statement I is the cause and Statement II is its effect.

(C) The two statements are unrelated.

(D) Both statements are effects of some other, unrelated cause.

Q28. **Statement:** "Regular readers of newspapers are generally better informed about current affairs than those who never read them."
Which of the following inferences follows most logically?

(A) Reading newspapers regularly can improve a person's awareness of current affairs.

(B) People who read newspapers never make mistakes.

(C) Current affairs are unimportant for everyone.

(D) Only newspapers can provide any information.

Q29. **Statement:** "All trains leaving the city were cancelled today because of the heavy floods."
Which of the following conclusions follows?

(A) Floods never affect train services.

(B) The city has no trains at all.

(C) Trains run faster during floods.

(D) The heavy floods disrupted train services in the city today.

Q30. **Statement:** "To improve punctuality, the office has decided to install biometric attendance machines."
Which of the following is an assumption **implicit** in the statement?

(A) All the employees will resign in protest.

(B) Biometric machines can help track and improve punctuality.

(C) The office has unlimited funds to spend.

(D) No employee is ever late for work.

Part F: Analytical and Miscellaneous

Q31. Choose the option that best completes the analogy: **HAND : GLOVE :: FOOT : ?**

(A) Shoe

(B) Leg

(C) Floor

(D) Walk

Q32. Find the odd one out.

(A) Rose

(B) Mango

(C) Lotus

(D) Lily

Q33. In a certain code, **MANGO** is written as **NBOHP**. How is **APPLE** written in the same code?

(A) BQPMF

(B) BQQME

(C) BQQMF

(D) BPQMF

Q34. In a row of children all facing North, Ravi is 7th from the left end and 12th from the right end. How many children are there in the row?

(A) 20

(B) 19

(C) 18

(D) 17

Q35. If "+" means "÷", "−" means "×", "×" means "+" and "÷" means "−", then find the value of:

$$12 + 4 - 3 \times 2 \div 1$$

(A) 10

(B) 11

(C) 9

(D) 12

Q36. In each row the third number is obtained from the first two by the same rule. Find the missing number.

3	5	34
4	6	52
5	7	?

(A) 70

(B) 84

(C) 60

(D) 74

Detailed Solutions

Q1.

Solution

Concept — Letter coding by shift: Compare each letter of the code word with the original to find a fixed shift.

Step 1: In CAT $\rightarrow$ DBU, compare letter by letter.

Step 2: C $\rightarrow$ D is a shift of $+1$; A $\rightarrow$ B is $+1$; T $\rightarrow$ U is $+1$.

Step 3: The rule is: replace every letter by the next letter of the alphabet.

Step 4: Apply to DOG: D $\rightarrow$ E, O $\rightarrow$ P, G $\rightarrow$ H, giving **EPH**.

Why other options are wrong:

- Option A: EPG leaves G unshifted.
- Option C: DPH leaves D unshifted.
- Option D: EOH leaves O unshifted.

Final Answer: DOG is coded as EPH $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Position coding: Each letter is replaced by its serial position in the English alphabet.

Step 1: Check the given code: F $= 6$, A $= 1$, C $= 3$, E $= 5$, so FACE $= 6135$. The rule is confirmed.

Step 2: Find the positions of the letters of HEAD.

Step 3: H is the 8th letter $\rightarrow 8$.

Step 4: E is the 5th letter $\rightarrow 5$; A is the 1st letter $\rightarrow 1$; D is the 4th letter $\rightarrow 4$.

Step 5: Writing the numbers in order gives **8514**.

Why other options are wrong:

- Option A: 8515 uses 5 for D instead of 4.
- Option C: 8541 swaps the last two digits.

- Option D: 8154 reorders the middle digits.

Final Answer: HEAD is coded as 8514 $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Letter series: Convert letters to positions and look for a constant difference.

Step 1: Positions: Z $= 26$, W $= 23$, T $= 20$, Q $= 17$.

Step 2: The differences are $23 - 26 = -3$, $20 - 23 = -3$, $17 - 20 = -3$. The series decreases by 3 each time.

Step 3: The next position is $17 - 3 = 14$.

Step 4: The 14th letter of the alphabet is **N**.

Why other options are wrong:

- Option A: P is position 16, a step of only -1.
- Option B: O is position 15, a step of -2.
- Option D: M is position 13, a step of -4.

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

Answer: (C) Go Back to Q3

Q4.

Solution

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

Step 1: Terms: $2, 6, 12, 20, 30$.

Step 2: Differences: $6 - 2 = 4$, $12 - 6 = 6$, $20 - 12 = 8$, $30 - 20 = 10$.

Step 3: The differences increase by 2 each time: $4, 6, 8, 10$, so the next difference is 12.

Step 4: The next term is $30 + 12 = 42$.

Why other options are wrong:

- Option B: 40 would need a difference of 10, repeating the previous gap.
- Option C: 44 would need a difference of 14, skipping 12.
- Option D: 38 would need a difference of 8, going backwards.

Final Answer: The next term is 42 $\Rightarrow$ A

Answer: (A) Go Back to Q4

Q5.

Solution

Concept — Midway position: The letter midway between two positions is found by averaging the two position numbers.

Step 1: The 8th letter from the left is H (position 8).

Step 2: The 14th letter from the left is N (position 14).

Step 3: The midway position is $\frac{8+14}{2} = \frac{22}{2} = 11$.

Step 4: The 11th letter of the alphabet is **K**.

Why other options are wrong:

- Option A: L is position 12, not the exact middle.
- Option B: J is position 10, one short of the middle.
- Option D: M is position 13, closer to N than to the middle.

Final Answer: The middle letter is K $\Rightarrow$ C

Answer: (C) Go Back to Q5

Q6.

Solution

Concept — Symbol substitution: Replace each digit by the letter assigned to it, one by one.

Step 1: The key is $1 =$P, $2 =$Q, $3 =$R, $4 =$S, $5 =$T.

Step 2: The number is 4 2 5 3. Replace the first digit: $4 \rightarrow$ S.

Step 3: Replace the second digit: $2 \rightarrow$ Q.

Step 4: Replace the third digit: $5 \rightarrow$ T; and the fourth: $3 \rightarrow$ R.

Step 5: Reading in order gives **S Q T R**.

Why other options are wrong:

- Option A: S Q R T swaps the codes for 5 and 3.
- Option C: Q S T R swaps the first two letters.
- Option D: S T Q R swaps the codes for 2 and 5.

Final Answer: The code is S Q T R $\Rightarrow$ B

Answer: (B) Go Back to Q6

Q7.

Solution

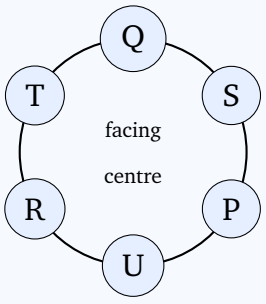
Concept — Circular seating: Place the friends step by step using the clues, remembering that left means clockwise and right means anticlockwise.

Step 1: "U sits to the immediate left of P" and "P sits to the immediate left of S" give the clockwise chain S, P, U.

Step 2: "R sits second to the left of P" places R just clockwise of U, extending the chain to S, P, U, R.

Step 3: "T sits to the immediate right of Q" and the two empty seats give Q and T next to each other, completing the circle.

Step 4: The final clockwise seating is **Q, S, P, U, R, T**, which also satisfies "S sits second to the right of U".



Step 5: T's immediate right is the anticlockwise neighbour of T, which is **R**.

Why other options are wrong:

- Option A: Q is the immediate left (clockwise neighbour) of T.

- Option B: U is not adjacent to T.
- Option C: P is two seats away from T.

Final Answer: R sits to the immediate right of T $\Rightarrow$ $\boxed{D}$

Answer: (D) Go Back to Q7

Q8.

Solution

Concept — Counting on a circle: Use the seating found above and count in the clockwise direction.

Step 1: The clockwise order is Q, S, P, U, R, T.

Step 2: Start at P and move clockwise: the next seat is U, then R, then T.

Step 3: The persons sitting between P and T (clockwise) are U and R.

Step 4: That is **two** persons.

Why other options are wrong:

- Option B: Three would include T itself, which is the end point.
- Option C: One misses either U or R.
- Option D: Four counts persons on the far side of the circle.

Final Answer: Two persons sit between P and T clockwise $\Rightarrow$ $\boxed{A}$

Answer: (A) Go Back to Q8

Q9.

Solution

Concept — Immediate neighbours: Two persons are immediate neighbours if they sit next to each other on the circle.

Step 1: The clockwise order is Q, S, P, U, R, T (and T is next to Q, closing the circle).

Step 2: The adjacent pairs are Q–S, S–P, P–U, U–R, R–T and T–Q.

Step 3: Among the options, only **U and R** appear as an adjacent pair.

Why other options are wrong:

- Option A: P and R have U sitting between them.
- Option B: Q and U are separated by S and P.
- Option D: S and T are on opposite sides of the table.

Final Answer: U and R are immediate neighbours $\Rightarrow$ C

Answer: (C) Go Back to Q9

Q10.

Solution

Concept — Floor puzzle: Fix the known floors first, then use the "immediately above" and "gap" clues.

Step 1: D is on floor 7, E is on floor 1, and B is on floor 2. Floors 3, 4, 5 and 6 remain for A, C, F and G.

Step 2: "A immediately above C" and "G immediately above F" need two consecutive pairs among floors 3–6. The only way to fit two disjoint consecutive pairs is (3,4) and (5,6).

Step 3: "Exactly one floor lies between C and F" with "C below F" forces C $= 3$ and F $= 5$, so that floor 4 lies between them.

Step 4: Then A $= 4$ (above C) and G $= 6$ (above F). The full arrangement is:

7	D
6	G
5	F
4	A
3	C
2	B
1	E

Step 5: Floor 5 is occupied by **F**.

Why other options are wrong:

- Option A: A is on floor 4.
- Option B: C is on floor 3.
- Option C: G is on floor 6.

Final Answer: F lives on the fifth floor $\Rightarrow$ D

Answer: (D) Go Back to Q10

Q11.

Solution

Concept — Counting floors between two people: Use the arrangement found above.

Step 1: A lives on floor 4 and G lives on floor 6.

Step 2: The floors strictly between them are only floor 5.

Step 3: So exactly **one** floor lies between A and G.

Why other options are wrong:

- Option B: Two would require them to be on floors 4 and 7.
- Option C: Three is too many for floors 4 and 6.
- Option D: None would mean they are on adjacent floors.

Final Answer: One floor lies between A and G $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q11

Q12.

Solution

Concept — Immediately above: Read off the person one floor higher than A.

Step 1: A lives on floor 4.

Step 2: The floor immediately above is floor 5.

Step 3: Floor 5 is occupied by **F**.

Why other options are wrong:

- Option A: C lives below A, on floor 3.
- Option C: G lives on floor 6, one above F.
- Option D: B lives on floor 2, far below A.

Final Answer: F lives immediately above A $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q12

Q13.

Solution

Concept — Blood relations: Work outward from the innermost phrase in the statement.

Step 1: "My grandfather" refers to the father of the man's father.

Step 2: "The only son of my grandfather" must be the man's own father (the grandfather has just one son).

Step 3: "The daughter of" that son is the daughter of the man's father.

Step 4: The daughter of the man's father is the man's **sister**.

Why other options are wrong:

- Option A: The mother is the wife of the man's father, not his daughter.
- Option B: A daughter would be one generation below the man.
- Option C: An aunt would be the sister of a parent, not the father's daughter.

Final Answer: The woman is the man's sister $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q13

Q14.

Solution

Concept — Direction sense: Track the turns, remembering that a right turn rotates the facing direction by 90° clockwise.

Step 1: Facing North, the man walks 6 km North.

Step 2: A right turn makes him face East; he walks 8 km East.

Step 3: A second right turn makes him face South; he walks 6 km South, cancelling the 6 km he went North.

Step 4: The net movement is 8 km East and 0 km North–South.

Step 5: So X is 8 km due **East** of O.

Why other options are wrong:

- Option A: 10 km North-East ignores that the North and South legs cancel.
- Option B: 6 km East uses the wrong leg length.
- Option C: 14 km East adds the legs instead of noticing the cancellation.

Final Answer: X is 8 km East of O $\Rightarrow$ D

Answer: (D) Go Back to Q14

Q15.

Solution

Concept — Shortest distance: The straight-line distance from start to end is the hypotenuse of the right triangle formed by the two perpendicular legs.

Step 1: Riya walks 9 m South.

Step 2: Facing South, a left turn makes her face East; she walks 12 m East.

Step 3: The two legs (9 m and 12 m) are at right angles, so the distance is $\sqrt{9^2 + 12^2}$.

Step 4: $9^2 + 12^2 = 81 + 144 = 225$.

Step 5: $\sqrt{225} = 15$, so she is 15 m from the start.

Why other options are wrong:

- Option A: 21 m adds the two legs directly.
- Option C: 12 m uses only the eastward leg.
- Option D: 9 m uses only the southward leg.

Final Answer: The distance is 15 m $\Rightarrow$ B

Answer: (B) Go Back to Q15

Q16.

Solution

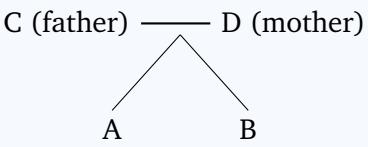
Concept — Family tree: Draw the relationships and read off the link between C and D.

Step 1: A is the brother of B, so A and B are siblings.

Step 2: B is the son of C, so C is a parent of B (and of A).

Step 3: D is the mother of A, so D is the female parent of A and B.

Step 4: C is the other parent of the same children, so C is the father, i.e. the husband of D.



Why other options are wrong:

- Option A: A brother relation is not supported; C is a parent, not a sibling.
- Option B: A son cannot be the father of the children in the tree.
- Option D: "Father" describes C's link to A and B, not to D.

Final Answer: C is the husband of D $\Rightarrow$ C

Answer: (C) Go Back to Q16

Q17.

Solution

Concept — Turning directions: Measure angles as bearings from North, adding for clockwise turns and subtracting for anticlockwise turns.

Step 1: The man starts facing North, which is a bearing of $0°$.

Step 2: Turning $135°$ clockwise gives a bearing of $0° + 135° = 135°$, which is South-East.

Step 3: Turning $180°$ anticlockwise subtracts $180°$: $135° - 180° = -45°$.

Step 4: A bearing of $-45°$ is the same as $315°$, which is **North-West**.

Why other options are wrong:

- Option A: South-East is only the position after the first turn.
- Option B: South-West would need a net turn to $225°$.
- Option D: North-East would need a net turn to $45°$.

Final Answer: He now faces North-West $\Rightarrow$ C

Answer: (C) Go Back to Q17

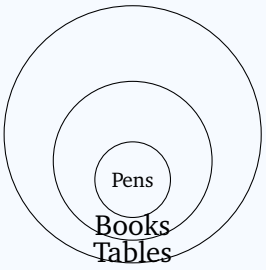
Q18.

Solution

Concept — Syllogism (chain of "all"): When two "all" statements share a middle term, the end terms can be linked. A Venn diagram makes this clear.

Step 1: "All pens are books" places the pen circle inside the book circle.

Step 2: "All books are tables" places the book circle inside the table circle.



Step 3: Since pens lie inside books, and books lie inside tables, every pen is a table. So Conclusion I (All pens are tables) follows.

Step 4: If all pens are tables, then at least those pens are tables, so "Some tables are pens" also follows. Conclusion II follows.

Step 5: Both conclusions follow.

Why other options are wrong:

- Options A and B: Each accepts only one conclusion, but both are valid.
- Option C: "Neither" ignores the clear chain of inclusion.

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

Answer: (D) Go Back to Q18

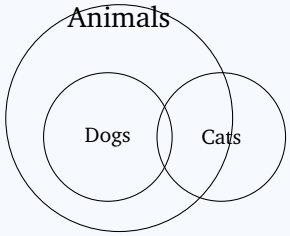
Q19.

Solution

Concept — Syllogism (some + all): A "some" statement joined to an "all" statement can carry the "some" across, but not reverse it.

Step 1: "Some cats are dogs" means the cat and dog circles overlap.

Step 2: "All dogs are animals" places the dog circle inside the animal circle.



Step 3: The overlap of cats and dogs lies inside the animal circle, so those cats are animals. Conclusion I (Some cats are animals) follows.

Step 4: Conclusion II (All animals are cats) is far too strong; many animals need not be cats. It does not follow.

Step 5: Only Conclusion I follows.

Why other options are wrong:

- Option A: II alone is invalid, as shown above.
- Option B: II does not follow, so "both" is wrong.
- Option D: I clearly follows, so "neither" is wrong.

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

Answer: (C) Go Back to Q19

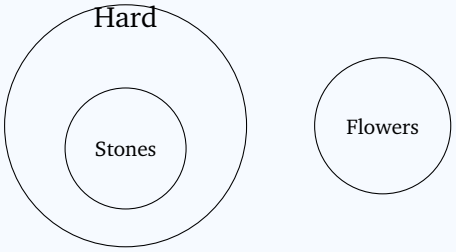
Q20.

Solution

Concept — Syllogism (no + all): Combine an exclusion with an inclusion using a Venn diagram.

Step 1: "No flower is a stone" keeps the flower and stone circles fully separate.

Step 2: "All stones are hard" places the stone circle inside the hard circle.



Step 3: Stones are hard things, and no stone is a flower, so those stones are hard things that are not flowers. Conclusion I (Some hard things are not flowers) follows.

Step 4: Nothing links flowers to the hard circle, so "All flowers are hard" (Conclusion II) is not supported.

Step 5: Only Conclusion I follows.

Why other options are wrong:

- Option B: II is unsupported, as flowers lie outside the given links.
- Option C: II fails, so "both" is wrong.
- Option D: I clearly follows, so "neither" is wrong.

Final Answer: Only Conclusion I follows $\Rightarrow$ A

Answer: (A) Go Back to Q20

Q21.

Solution

Concept — Syllogism (some + some): Two "some" statements sharing a middle term give no definite link between the end terms.

Step 1: "Some doctors are engineers" overlaps doctors with engineers.

Step 2: "Some engineers are teachers" overlaps engineers with teachers.

Step 3: The doctors who are engineers and the engineers who are teachers may be entirely different engineers. So no doctor need be a teacher.

Step 4: Therefore Conclusion I (Some doctors are teachers) does not necessarily follow.

Step 5: Its converse, Conclusion II (Some teachers are doctors), fails for the same reason.

Why other options are wrong:

- Options A and B: Neither single conclusion is guaranteed by "some + some".
- Option C: Both cannot follow when neither is forced.

Final Answer: Neither conclusion follows $\Rightarrow$ D

Answer: (D) Go Back to Q21

Q22.

Solution

Concept — Syllogism (all + all): Follow the chain of inclusion, but do not assume the wider set has extra members.

Step 1: "All roses are flowers" places roses inside flowers.

Step 2: "All flowers are plants" places flowers inside plants.

Step 3: Roses lie inside flowers, which lie inside plants, so all roses are plants. Conclusion I follows.

Step 4: Conclusion II says "Some plants are not roses". But it is possible (in the diagram) that every plant is a flower and every flower is a rose, leaving no plant outside the rose circle. So this is not guaranteed.

Step 5: Only Conclusion I follows.

Why other options are wrong:

- Option B: II is only a possibility, not a certainty.
- Option C: Since II is uncertain, "both" is wrong.
- Option D: I clearly follows, so "neither" is wrong.

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

Answer: (A) Go Back to Q22

Q23.

Solution

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

Step 1: The advertisement invites people by promising "the best espresso in town".

Step 2: Such an appeal only works if the shop assumes that a quality claim will actually attract customers.

Step 3: So the implicit assumption is that people are likely to be drawn by the promise of the best espresso (Option C).

Why other options are wrong:

- Option A: Whether the town drinks tea is unrelated to the coffee appeal.

- Option B: Being the oldest shop is never suggested.
- Option D: The ad says nothing about making espresso at home.

Final Answer: The implicit assumption is Option C $\Rightarrow$ C

Answer: (C) Go Back to Q23

Q24.

Solution

Concept — Strengthening an argument: The best strengthener adds direct evidence that the proposed action produces the claimed result.

Step 1: The argument claims that building cycle lanes will reduce traffic congestion.

Step 2: Congestion falls only if drivers actually leave their cars for bicycles.

Step 3: Option D shows that in similar cities, cycle lanes led commuters to switch from cars to bicycles, directly supporting the claim.

Why other options are wrong:

- Option A: High cost is a drawback, not support.
- Option B: Car ownership alone does not show people will switch.
- Option C: Health benefits are real but do not address congestion.

Final Answer: Option D most strengthens the argument $\Rightarrow$ D

Answer: (D) Go Back to Q24

Q25.

Solution

Concept — Weakening an argument: The best weakener attacks the reason given for the action.

Step 1: The argument recommends machine X only because it works faster.

Step 2: If frequent breakdowns make machine X's average output lower than the current machine, then "faster" does not translate into more work done.

Step 3: Option B directly undermines the single reason offered, so it weakens the argument most.

Why other options are wrong:

- Option A: A well-known maker does not affect output.
- Option C: A lower price would support, not weaken, the switch.
- Option D: Familiarity with the machine also supports the switch.

Final Answer: Option B most weakens the argument $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q25

Q26.

Solution

Concept — Course of action: A good course of action should directly address the problem in a reasonable, practical way.

Step 1: The problem is that many students fail mathematics each year.

Step 2: A sensible response is to find the weak students and give them extra help so that their performance improves.

Step 3: Option A does exactly this, so it is the most appropriate action.

Why other options are wrong:

- Option B: Removing mathematics avoids the subject instead of solving the problem.
- Option C: Expelling students is extreme and unjust.
- Option D: Ignoring the results does nothing to help.

Final Answer: Option A is the appropriate course of action $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q26

Q27.

Solution

Concept — Cause and effect: Identify which event naturally brings about the other.

Step 1: Statement I: the tax on cigarettes was sharply increased.

Step 2: A higher tax raises prices, which usually lowers demand.

Step 3: Statement II: cigarette sales fell. This is the expected result of the tax rise.

Step 4: So Statement I is the cause and Statement II is its effect (Option B).

Why other options are wrong:

- Option A: Falling sales did not cause the tax increase.
- Option C: The two are clearly linked, not unrelated.
- Option D: No third common cause is suggested.

Final Answer: Statement I is the cause of Statement II $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q27

Q28.

Solution

Concept — Inference: A valid inference is a moderate conclusion that the statement reasonably supports.

Step 1: The statement links regular newspaper reading to being better informed about current affairs.

Step 2: From this it is reasonable to infer that reading newspapers regularly can improve awareness of current affairs.

Step 3: Option A states exactly this measured inference.

Why other options are wrong:

- Option B: "Never make mistakes" is far too strong.
- Option C: The statement does not call current affairs unimportant.
- Option D: It never claims newspapers are the only source.

Final Answer: Option A is the logical inference $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q28

Q29.

Solution

Concept — Statement and conclusion: A conclusion must follow directly from the wording of the statement.

Step 1: The statement says all trains were cancelled today because of heavy floods.

Step 2: This tells us the floods disrupted the city's train services today.

Step 3: Option D restates this directly, so it follows.

Why other options are wrong:

- Option A: The statement shows floods do affect trains.
- Option B: Cancelled trains still exist; the city clearly has trains.
- Option C: Nothing suggests trains run faster during floods.

Final Answer: Option D follows from the statement $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q29

Q30.

Solution

Concept — Implicit assumption: The plan makes sense only if a certain belief is taken for granted.

Step 1: The office installs biometric machines in order to improve punctuality.

Step 2: This decision only makes sense if the office believes such machines can track attendance and thereby help improve punctuality.

Step 3: Option B captures this assumption.

Why other options are wrong:

- Option A: Mass resignation is not assumed; it would defeat the plan.
- Option C: Unlimited funds are not needed for the decision.
- Option D: If no one were ever late, there would be no need for the machines.

Final Answer: Option B is the implicit assumption $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q30

Q31.

Solution

Concept — Analogy: Name the relationship in the first pair, then find the option that repeats it.

Step 1: A glove is the covering worn on a hand.

Step 2: The relationship is "body part : the covering worn on it".

Step 3: The covering worn on a foot is a **shoe**, so Option A completes the analogy.

Why other options are wrong:

- Option B: A leg is a body part, not a covering.
- Option C: A floor is what a foot rests on, not what covers it.
- Option D: "Walk" is an action of the foot, not a covering.

Final Answer: Foot : Shoe completes the analogy $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q31

Q32.

Solution

Concept — Odd one out: Find the common category shared by all but one item.

Step 1: Rose, Lotus and Lily are all flowers.

Step 2: Mango is a fruit, not a flower.

Step 3: So the odd one out is **Mango** (Option B).

Why other options are wrong:

- Option A: Rose is a flower, like the others.
- Option C: Lotus is a flower.
- Option D: Lily is a flower.

Final Answer: Mango is the odd one out $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q32

Q33.

Solution

Concept — Coding by shift: Find the shift from the sample word, then apply it letter by letter.

Step 1: In MANGO $\rightarrow$ NBOHP, each letter moves forward by one: M$\rightarrow$N, A$\rightarrow$B, N$\rightarrow$O, G$\rightarrow$H, O$\rightarrow$P.

Step 2: The rule is $+1$ for every letter.

Step 3: Apply to APPLE: A$\rightarrow$B, P$\rightarrow$Q, P$\rightarrow$Q, L$\rightarrow$M, E$\rightarrow$F.

Step 4: The code is **BQQMF**.

Why other options are wrong:

- Option A: BQPMF leaves the second P unshifted.
- Option B: BQQME shifts E backwards instead of forwards.
- Option D: BPQMF shifts the first P wrongly.

Final Answer: APPLE is coded as BQQMF $\Rightarrow$ C

Answer: (C) Go Back to Q33

Q34.

Solution

Concept — Position in a row: If a person is mth from one end and nth from the other, the total count is $m + n - 1$ (the person is counted once from each side).

Step 1: Ravi is 7th from the left, so there are 6 children to his left.

Step 2: Ravi is 12th from the right, so there are 11 children to his right.

Step 3: Total $= 6 + 1 + 11 = 18$, which equals $7 + 12 - 1$.

Step 4: So there are 18 children in the row.

Why other options are wrong:

- Option A: 20 adds the two ranks without removing the double count.
- Option B: 19 removes nothing extra but is still one too many.
- Option D: 17 subtracts one too many.

Final Answer: There are 18 children $\Rightarrow$ C

Answer: (C) Go Back to Q34

Q35.

Solution

Concept — Operator substitution: Replace each symbol by the operation it stands for, then evaluate using normal order of operations.

Step 1: The substitutions are $+ \to \div$, $- \to \times$, $\times \to +$, $\div \to -$.

Step 2: Rewrite $12 + 4 - 3 \times 2 \div 1$ as $12 \div 4 \times 3 + 2 - 1$.

Step 3: Do division and multiplication from left to right: $12 \div 4 = 3$.

Step 4: Then $3 \times 3 = 9$.

Step 5: Now add and subtract: $9 + 2 = 11$, and $11 - 1 = 10$.

Why other options are wrong:

- Option B: 11 stops before subtracting 1.
- Option C: 9 ignores the final $+2 - 1$.
- Option D: 12 comes from not substituting the symbols.

Final Answer: The value is 10 $\Rightarrow$ A

Answer: (A) Go Back to Q35

Q36.

Solution

Concept — Number matrix: Find one rule that turns the first two numbers of a row into the third, then test it on every row.

Step 1: Row 1: $3^2 + 5^2 = 9 + 25 = 34$, which matches the third number.

Step 2: Row 2: $4^2 + 6^2 = 16 + 36 = 52$, which also matches.

Step 3: The rule is: third number $=$ (first)^2+(second)^2.

Step 4: Row 3: $5^2 + 7^2 = 25 + 49 = 74$.

Why other options are wrong:

- Option A: 70 does not fit the sum-of-squares rule.
- Option B: 84 overshoots the correct total.
- Option C: 60 comes from an incorrect rule.

Final Answer: The missing number is 74 $\Rightarrow$ D

Answer: (D) Go Back to Q36

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	B	3	C	4	A	5	C
6	B	7	D	8	A	9	C	10	D
11	A	12	B	13	D	14	D	15	B
16	C	17	C	18	D	19	C	20	A
21	D	22	A	23	C	24	D	25	B
26	A	27	B	28	A	29	D	30	B
31	A	32	B	33	C	34	C	35	A
36	D								