SNAP Analytical and Logical Reasoning

Sample Paper – 7

Duration: 25 Minutes **Maximum Marks: 25**

Instructions

- This paper contains **25** Multiple Choice Questions (Single Correct Answer), modelled on the Analytical and Logical Reasoning section of **SNAP** (Symbiosis National Aptitude Test).
- Each correct answer carries **+1 mark**. **0.25 marks** are deducted for every wrong answer. Unattempted questions carry no penalty.
- Only **one** option is correct. Choose the most appropriate answer.
- SNAP is a computer-based test with no sectional time limit; attempt this practice paper in one timed sitting of about **25 minutes**.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Part A: Series and Analogy

Q1. Find the next number in the series: **5, 11, 23, 47, ?**

(A) 94

(B) 96

(C) 93

(D) 95

Q2. Find the next term in the series: **D, H, L, P, ?**

(A) S

(B) T

(C) U

(D) R

Q3. Choose the option that completes the analogy: **Author : Novel :: Sculptor : ?**

(A) Clay

(B) Chisel

(C) Statue

(D) Museum

Q4. Choose the option that completes the analogy: **6 : 216 :: 4 : ?**

(A) 16

(B) 12

(C) 48

(D) 64

Part B: Coding and Decoding

Q5. In a certain code, ORANGE is written as PSBOHF. How is TEMPLE written in that code?

(A) UFNPMF

(B) UFNQMF

(C) TFNQMF

(D) UFNQMG

Q6. If each letter is given its position value in the alphabet (A=1, B=2, and so on), what is the code for the word LOGIC, taken as the sum of its letters?

(A) 44

(B) 45

(C) 48

(D) 46

Q7. In a certain code, WATER is written as YCVGT. How is FIRE written in the same code?

(A) HKTF

(B) GKTG

(C) HKTG

(D) HKUG

Part C: Blood Relations and Direction Sense

Q8. Introducing a man, a woman said, "He is the only son of the mother of my father." How is the man related to the woman?

(A) Father

(B) Brother

(C) Uncle

(D) Grandfather

Q9. If "A $\times$ B" means A is the mother of B, and "A + B" means A is the brother of B, then in "P $\times$ Q + R", how is P related to R?

(A) Sister

(B) Aunt

(C) Grandmother

(D) Mother

Q10. A woman, pointing to a man, said, "He is the brother of the daughter of the wife of my husband." How is the man related to the woman?

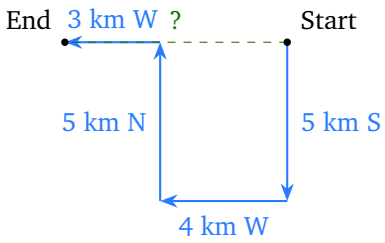
(A) Husband

(B) Brother

(C) Father

(D) Son

Q11. A man starts from a point and walks 5 km towards South, then turns right and walks 4 km, then turns right again and walks 5 km, and finally turns left and walks 3 km. How far and in which direction is he now from his starting point?



(A) 7 km West

(B) 7 km East

(C) 2 km West

(D) 1 km East

Part D: Arrangement and Ranking

Q12. Five friends U, V, W, X and Y sit in a row facing north. U is immediately to the left of V. Y is at the left end. X sits between V and W. Who sits in the middle of the row?

(A) V

(B) U

(C) X

(D) Y

Q13. In a row of children, Sita is 9th from the left end and 14th from the right end. How many children are there in the row?

(A) 24

(B) 21

(C) 22

(D) 23

Q14. Among five students, Ravi is taller than Sohan but shorter than Mohan. Amit is taller than Mohan. Karan is the shortest of all. Who is the tallest?

(A) Mohan

(B) Amit

(C) Ravi

(D) Sohan

Q15. Seven students stand in a row facing north. R is second from the left end and W is sixth from the left end. How many students stand between R and W?

(A) 2

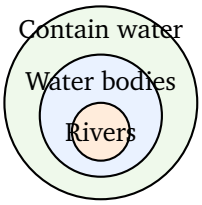
(B) 4

(C) 3

(D) 5

Part E: Syllogisms

Q16. **Statements:** All rivers are water bodies. All water bodies contain water. **Conclusion I:** All rivers contain water. **Conclusion II:** Some water bodies are rivers.



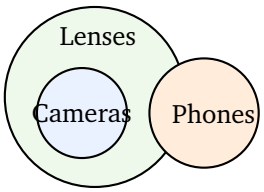
(A) Only Conclusion I follows

(B) Both Conclusion I and Conclusion II follow

(C) Only Conclusion II follows

(D) Neither conclusion follows

Q17. **Statements:** Some phones are cameras. All cameras have lenses. **Conclusion I:** Some phones have lenses. **Conclusion II:** All phones have lenses.



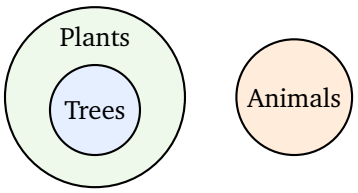
(A) Only Conclusion I follows

(B) Only Conclusion II follows

(C) Both Conclusion I and Conclusion II follow

(D) Neither conclusion follows

Q18. **Statements:** No plant is an animal. All trees are plants.
Conclusion I: No tree is an animal. **Conclusion II:** Some plants are trees.



(A) Only Conclusion I follows

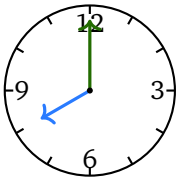
(B) Only Conclusion II follows

(C) Both Conclusion I and Conclusion II follow

(D) Neither conclusion follows

Part F: Clocks, Calendars and Miscellaneous

Q19. What is the angle between the hour hand and the minute hand of a clock at exactly 8:00?



(A) 90 degrees

(B) 150 degrees

(C) 160 degrees

(D) 120 degrees

Q20. If today is Saturday, what day of the week will it be after 50 days?

(A) Sunday

(B) Monday

(C) Tuesday

(D) Friday

Q21. How many times do the hour and minute hands of a clock form a right angle (90 degrees) in a 12-hour period?

(A) 24

(B) 20

(C) 22

(D) 44

Part G: Logical Deduction

Q22. **Statements:** All members of the club can swim. Ramesh is a member of the club.

Conclusion I: Ramesh can swim. **Conclusion II:** Ramesh cannot swim.

(A) Both conclusions follow

(B) Only Conclusion I follows

(C) Only Conclusion II follows

(D) Neither conclusion follows

Q23. If "+" means divide, "−" means multiply, "×" means add, and "÷" means subtract, then find the value of: $\mathbf{12 - 3 + 6 \times 2 \div 4}$

(A) 4

(B) 6

(C) 8

(D) 5

Q24. Find the odd one out: **16, 25, 36, 40, 49**

(A) 25

(B) 40

(C) 36

(D) 49

Q25. M is the brother of N. N is the son of O. O is the mother of P. How is M related to P?

(A) Brother

(B) Father

(C) Uncle

(D) Cousin

Detailed Solutions

Q1.

Solution

Concept — Number series: Check how each term is built from the one before it.

Step 1: Test the ratio and the rule. 5 to 11: $5 \times 2 = 10$, then $+1$ gives 11.

Step 2: 11 to 23: $11 \times 2 = 22$, then $+1$ gives 23.

Step 3: 23 to 47: $23 \times 2 = 46$, then $+1$ gives 47. So the rule is "double and add 1".

Step 4: Next term $= 47 \times 2 + 1 = 94 + 1 = 95$.

Why other options are wrong:

- Option A: 94 is only the doubling step, forgetting the $+1$.
- Option B: 96 adds 2 instead of 1.
- Option C: 93 is less than the doubled value.

Final Answer: The next number is 95 $\Rightarrow$ D

Answer: (D) Go Back to Q1

Q2.

Solution

Concept — Letter series: Convert letters to positions and find the constant gap.

Step 1: D(4), H(8), L(12), P(16). Each term rises by 4.

Step 2: Next position $= 16 + 4 = 20$, which is the letter T.

Why other options are wrong:

- Option A: S is position 19, a gap of only 3.
- Option C: U is position 21, a gap of 5.
- Option D: R is position 18, a gap of 2.

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

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Analogy: Name the exact relationship in the first pair.

Relationship: An author is the person who creates a novel, so the link is creator to the work created.

Application: A sculptor is the person who creates a statue, matching the same creator-to-creation pattern.

Why other options are wrong:

- Option A: Clay is the raw material a sculptor uses, not the finished creation.
- Option B: A chisel is a tool, not the work produced.
- Option D: A museum is a place where statues are displayed, not the creation itself.

Final Answer: A sculptor creates a Statue $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q3

Q4.

Solution

Concept — Number analogy: Find the rule linking the two numbers.

Step 1: $216 = 6 \times 6 \times 6 = 6^3$, so the rule is "cube the number".

Step 2: Apply to 4: $4^3 = 4 \times 4 \times 4 = 64$.

Why other options are wrong:

- Option A: $16 = 4^2$, the square of 4, not the cube.
- Option B: $12 = 4 \times 3$, an unrelated rule.
- Option C: $48 = 4 \times 12$, not a cube.

Final Answer: $4^3 = 64 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Coding: Compare each letter of the code with the original word.

Step 1: O→P, R→S, A→B, N→O, G→H, E→F. Each letter moves forward by 1 place.

Step 2: Apply +1 to TEMPLE: T→U, E→F, M→N, P→Q, L→M, E→F, giving UFNQMF.

Why other options are wrong:

- Option A: UFNPMF keeps P instead of moving it to Q.
- Option C: TFNQMF leaves the first T unchanged instead of U.
- Option D: UFNQMG moves the last E forward by 2 to G.

Final Answer: TEMPLE becomes UFNQMF ⇒ $\boxed{B}$

Answer: (B) Go Back to Q5

Q6.

Solution

Concept — Number coding: Add the alphabet positions of the letters.

Step 1: L is the 12th letter, O is the 15th, G is the 7th, I is the 9th, C is the 3rd.

Step 2: Sum = 12 + 15 + 7 + 9 + 3.

Step 3: 12 + 15 = 27, then 27 + 7 = 34, then 34 + 9 = 43, then 43 + 3 = 46.

Why other options are wrong:

- Option A: 44 undercounts by 2.
- Option B: 45 undercounts by 1.
- Option C: 48 overcounts by 2.

Final Answer: L + O + G + I + C = 46 ⇒ $\boxed{D}$

Answer: (D) Go Back to Q6

Q7.

Solution

Concept — Coding: Find the shift by matching WATER to YCVGT.

Step 1: W→Y, A→C, T→V, E→G, R→T. Each letter moves forward by 2 places.

Step 2: Apply +2 to FIRE: F→H, I→K, R→T, E→G, giving HKTG.

Why other options are wrong:

- Option A: HKTF moves E to F (only +1) instead of G.
- Option B: GKTG moves F to G (only +1) instead of H.
- Option D: HKUG moves R to U (+3) instead of T.

Final Answer: FIRE becomes HKTG ⇒ C

Answer: (C) Go Back to Q7

Q8.

Solution

Concept — Blood relation: Break the statement from the inside out.

Step 1: "The mother of my father" is the woman's paternal grandmother.

Step 2: "The only son of" that grandmother is the woman's own father, since he is her single son.

Step 3: So the man is the woman's father.

Why other options are wrong:

- Option B: A brother would be a son of the woman's parents, not the grandmother's only son.
- Option C: An uncle would be another son of the grandmother, but she has only one son.
- Option D: The grandfather is the grandmother's husband, not her son.

Final Answer: The man is the woman's father ⇒ A

Answer: (A) Go Back to Q8

Q9.

Solution

Concept — Coded relations: Replace each symbol with its meaning step by step.

Step 1: "P $\times$ Q" means P is the mother of Q.

Step 2: "Q + R" means Q is the brother of R, so Q and R share the same parents.

Step 3: Since P is the mother of Q, and R is Q's sibling, P is also the mother of R.

Why other options are wrong:

- Option A: A sister would be at the same level as R, but P is a generation above.
- Option B: An aunt would be the mother's sister, not the mother herself.
- Option C: A grandmother is two generations above, but P is only one generation above R.

Final Answer: P is the mother of R $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q9

Q10.

Solution

Concept — Blood relation: Work outward from the innermost phrase.

Step 1: "The wife of my husband" is the woman herself.

Step 2: "The daughter of" the woman is the woman's own daughter.

Step 3: "The brother of" the woman's daughter is the woman's son.

Why other options are wrong:

- Option A: The husband is the woman's spouse, not the brother of her daughter.
- Option B: A brother of the woman would be at her own level, not one generation below.
- Option C: A father would be a generation above, not the brother of her daughter.

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

Answer: (D) Go Back to Q10

Q11.

Solution

Concept — Direction sense: Track each turn on a rough sketch (see the figure).

Step 1: He walks 5 km South.

Step 2: A right turn from South faces West; he walks 4 km West.

Step 3: A right turn from West faces North; he walks 5 km North, cancelling the 5 km South.

Step 4: A left turn from North faces West; he walks 3 km more West.

Step 5: The North and South legs cancel, so only the westward legs remain: $4 + 3 = 7$ km West.

Why other options are wrong:

- Option B: East is the wrong direction; both sideways legs went West.
- Option C: 2 km wrongly subtracts the two westward legs instead of adding them.
- Option D: 1 km East mixes up both the direction and the distance.

Final Answer: He is 7 km West of the start $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q11

Q12.

Solution

Concept — Linear arrangement: Place the fixed clue first, then fit the rest.

Step 1: Y is at the left end, so Y takes position 1.

Step 2: U is immediately to the left of V, so U and V are together as U, V.

Step 3: X sits between V and W, giving the block V, X, W.

Step 4: Joining after Y gives the row Y, U, V, X, W. The middle (third) seat is V.

Why other options are wrong:

- Option B: U sits second, not in the middle.
- Option C: X sits fourth.
- Option D: Y sits at the left end.

Final Answer: V sits in the middle $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q12

Q13.

Solution

Concept — Ranking: Total = (rank from left) + (rank from right) − 1.

Step 1: Sita is 9th from the left and 14th from the right.

Step 2: Total children = 9 + 14 − 1 = 22. We subtract 1 because Sita is counted in both ranks.

Why other options are wrong:

- Option A: 24 adds two extra children.
- Option B: 21 subtracts one too many.
- Option D: 23 forgets to subtract the double-counted Sita.

Final Answer: There are 22 children ⇒ C

Answer: (C) Go Back to Q13

Q14.

Solution

Concept — Comparison: Turn each clue into an inequality and combine.

Step 1: Ravi taller than Sohan but shorter than Mohan gives Sohan < Ravi < Mohan.

Step 2: Amit is taller than Mohan gives Mohan < Amit.

Step 3: Karan is the shortest. Combining: Karan < Sohan < Ravi < Mohan < Amit.

Step 4: The tallest is Amit.

Why other options are wrong:

- Option A: Mohan is taller than Ravi but still shorter than Amit.
- Option C: Ravi is in the middle of the order.
- Option D: Sohan is near the shorter end.

Final Answer: Amit is the tallest ⇒ B

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Row position: Count the seats strictly between the two fixed positions.

Step 1: R is at position 2 and W is at position 6.

Step 2: The positions strictly between them are 3, 4 and 5.

Step 3: That is 3 students between R and W.

Why other options are wrong:

- Option A: 2 misses one of the three middle seats.
- Option B: 4 counts one of the endpoints as "between".
- Option D: 5 counts both endpoints as well.

Final Answer: 3 students stand between R and W $\Rightarrow$ C

Answer: (C) Go Back to Q15

Q16.

Solution

Concept — Syllogism: Use the nested Venn diagram to test each conclusion.

Setup: "All rivers are water bodies" puts Rivers inside Water bodies. "All water bodies contain water" puts Water bodies inside the group of things that contain water. So Rivers sits inside Water bodies, which sits inside Contain water.

Conclusion I — All rivers contain water: Since Rivers is inside Contain water, every river contains water. Conclusion I follows.

Conclusion II — Some water bodies are rivers: All rivers are water bodies, so the rivers themselves are water bodies that are rivers. Conclusion II follows.

Result: Both conclusions follow.

Final Answer: Both Conclusion I and Conclusion II follow $\Rightarrow$ B

Answer: (B) Go Back to Q16

Q17.

Solution

Concept — Syllogism: A conclusion follows only if it is true in every possible diagram.

Setup: "Some phones are cameras" overlaps Phones with Cameras. "All cameras have lenses" puts Cameras inside the group of things with Lenses.

Conclusion I — Some phones have lenses: The phones that are cameras must have lenses, because all cameras have lenses. So at least those phones have lenses. Conclusion I follows.

Conclusion II — All phones have lenses: Only the phones that are cameras are guaranteed lenses; other phones may have none. Conclusion II does not follow.

Result: Only Conclusion I follows.

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

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Syllogism: Check whether each conclusion is forced by the statements.

Setup: "No plant is an animal" separates Plants from Animals. "All trees are plants" puts Trees inside Plants. So Trees lie within Plants, which is fully outside Animals.

Conclusion I — No tree is an animal: Trees are inside Plants, and Plants do not touch Animals, so no tree can be an animal. Conclusion I follows.

Conclusion II — Some plants are trees: All trees are plants, so the trees themselves are plants that are trees. Conclusion II follows.

Result: Both conclusions follow.

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

Answer: (C) Go Back to Q18

Q19.

Solution

Concept — Clock angle: Each hour gap on the dial is 30 degrees ($360 \div 12$).

Step 1: At 8:00 the minute hand points to 12 and the hour hand points to 8.

Step 2: The shorter gap from 12 to 8 is 4 hour marks (12 to 8 counted the short way through 11, 10, 9).

Step 3: Angle $= 4 \times 30 = 120$ degrees.

Why other options are wrong:

- Option A: 90 degrees would be a 3-hour gap.
- Option B: 150 degrees would be a 5-hour gap.
- Option C: 160 degrees is not a whole number of hour marks.

Final Answer: The angle is 120 degrees $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q19

Q20.

Solution

Concept — Calendar: Days of the week repeat every 7 days, so use the remainder.

Step 1: Divide 50 by 7: $50 = 7 \times 7 + 1$, so the remainder is 1.

Step 2: Count 1 day forward from Saturday: that is Sunday.

Step 3: The day is Sunday.

Why other options are wrong:

- Option B: Monday would be a remainder of 2.
- Option C: Tuesday would be a remainder of 3.
- Option D: Friday would be a remainder of 6.

Final Answer: It will be Sunday $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q20

Q21.

Solution

Concept — Clock right angles: The hands are at 90 degrees twice each hour, but a small overlap is lost over 12 hours.

Step 1: In each hour the hands normally make a right angle 2 times, which would suggest $2 \times 12 = 24$ in 12 hours.

Step 2: But 2 of those positions are shared at the boundaries, so the actual count is $24 - 2 = 22$.

Step 3: So the hands form a right angle 22 times in 12 hours.

Why other options are wrong:

- Option A: 24 forgets that two right angles are lost over 12 hours.
- Option B: 20 removes too many positions.
- Option D: 44 is the count for a full 24-hour day.

Final Answer: The hands form a right angle 22 times $\Rightarrow$ C

Answer: (C) Go Back to Q21

Q22.

Solution

Concept — Statement and conclusion: A conclusion follows only if the statements force it.

Step 1: All members of the club can swim, and Ramesh is a member of the club.

Step 2: Since Ramesh belongs to the group of members, he must be able to swim. Conclusion I follows.

Step 3: Conclusion II says the opposite, that Ramesh cannot swim, which contradicts Step 2, so it does not follow.

Why other options are wrong:

- Option A: Both cannot follow when they are opposite statements.
- Option C: Conclusion II is directly contradicted by the given facts.
- Option D: Conclusion I clearly follows, so "neither" is wrong.

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

Answer: (B) Go Back to Q22

Q23.

Solution

Concept — Symbol substitution: Replace each symbol with its real operation, then use BODMAS.

Step 1: "+" means $\div$, "$-$" means $\times$, "$\times$" means $+$, "$\div$" means $-$. The expression $12 - 3 + 6 \times 2 \div 4$ becomes $12 \times 3 \div 6 + 2 - 4$.

Step 2: Do multiplication and division from left to right: $12 \times 3 = 36$, then $36 \div 6 = 6$.

Step 3: Now handle addition and subtraction: $6 + 2 = 8$, then $8 - 4 = 4$.

Why other options are wrong:

- Option B: 6 stops before subtracting the 4.
- Option C: 8 stops before subtracting the 4 and mishandles order.
- Option D: 5 comes from a wrong order of operations.

Final Answer: The value is 4 $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q23

Q24.

Solution

Concept — Odd one out: Find the shared property and the one that breaks it.

Step 1: $16 = 4^2$, $25 = 5^2$, $36 = 6^2$, $49 = 7^2$ are all perfect squares.

Step 2: 40 is not a perfect square, since $6^2 = 36$ and $7^2 = 49$ and nothing squared gives 40.

Why other options are wrong:

- Option A: $25 = 5^2$ is a perfect square and fits the group.
- Option C: $36 = 6^2$ is a perfect square and fits the group.
- Option D: $49 = 7^2$ is a perfect square and fits the group.

Final Answer: 40 is the odd one out $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q24

Q25.

Solution

Concept — Blood relation: Link the relations one at a time.

Step 1: N is the son of O, so O is a parent of N.

Step 2: M is the brother of N, so M is also a child of O, making M another son of O.

Step 3: O is the mother of P, so P is also a child of O.

Step 4: M and P are therefore both children of O, which makes M the brother of P.

Why other options are wrong:

- Option B: The parent of P is O, not M.
- Option C: An uncle would be one generation above P, but M is at the same level.
- Option D: A cousin would be a child of O's sibling, not a child of O.

Final Answer: M is the brother of P $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q25

Answer Key

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