

CAREERS 360

PREPARATION **Series**

NIFT-UG 2025

Analytical Ability Section

(A Complete Guide + Practice Questions)

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ABOUT THIS eBook

Unlock the secrets to acing the logical reasoning section with our specifically crafted ebook.

Key Features:

- **General Introduction:** Familiarize yourself with the analytical ability section through a general introduction. Understand the significance of logical reasoning and its role in competitive exams.
- **Topic List:** Gain insights into the array of topics covered in this section. Navigate the content effortlessly with a structured list of concepts.
- **Solving Strategies:** Learn effective strategies for solving analytical ability questions. Discover techniques to approach different question types with confidence and precision.
- **Benefits of Analytical Ability Skills:** Uncover the broader advantages of developing greater skills. See how these skills transcend exams, contributing to cognitive enhancement.
- **Improvement Strategies:** Delve into a detailed strategy guide for enhancing logical reasoning abilities. Follow a systematic approach to progressively sharpen your skills and maximize your potential.
- **In-Depth Study Material:** Explore the logical reasoning section in its entirety with comprehensive study material. Each concept is elucidated to provide a strong foundation for tackling diverse question types.
- **Practice Questions:** Refine your skills with 10 practice questions corresponding to each concept. Test your understanding and reinforce your knowledge as you progress through the ebook.
- **Detailed Solutions:** No more grappling in the dark! Our ebook provides detailed solutions for each practice question, offering a step-by-step breakdown to enhance your problem-solving abilities.
- **Full Mock Test:** Put your analytical ability skills to the test with a full mock test comprising 50 questions. The ebook includes a precise answer key and detailed solutions to aid your self-assessment.
- **Additional Resources:** Beyond the confines of the ebook, discover a curated list of supplementary resources tailored to aid NIFT aspirants. Access a wealth of information to complement your preparation.

Embark on your journey to NIFT success armed with a comprehensive guide that leaves no stone unturned in preparing you for the logical reasoning challenges.

Master the art of reasoning, enhance your problem-solving prowess, and elevate your chances of acing the NIFT entrance exam.

Analytical Ability Section: An Introduction



Analytical Ability is a type of problem-solving skill that involves analyzing and evaluating information to make sound and logical decisions. It often requires the application of deductive or inductive reasoning to arrive at the correct solution. Logical reasoning questions can cover a wide range of topics, including patterns, sequences, analogies, syllogisms, puzzles, and more.

It can be classified further into:

- **Conceptual Basis:** Many logical reasoning questions are constructed based on fundamental concepts of logic, mathematics, and language. These questions often test the ability to apply known principles and rules to arrive at a solution.
- **Out-of-the-Box Thinking:** Some logical reasoning questions are designed to assess creative and unconventional thinking. These may involve scenarios where standard rules don't apply directly, and individuals need to think innovatively to find a solution.
- **Analysis:** Logical reasoning requires careful analysis of the information provided in the question. This involves recognizing patterns, relationships, and dependencies that lead to the correct answer.
- **Problem-Solving:** Logical reasoning questions are essentially problems that need to be solved. This may involve breaking down complex information, making inferences, and drawing logical conclusions.
- **Deductive and Inductive Reasoning:** Deductive reasoning involves drawing specific conclusions from general principles, while inductive reasoning involves making generalizations based on specific observations. Logical reasoning questions often require a combination of both.

Verbal Questions

These are problems that can be resolved verbally without the need for written solutions. Candidates analyze and deduce the answers through mental reasoning.

Image-Based Questions

Questions in this category involve visual elements such as mirror images or constructions with paper. Candidates are tasked with identifying similarities or dissimilarities among figures.

This section encompasses various types of questions, including:

Puzzle-based Questions

This category includes problems related to arranging elements like people, days, months, or places in different configurations. Common examples involve seating arrangements or organizing items in various formats.

Sequence-based Questions

In these questions, a series or sequence of elements such as people, numbers, or alphabets is presented. Candidates are then asked questions based on the given sequence, testing their ability to discern patterns and relationships.

- Examine critical logical information provided in the question.
- Identify patterns, relationships, or constraints that may guide your analysis.

Analyze Key Logical Information

- Consider various potential solutions or approaches to the problem.
- Explore different angles and perspectives to address the logical aspects of the question.

Generate Possible Solutions

Compare Results with Alternatives

- Evaluate the answer derived from your analysis.
- Compare your solution with alternative possibilities to ensure a comprehensive understanding.

Arrive at a Definitive Logical Conclusion

- Synthesize the information and analysis to arrive at a final, logically sound conclusion.
- Ensure that your solution aligns with the established rules and patterns.

Steps To Solve Analytical Ability Based Questions

Benefits of Developing Analytical Ability Skills



Sequence-based Questions

Improved ability to make informed and thoughtful decisions.

Boosted Problem

Increased proficiency in addressing and resolving complex problems.



Refined Research Skills

Improved ability to conduct thorough and insightful research.

Development of Creativity

Polished creative thinking skills, fostering innovative solutions.



Stimulation of Curiosity

Encouragement of intellectual curiosity and a desire for deeper understanding.

Now the major question arises on how to improve your logical reasoning skills. Well lets study this topic in the next part.

Strategy To Solve Analytical Ability Section Questions

Enhancing your logical reasoning skills involves refining your ability to draw conclusions based on evidence and avoiding personal biases. Here are several strategies to improve your logical reasoning:



Practice Conditional Statements:

Engage in recognizing and applying conditional statements, which are truths dependent on specific conditions. For instance, observe how certain actions or events lead to predictable outcomes.

Filter Out Biases:

Strive for objectivity by identifying and minimizing personal biases. Train yourself to make decisions based on factual information rather than subjective feelings, ensuring a more logical approach.



Play Logic-based Games:

Challenge yourself with games that require logical thinking, such as chess, card games, or strategy board games. These activities not only enhance logical reasoning but also foster attention to detail and decision-making skills.

Note Patterns in Daily Life:

Actively seek and analyze patterns in your personal and professional life. Take note of recurring events and consider their implications. Recognizing patterns is crucial for predicting future behavior and making informed decisions.



Monitor for Misleading Conclusions:

Be vigilant about avoiding a false notion – faulty reasoning that undermines the validity of an argument. Familiarize yourself with common false or misleading notions and ensure that your conclusions are based on sound logic.

Make Observations:

Cultivate focus and thoughtfulness by actively observing your surroundings. Pay attention to details, anomalies, and patterns. Reflect on your observations, consider their significance, and think backward to understand causation.

**Take Logical Reasoning Tests:**

Consider taking logical reasoning tests. These tests, such as diagrammatic or verbal logical reasoning tests, assess your ability to identify patterns, interpret rules, and draw conclusions based on evidence.

By consistently practicing these strategies, you can refine your logical reasoning skills and apply them effectively in various aspects of your personal and professional life.

Now let's get started with the study guide. Following each topic are ten practice questions with comprehensive answers to help with better understanding. Finally, a complete mock exam of 50 questions is provided as an additional practice test with a detailed solution key and proper answer key.

Shall we begin with the concepts?

BLOOD RELATIONS

Introduction to Blood Relations: Blood Relations, a fundamental aspect of data interpretation, revolves around comprehending and deducing family relationships based on provided information. This skill is invaluable in solving complex familial scenarios, such as understanding genealogy, inheritance, and social dynamics.

Key Concepts in Blood Relations:

Family Members: Blood Relations scenarios involve various family members, including parents, siblings, children, grandparents, aunts, uncles, cousins, and more.

Relationships: The crux of Blood Relations is grasping the relationships between family members. These relationships can be direct (e.g., parent-child) or indirect (e.g., cousin relationships).

Family Tree: Visual representations like family trees or relationship diagrams aid in understanding complex familial connections. They provide a snapshot of the family structure.

Interpreting Blood Relations:

Blood Relations data interpretation tasks require you to:

- Analyze provided family trees or relationship diagrams.
- Deduce family connections.
- Identify the roles of individuals.
- Answer questions related to familial relationships.

Example Blood Relations:

Let's explore an extended example of a Blood Relations scenario to delve deeper into these concepts.

Scenario: The Taylor Family

Given Information:

- John and Mary are a married couple.
- They have three children: Emily, James, and Lily.
- Emily is married to Michael, and they have two children: Sophie and Ethan.
- James is married to Sarah.
- Lily is single.

Logical Questions:

Determination of Relationship:

- What is the relationship between James and Sophie?

Identification of Sibling:

- Who is Lily's sibling?

Marital Status:

- Is Emily married?

Identification of Grandparents:

- Who are Sophie and Ethan's grandparents?

Answers:

Determination of Relationship:

- James is Sophie's uncle. The relationship between James and Sophie is "Uncle-Niece/Nephew."

Identification of Sibling:

- Lily's siblings are Emily and James.

Marital Status:

- Yes, Emily is married to Michael.

Identification of Grandparents:

- Sophie and Ethan's grandparents are John and Mary.

Conclusion:

Blood Relations data interpretation is an essential skill for deciphering complex family relationships. It is particularly useful for understanding genealogical data, kinship structures, and inheritance patterns. Proficiency in Blood Relations empowers you to make accurate deductions and informed decisions in a wide range of analytical and decision-making contexts.

PRACTICE QUESTIONS BASED ON BLOOD -RELATIONS

Q1.Directions: Abhishek is Byomkesh's brother, and Vimal is Jackie's father. Ella is Byomkesh's mother. Abhishek and Jackie are brothers. How is Ella related to Vimal?

- A) Wife
- B) Daughter
- C) Mother
- D) Sister

Q2.Directions: A boy says to a girl, "Your father's wife is the only daughter of my maternal grandmother." How is the boy related to the girl?

- A) Brother
- B) Sister
- C) Son
- D) Cousin

Q3.Directions: Pointing towards Anil, Shipra says, "His mother's father is the grandfather of my brother". How is Anil related to Shipra?

- A) Father-in-law
- B) Father
- C) Brother
- D) Cousin

Q4.Directions: Pointing to a woman, a girl says, "Her daughter-in-law is married to the only son of my husband's mother-in-law". How is the girl related to the woman?

- A) Niece
- B) Granddaughter
- C) Daughter
- D) Cousin

Q5.Directions: Sandeep has a brother named Ankur. Sandeep is the son of Kishon. Baljor is Kishon's father. How is Ankur related to Baljor?

- A) Grandson
- B) Brother
- C) Son
- D) Grandfather

Q6.Directions: A boy and a girl are playing in a park. The only daughter of the maternal grandfather of the girl is the sister of the boy's father. How is the boy related to the girl?

- A) Father
- B) Grandfather
- C) Son
- D) Cousin

Q7.Directions: A man and a woman are sitting in a room. The man's mother-in-law and the woman's mother-in-law are mother and daughter, respectively. How is the man related to the woman?

- A) Father
- B) Father-in-law
- C) Grandfather
- D) Brother

Q8.Directions: Pointing to a photograph of a lady, Vishal says "She is the sister-in-law of my grandfather's (paternal) daughter". How is the lady in the photograph related to Vishal?

- A) Mother
- B) Aunt
- C) Sister
- D) Cannot be determined

Q9.Directions: Introducing a girl, Raju says, "She is the daughter of my grandfather's son's daughter". How is the girl related to Raju?

- A) Cousin
- B) Wife
- C) Sister
- D) Niece

Q10.Directions: Introducing a man, Amar says, "His wife is the only daughter of my maternal grandfather". How is the man related to Amar?

- A) Father
- B) Grandfather
- C) Son
- D) Grandson

SOLUTIONS

1-A

Following the instructions of the question, the family tree will be –

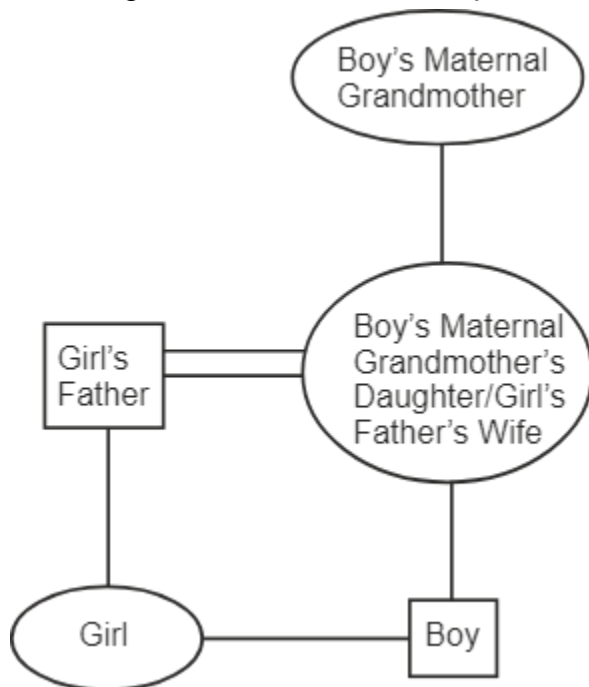


Note: + denotes male and – denotes female.

So, from the above family tree, it is clear that Byomkesh, Abhishek, and Jackie are siblings and Ella is the wife of Vimal. Hence, the first option is correct.

2-A

Following the instructions of the question, the family tree will be –

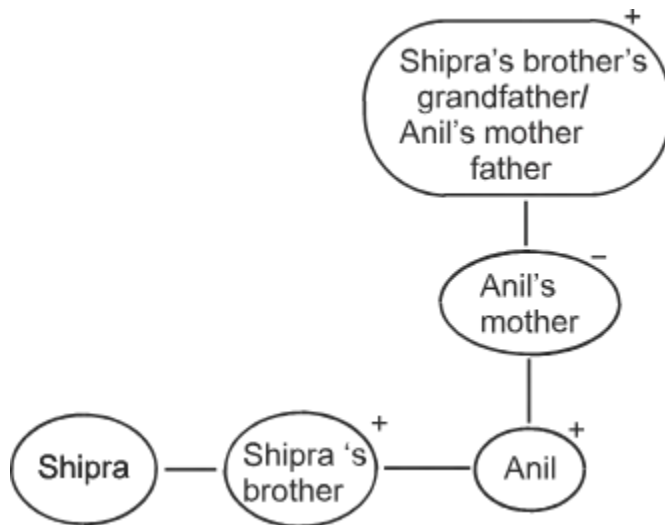


Note: In the above figure, the circle denotes female, and the square denotes male.

So, from the above family tree, it is clear that the boy is the brother of the girl. Hence, the first option is correct.

3-C

Following the instructions of the question, the family tree will be –

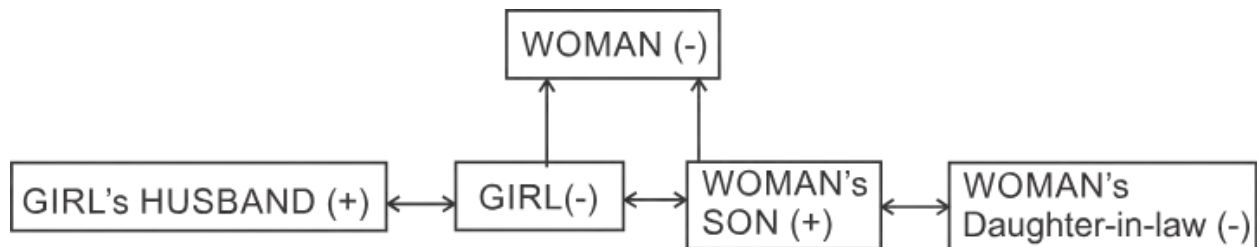


Note: + denotes male, and – denotes female.

So, from the above diagram, it is clear that Anil is Shipra's brother. Hence, the third option is correct.

4-C

According to the given information, the family tree is as follows –

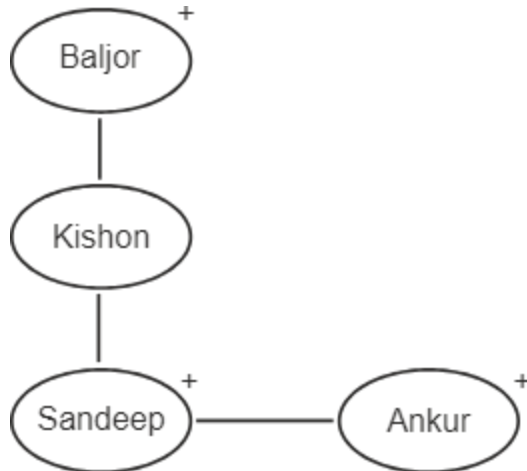


Note: + denotes male and – denotes female.

So, the girl is the daughter of the woman. Hence, the third option is correct.

5-A

First, we need to draw a family tree.



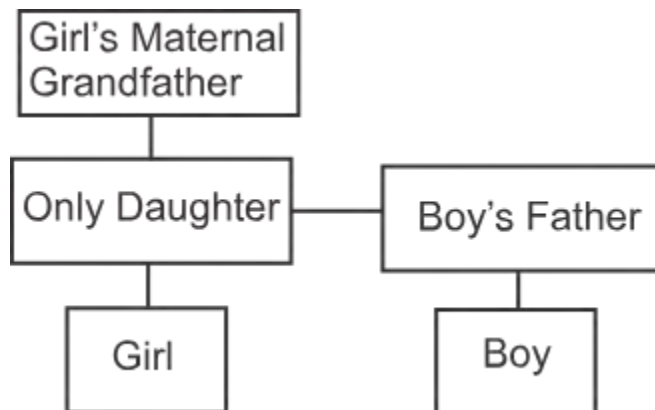
In the above family tree, + denotes male.

Now, it can be clearly seen that Sandeep and Ankur are the sons of Kishon, and Baljor is Kishon's father.

So, it is clear that Ankur is the grandson of Baljor. Hence, the first option is correct.

6-D

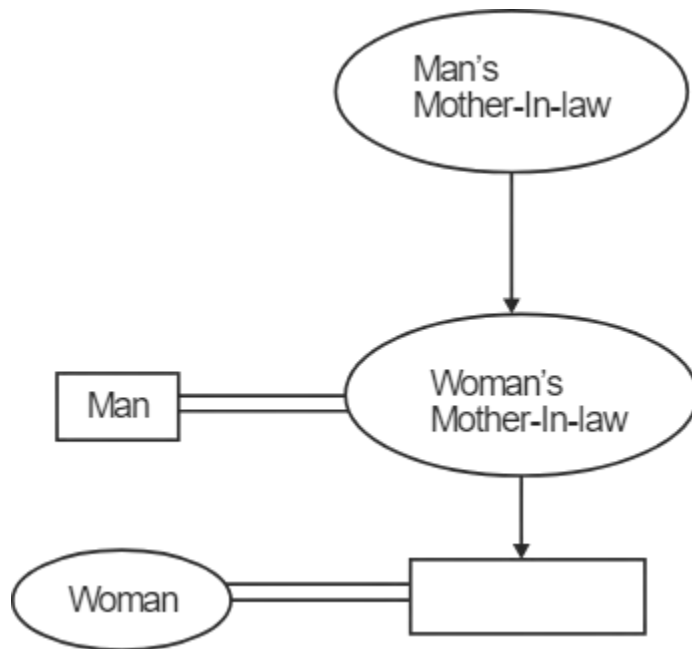
As per the given instructions, the family tree will be drawn as shown below –



From the above family tree, the boy is the cousin of that girl. Hence, the fourth option is correct.

7-B

First, we need to draw a family tree.



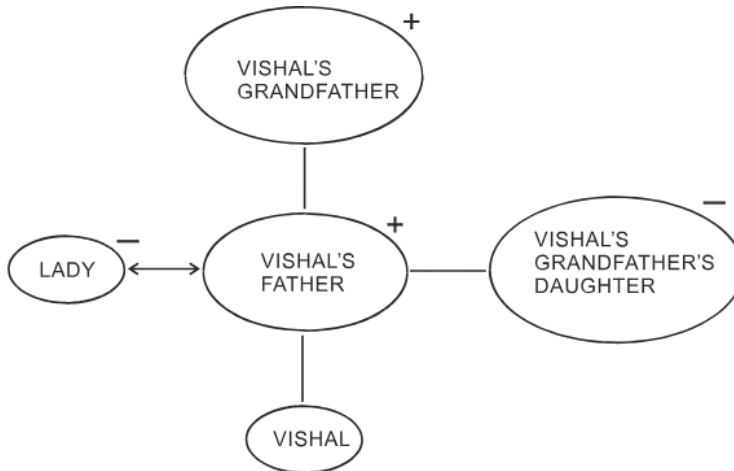
In the above figure, circle denotes female and rectangle denotes male.

Now, we see that the woman's mother-in-law is the daughter of the man's mother-in-law. The man is the husband of the woman's mother-in-law.

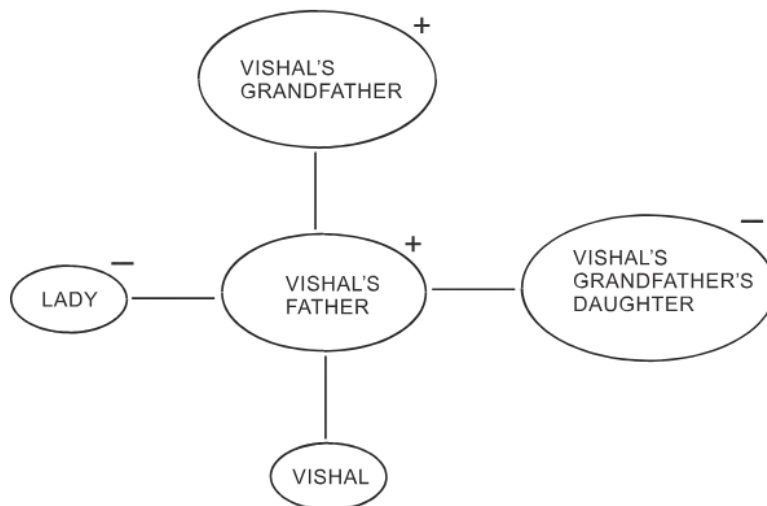
So, from the above, the man is the woman's father-in-law. Hence, the second option is correct.

8-D

The family tree is as follows:



OR



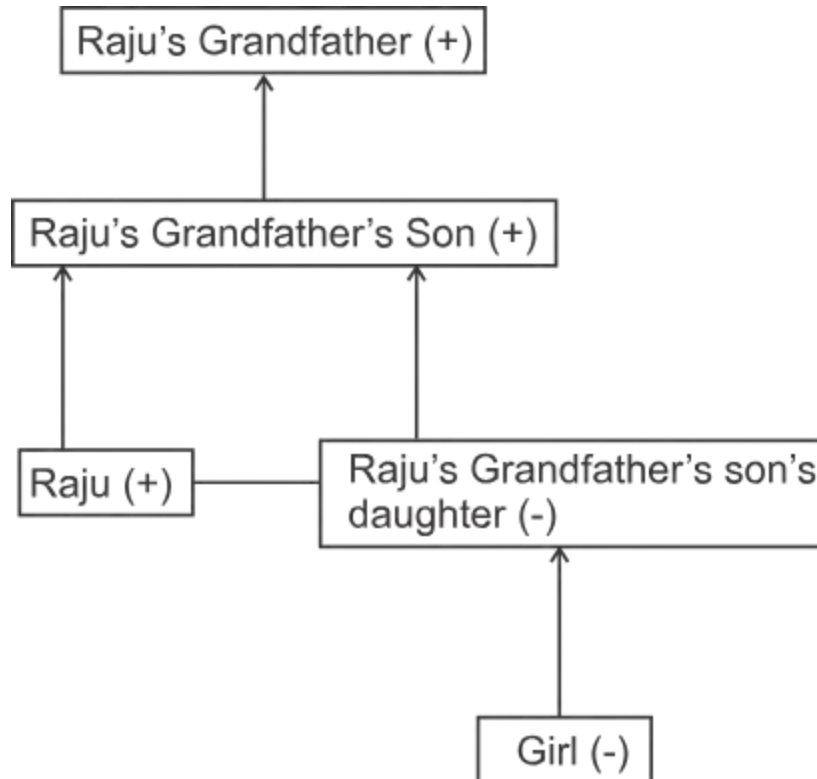
In the above diagram + denotes male and – denotes female.

The above family tree shows two possibilities where in one, the lady can be the mother of Vishal, and in other, the lady can be the Aunt of Vishal.

So, from the above, the exact relationship between the lady and Vishal cannot be determined. Hence, the fourth option is correct.

9- D

According to the given information, the family tree is as follows –



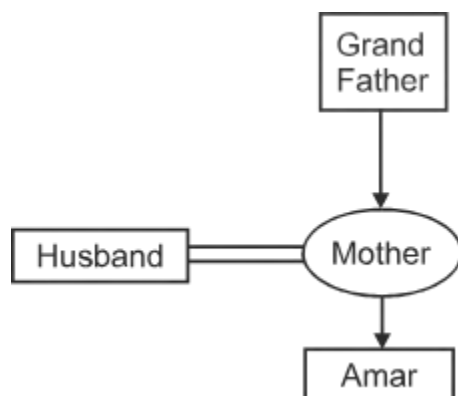
In the above figure, + denotes male, and – denotes female.

Now, from the above diagram, Raju's grandfather's son's daughter is Raju's sister. So, that girl is the daughter of Raju's sister and Raju is her uncle.

Therefore, the girl is Raju's niece. Hence, the fourth option is correct.

10-A

First, we need to draw a family tree.



In the above figure, the circle represents female and the square represents male.
Now, from the above diagram, the only daughter of Amar's maternal grandfather is Amar's mother. So, the man is Amar's mother's husband is Amar's father.
Therefore, the man is Amar's father. Hence, the first option is correct.

VENN DIAGRAMS

Introduction to Venn Diagrams: Venn Diagrams are a graphical tool used in data interpretation to visualize the relationships between different sets or categories of data. They are particularly useful for understanding overlapping or shared elements between various data groups.

Key Concepts in Venn Diagrams:

- Sets: Venn Diagrams represent different sets of data, where each set corresponds to a category or group.
- Overlapping Regions: The overlapping regions in a Venn Diagram represent elements that belong to multiple sets simultaneously.

Interpreting Venn Diagrams:

- Venn Diagrams scenarios require you to analyze the diagram to extract information about the relationships between sets, identify shared elements, and answer questions related to the data.

Example Venn Diagram:

Let's explore a detailed example of a Venn Diagram scenario to illustrate these concepts:

Scenario: Consider a Venn Diagram representing two sets: Set A and Set B.

Data Interpretation Questions:

- Identify the elements in Set A.
- Identify the elements in Set B.
- Determine the elements that belong to both Set A and Set B.
- Calculate the total number of elements in both Set A and Set B.



Answers:

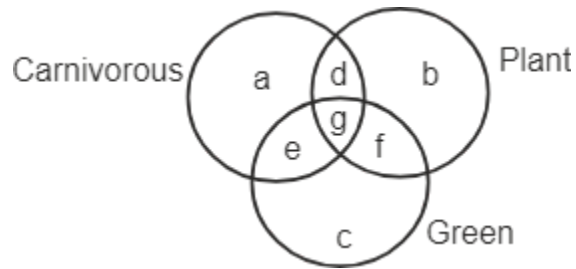
- The elements in Set A are {1, 2, 3, 4, 5}.
- The elements in Set B are {3, 4, 5, 6, 7}.
- The elements that belong to both Set A and Set B are {3, 4, 5}.
- The total number of elements in both Set A and Set B is 5.

Conclusion: Venn Diagrams are a powerful visual tool for understanding the relationships between different sets of data. They help you identify shared elements and

calculate various set-related parameters. Proficiency in interpreting Venn Diagrams is essential for analyzing complex data scenarios and extracting meaningful insights from overlapping data categories.

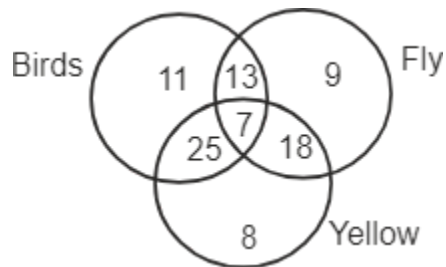
PRACTICE QUESTIONS BASED ON VENN-DIAGRAMS

Q1.Directions: In the given figure, which letter represents carnivorous plants that are not green?



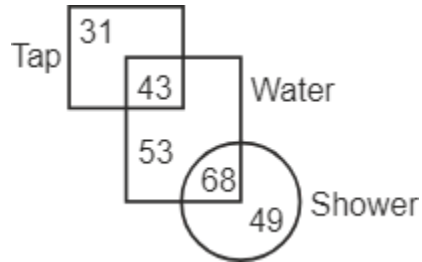
- A) d
- B) g
- C) e
- D) f

Q2.Directions: In the given figure, how many yellow birds are there?



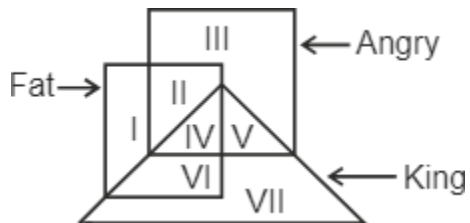
- A) 25
- B) 32
- C) 18
- D) 20

Q3.Directions: In the given figure, how much water is either tap or shower?



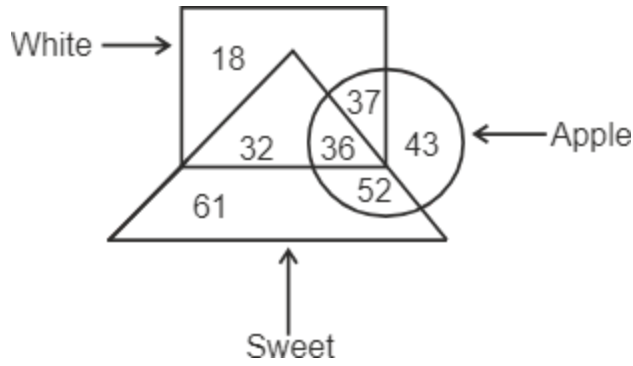
- A) 168
- B) 111
- C) 125
- D) 108

Q4.Directions: In the given figure, which Roman numeral represents the angry kings who are fat?



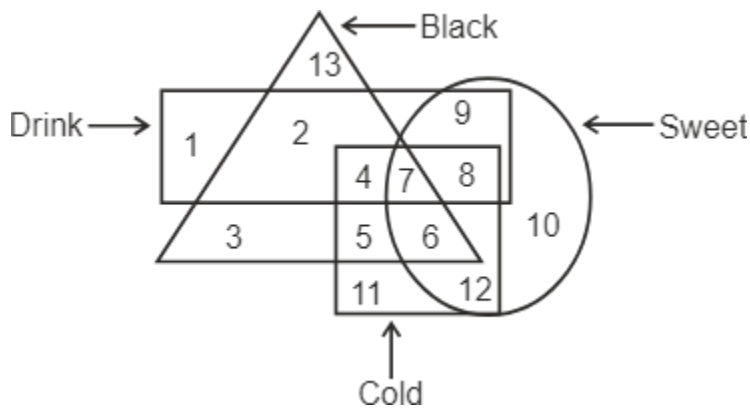
- A) V
- B) IV
- C) VI
- D) II

Q5.Directions: In the given figure, how many white apples are there?



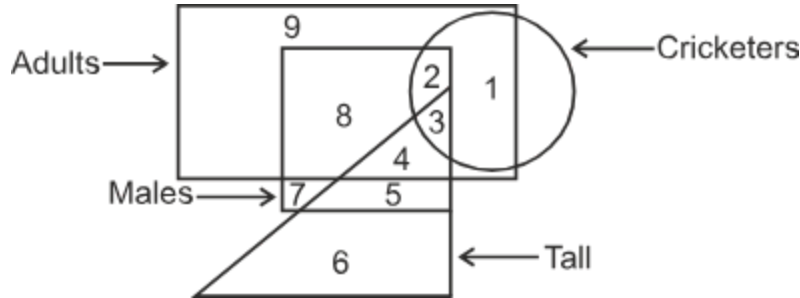
- A) 37
- B) 73
- C) 36
- D) 88

Q6.Directions: In the given figure, which number represents cold drink that is black and sweet?



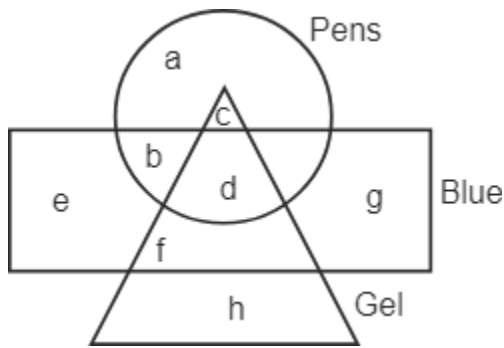
- A) 4
- B) 8
- C) 7
- D) 6

Q7.Directions: In the given figure, which number represents male cricketers who are adults but are not tall?



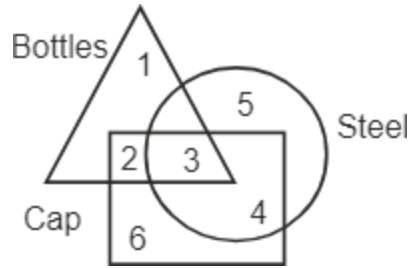
- A) 3
- B) 2
- C) 8
- D) 4

Q8.Directions: In the given figure, which alphabet represents gel pens that are not blue?



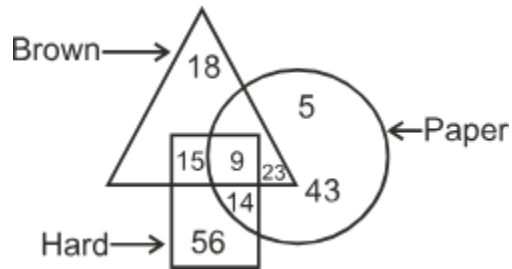
- A) c
- B) d
- C) h
- D) b

Q9.Directions: In the given figure, which number represents steel bottles that are caps?



- A) 2
- B) 4
- C) 3
- D) 6

Q10.Directions: In the given figure, how many papers are also hard?

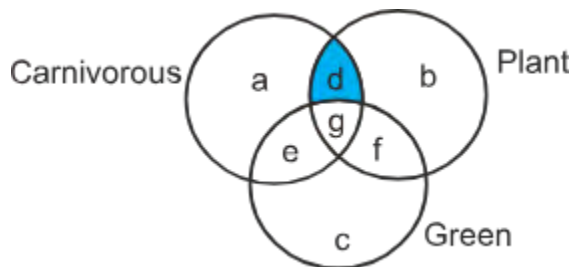


- A) 14
- B) 23
- C) 37
- D) 32

SOLUTIONS

1-A

The shaded region is common to both carnivorous and plants but uncommon to the region of green.



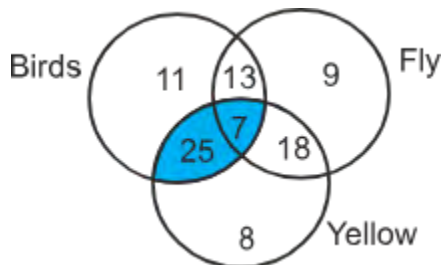
The region that represents carnivorous plants is d and g.

But, we need to find out those carnivorous plants that are not green. This means that the g region will not be considered.

So, the letter that represents carnivorous plants that are not green is d. Hence, the first option is correct.

2-B

The shaded region is common to both yellow and birds.



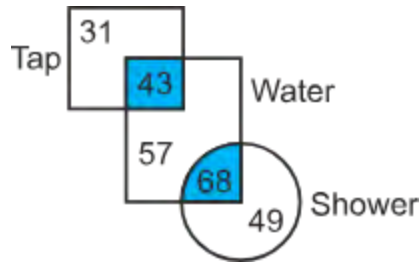
The intersection of the circle representing yellow and birds is the number of yellow birds.

So, the number of yellow birds = $25 + 7 = 32$

Hence, the second option is correct.

3-B

The shaded region is common to both water and tap and water and shower.



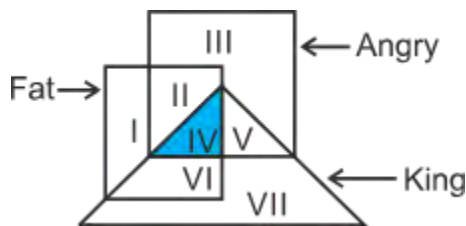
Water that is either tap or shower is the overlapping region between Water and Tap as well as the overlapping region between Water and Shower.

So, water that is either tap or shower = $43 + 68 = 111$

Hence, the second option is correct.

4-B

The shaded region is common to all fat, kings, and angry.

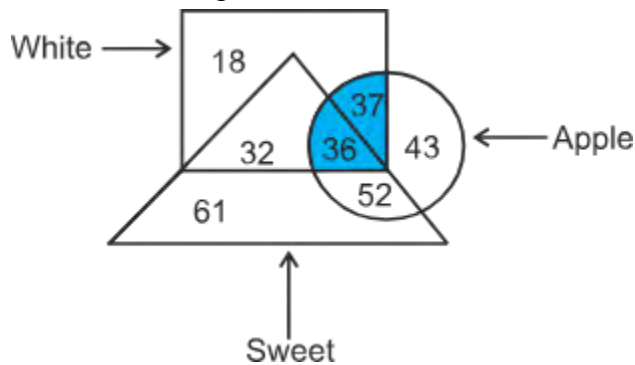


The region of Angry kings who are fat is the region that is a part of all the three groups. From the Venn diagram, we can see that the region is represented by the Roman numeral IV.

Hence, the second option is correct.

5-B

The shaded region is common to both white and apple.



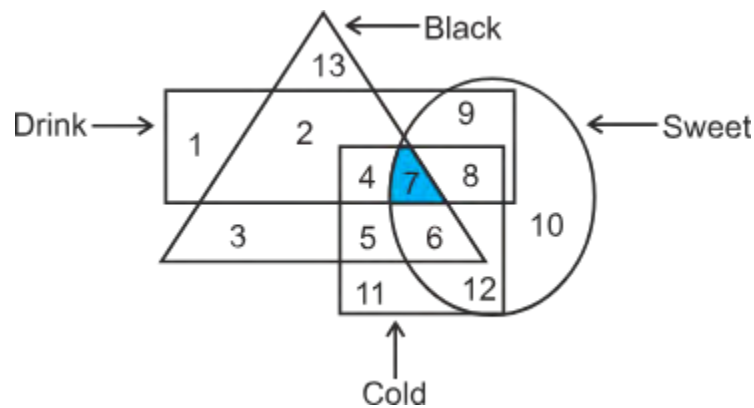
The region that is common to White and Apple is the number of white apples.

From the Venn diagram, the number of white apples = $36 + 37 = 73$

Hence, the second option is correct.

6-C

The shaded region is common to all black, drink, cold, and sweet.



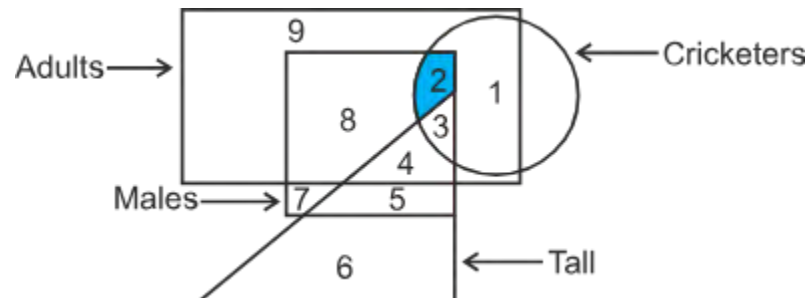
The region that represents cold drink which is black and sweet is the common region of all the four figures.

We can see that the number of cold drink which is black and sweet is 7.

Hence, the third option is correct.

7-B

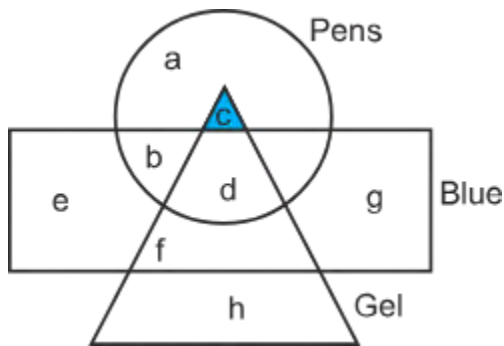
The shaded part in the diagram given below represents male cricketers who are adults but are not tall.



So, the number of male cricketers who are adults but are not tall is 2. Hence, the second option is correct.

8- A

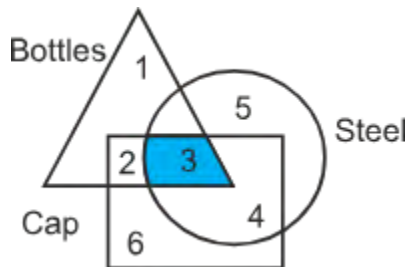
The shaded part in the diagram given below represents gel pens that are not blue.



The alphabet that represents gel pens that are not blue is c. Hence, the first option is correct.

9-C

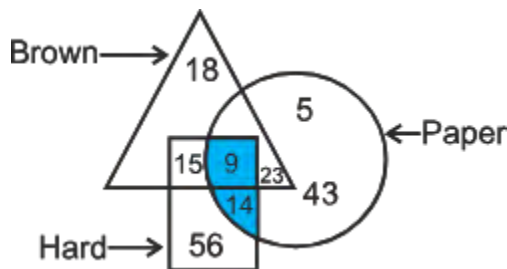
The shaded part in the diagram given below represents steel bottles that are caps.



The number is 3. Hence, the third option is correct.

10-B

The shaded part in the diagram given below represents papers that are also hard.



Papers that are also hard $\rightarrow 14 + 9 = 23$

23 papers are also hard. Hence, the second option is correct.

LINEAR AND CIRCULAR ARRANEMENTS

Introduction to Linear and Circular Arrangement: Linear and Circular Arrangement is a type of data interpretation that deals with organizing and arranging data elements, often in the form of people, objects, or items, in linear or circular sequences. These arrangements are used to pose questions related to the positioning or ordering of elements. Both linear and circular arrangements involve understanding the spatial relationships among elements.

Key Components of Linear and Circular Arrangement:

Arrangement Structure: Linear arrangements involve arranging elements in a straight line, while circular arrangements involve arranging elements in a circular or ring-like fashion.

Positional Information: Data scenarios provide information about the positions of elements in the arrangement, including their relative positions, directions, and distances.

Interpreting Linear and Circular Arrangement:

- Linear and circular arrangement scenarios require you to analyze positional information and draw conclusions about the order or placement of elements.

Example Linear Arrangement:

Let's consider an example of a linear arrangement to illustrate these concepts:

Scenario: Five friends—Alice, Bob, Carol, David, and Eve—are sitting in a row. We have the following information:

- Alice is sitting to the immediate left of Bob.
- Carol is sitting to the immediate right of Bob.
- David is sitting to the immediate right of Eve.

Logical Questions:

Who is sitting in the middle of the row?

Who is sitting at one end of the row?

Who is sitting between Carol and David?

Answers:

Bob is sitting in the middle of the row.

Alice is sitting at one end of the row.

Eve is sitting between Carol and David.

Example Circular Arrangement:

Now, let's consider an example of a circular arrangement:

Scenario: Five friends—Amy, Ben, Chris, Dan, and Emma—are sitting in a circle. We have the following information:

- Amy is sitting two seats to the left of Ben.
- Chris is sitting three seats to the right of Dan.
- Emma is sitting to the immediate left of Chris.

Logical Questions:

Who is sitting to the immediate right of Dan?

Who is sitting between Ben and Emma?

Answers:

Amy is sitting to the immediate right of Dan.

Chris is sitting between Ben and Emma.

Conclusion: Linear and Circular Arrangement data interpretation involves understanding the spatial relationships among elements in an ordered sequence. It requires you to analyze positional information and draw conclusions about the positioning or order of elements. Practicing these scenarios enhances your ability to arrange and analyze data effectively.

PRACTICE QUESTIONS BASED ON LINEAR AND CIRCULAR ARRANEMENTS

Q1.Direction: In a row of buses, Panjab is in the 19th position from the right end. Raftaar is 23 places to the left of Panjab and is at the exact center of the row. How many buses are between the Raftaar bus and the bus standing at the left end?

- A) 44
- B) 42
- C) 40
- D) 43

Q2. Directions: Five friends are sitting on a bench facing the north. Ankit is sitting to the immediate right of Anjum. Amit is sitting to the left of Priya and to the immediate right of Ram. Ram is sitting to the right of Ankit. Who is sitting at the extreme right end?

- A) Amit
- B) Ankit
- C) Priya
- D) Anjum

Q3.Directions: Amit, Bhuwan, Chetan, Dilip, Lalit, and Fahim are sitting in a row facing west. Chetan is between Amit and Lalit. Bhuwan is just to the left of Lalit but right of Dilip. Chetan is sitting to the immediate right of Lalit. Fahim is at the extreme left end. Which pair is sitting by the side of Dilip?

- A) Lalit and Bhuwan
- B) Bhuwan and Fahim
- C) Amit and Fahim
- D) Chetan and Amit

Q4.Directions: Six people are sitting in a row. A is sitting to the immediate left of B and to the immediate right of C. C is sitting to the immediate right of F. If D is to the immediate right of E, who is to the left of F, then which two people are sitting in the center?

- A) D and B
- B) A and B
- C) F and C
- D) E and D

Q5.Directions: Six people, A, B, C, D, E, and F are standing in a circle. B is between F and C. A is between E and D. F is to the left of D. Who is between B and D?

- A) E
- B) C
- C) F
- D) A

Q6.Directions: P, Q, R, S, and T are sitting in a line facing west. P and Q are sitting together. R is sitting at the south end, and S is sitting at the north end. T is a neighbor of Q and R. Who is sitting in the middle?

- A) P
- B) Q
- C) R
- D) S

Q7.Directions: P, Q, R, S, and T are sitting in a line facing west. P and Q sit in adjacent places. R is sitting at the south end, and S is sitting at the north end. T is a neighbor of Q and R. Who is second from the north end?

- A) P
- B) Q
- C) R
- D) T

Q8.Direction: Five girls are sitting in a row. Sudha is sitting next to Padma. Krishna is sitting next to Rama who is sitting on the extreme left. Tapti is sitting on the extreme right. Nobody is sitting between Padma and Krishna. Who is sitting in the middle?

- A) Krishna
- B) Padma

- C) Sudha
- D) Tapti

Q9.Direction: Five friends P, Q, R, S, and T are sitting in a row facing North. Here S is between T and Q and Q is to the immediate left of R. P is to the immediate left of T. Who is in the middle?

- A) S
- B) T
- C) Q
- D) R

Q10.Direction: Five policemen are standing in a row facing south. Shekhar is to the immediate right of Dhanush. Bala is between Basha and Dhanush. David is at the extreme right end of the row. Who is standing in the middle of the row?

- A) Bala
- B) Basha
- C) Shekhar
- D) Dhanush

SOLUTIONS

1-C

Given:

Total number of buses = Leftmost bus + Rightmost bus + 18 + 17 + 22 + 22 + Punjab bus + Raftaar bus

Total number of buses = $1 + 1 + 35 + 44 + 1 + 1 = 83$

Now, find the number of buses between the leftmost bus and the middle bus.

Number of buses between the leftmost bus and the middle bus

= Total number of buses – (Leftmost bus + Rightmost bus + 17 + 22 + Punjab bus + Raftaar bus)

= $83 - (1 + 1 + 17 + 22 + 1 + 1)$

= $83 - 43$

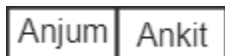
= 40

The number of buses between the leftmost bus and the middle bus is 40.

Hence, the third option is correct.

2-C

Ankit is sitting to the immediate right of Anjum. So, the seating arrangement is:



Amit is sitting to the left of Priya and to the immediate right of Ram. So, the seating arrangement is:



Ram is sitting to the right of Ankit. So the seating arrangement is:



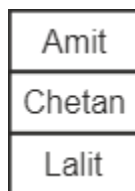
Since there are only five people, there cannot be anyone between Amit and Priya. So, the final seating is:



So, Priya is sitting in the extreme right position. Hence, the third option is correct.

3-B

It is given that Chetan is between Amit and Lalit. Also, Chetan is sitting to the immediate right of Lalit. So, the seating arrangement is:



Bhuvan is just to the left of Lalit but right of Dilip. So, the seating arrangement is:



Fahim is at the extreme left end. So, the final seating arrangement is:



So, Bhuvan and Fahim are sitting to the side of Dilip. Hence, the second option is correct.

4-C

Assuming that all the people are sitting in a row facing north, the following arrangements can be made as per the given information –

(i) A is sitting to the immediate left of B and to the immediate right of C.



(ii) C is sitting to the immediate right of F.



(iii) D is to the immediate right of E, who is to the left of F.

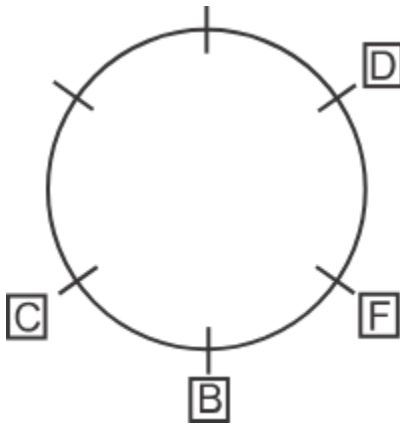


So, F and C are sitting at the center. Hence, the third option is correct.

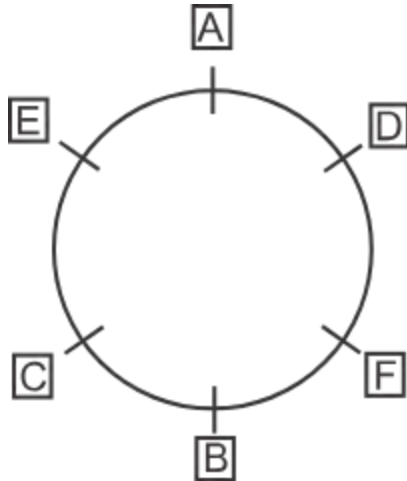
5-C

Assuming that all the people are facing inside the circle, the following arrangements can be made as per the given information –

(i) B is between F and C. F is to the left of D.



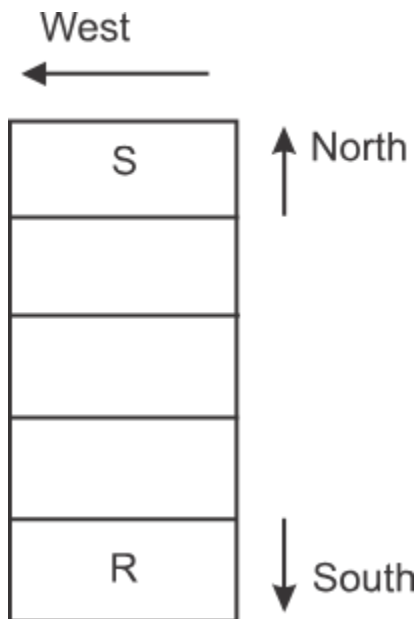
(ii) A is between E and D. So, the final arrangement is –



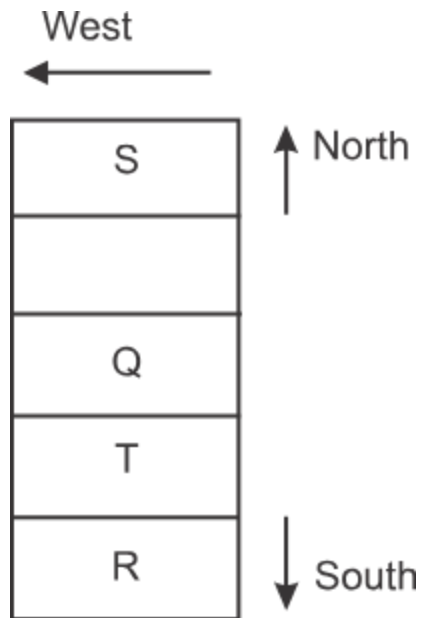
So, F is between B and D. Hence, the third option is correct.

6-B

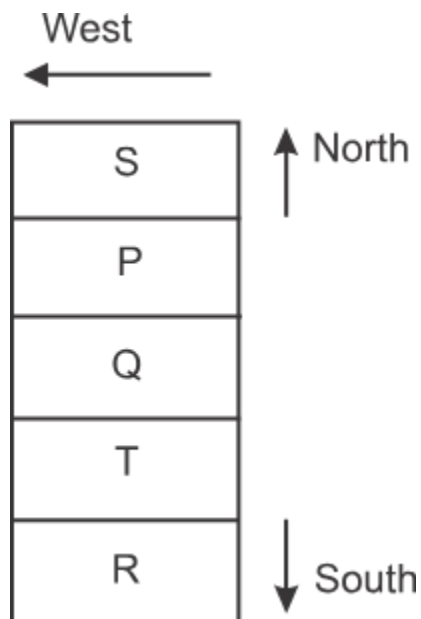
It is given that R is sitting at the south end, and S is sitting at the north end.



T is a neighbor of Q and R. This means that T is in the middle of Q and R.



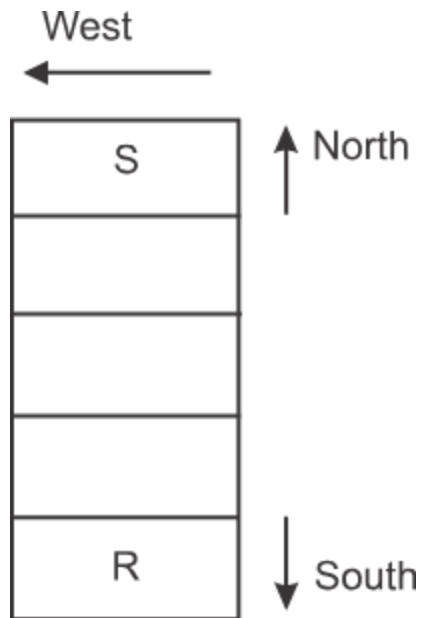
There is only one space left where P will sit. So, the final arrangement is –



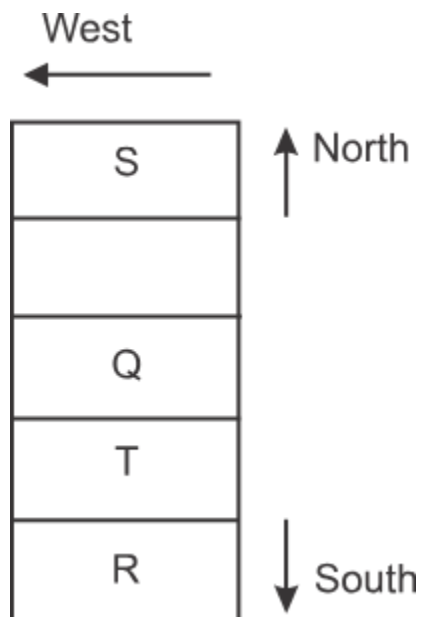
Thus, Q is sitting in the middle of the line. Hence, the second option is correct.

7-A

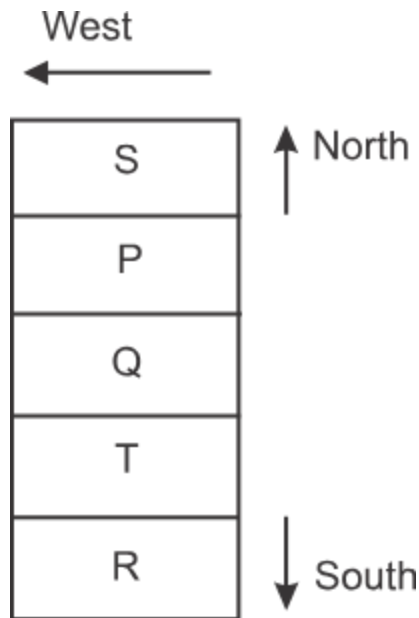
It is given that R is sitting at the south end, and S is sitting at the north end.



T is a neighbor of Q and R. This means that T is in the middle of Q and R.



There is only one space left where P will sit. So, the final arrangement is –



So, P is sitting second from the north end. Hence, the first option is correct.

8-B

(i) Tapti is sitting on the extreme right. And Rama is sitting to the extreme left.

| | | | | |
|------|--|--|--|-------|
| RAMA | | | | TAPTI |
|------|--|--|--|-------|

(ii) Krishna is sitting next to Rama who is sitting on the extreme left.

| | | | | |
|------|---------|--|--|-------|
| RAMA | KRISHNA | | | TAPTI |
|------|---------|--|--|-------|

(iii) Nobody is sitting between Padma and Krishna.

| | | | | |
|------|---------|-------|--|-------|
| RAMA | KRISHNA | PADMA | | TAPTI |
|------|---------|-------|--|-------|

(iv) Sudha is sitting next to Padma.

| | | | | |
|------|---------|-------|-------|-------|
| RAMA | KRISHNA | PADMA | SUDHA | TAPTI |
|------|---------|-------|-------|-------|

So, Padma is sitting in the middle. Hence, the second option is correct.

9-A

According to the given instructions, the seating arrangement where all the people are facing north is as follows –

(i) S is sitting between T and Q. So, the seating arrangement is –

| | | |
|---|---|---|
| T | S | Q |
|---|---|---|

(ii) P is sitting to the immediate left of T. So, the seating arrangement is –

| | | | |
|---|---|---|---|
| P | T | S | Q |
|---|---|---|---|

(iii) Q is sitting to the immediate left of R. So, the seating arrangement is –

| | | | | |
|---|---|---|---|---|
| P | T | S | Q | R |
|---|---|---|---|---|

So, S is sitting in the middle. Hence, the first option is correct.

10-D

Given:

Shekhar is standing to the immediate right of Dhanush. So, the seating arrangement is:

| | |
|---------|---------|
| Shekhar | Dhanush |
|---------|---------|

Bala is standing between Basha and Dhanush. So, the seating arrangement is:

| | | | |
|---------|---------|------|-------|
| Shekhar | Dhanush | Bala | Basha |
|---------|---------|------|-------|

David is standing at the extreme right end of the row. So, the seating arrangement is:

| | | | | |
|-------|---------|---------|------|-------|
| David | Shekhar | Dhanush | Bala | Basha |
|-------|---------|---------|------|-------|

So, Dhanush is sitting in the middle. Hence, the fourth option is correct.

ANALYTICAL PUZZLES

Introduction to Analytical Puzzles: Analytical Puzzles are a challenging but fascinating component of data interpretation that require you to solve complex problems by applying logical and deductive reasoning. These puzzles often involve arranging information, making deductions, and finding solutions to intricate scenarios.

Key Concepts in Analytical Puzzles

Scenario: Analytical Puzzles present a unique scenario or problem that requires careful analysis and problem-solving.

Clues: Clues or pieces of information are provided to help you deduce the correct solution. These clues may be explicit or require you to make inferences.

Interpreting Analytical Puzzles:

- Analytical Puzzles scenarios require you to read, analyze, and synthesize the provided information, often in the form of clues, in order to arrive at a logical solution.

Example Analytical Puzzle:

Let's delve into a detailed example of an Analytical Puzzle to illustrate these concepts:

Scenario: The Zebra Puzzle This classic analytical puzzle involves five houses, each of a different color. Each house's owner has a distinct nationality, pet, favorite drink, and cigarette brand. The goal is to determine who owns the pet zebra.

Clues:

- The Englishman lives in the red house.
- The Spaniard owns the dog.
- Coffee is drunk in the green house.
- The Ukrainian drinks tea.
- The green house is immediately to the right of the ivory house.
- The Old Gold smoker owns snails.
- Kools are smoked in the yellow house.
- Milk is drunk in the middle house.
- The Norwegian lives in the first house.
- The man who smokes Chesterfields lives in the house next to the man with the fox.
- Kools are smoked in the house next to the house with the horse.
- The Lucky Strike smoker drinks orange juice.
- The Japanese smokes Parliaments.
- The Norwegian lives next to the blue house.

Logical Question: Who owns the zebra?

Answer: By systematically applying the clues and eliminating possibilities, you can deduce the following:

- The Norwegian lives in the first (leftmost) house.
- The blue house is next to the Norwegian's house.
- The red house is next to the greenhouse.
- The Englishman lives in the red house.
- The Spaniard owns the dog.
- Coffee is drunk in the green house.
- The Ukrainian drinks tea.

- Milk is drunk in the middle house.
- The green house is to the right of the ivory house.
- The Old Gold smoker owns snails.
- Kools are smoked in the yellow house.
- The man who smokes Chesterfields lives next to the man with the fox.
- Kools are smoked next to the house with the horse.
- The Lucky Strike smoker drinks orange juice.
- The Japanese smokes Parliaments.
- The only option left for the zebra is the Norwegian.

Conclusion: Analytical Puzzles challenge your ability to apply logical reasoning and deduction to solve complex problems. These puzzles require careful analysis of provided information and the application of logical rules to arrive at solutions. Proficiency in analytical puzzles enhances your problem-solving skills and cognitive abilities, making them valuable for various analytical and decision-making contexts.

PRACTICE QUESTIONS BASED ON ANALYTICAL PUZZLES

Q1.Directions: P, Q, R and S are playing a game of carrom. P, R and S, Q are partners. S is to the right of R. If R is facing West, then Q is facing which direction?

- A) North
- B) South
- C) East
- D) West

Q2.Direction: Four persons M, N, O, and P are playing cards. M is on the right of N and P is on the left of O. Then which of the following are partners?

- A) Pand O
- B) M and P
- C) M and N
- D) N and P

Q3.Directions: The weight of the four boxes is 20, 40, 80, and 90 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination of these boxes, and in a combination, a box can be used only once?

- A) 220
- B) 230
- C) 150
- D) 210

Q4.Directions: The weights of 4 boxes are 30, 20, 60 and 70 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination a box can be used only once?

- A) 180
- B) 170
- C) 120
- D) 150

Q5.Directions: The weights of the 4 boxes are 90, 40, 80, and 50 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination of these boxes, and in a combination a box can be used only once?

- A) 200
- B) 260
- C) 180
- D) 170

Q6.Directions: The weights of the four boxes are 90, 30, 40, and 60 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination of these boxes, and in combination, a box can be used only once?

- A) 200
- B) 220
- C) 180
- D) 130

Q7.Directions: The weights of 4 boxes are 90, 30, 20, and 50 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination of these boxes, and in combination a box can be used only once?

- A) 190
- B) 170
- C) 100
- D) 150

Q8.Directions: Five friends are sitting on a bench facing the north. Ankit is sitting to the immediate right of Anjum. Amit is sitting to the left of Priya and to the immediate right of Ram. Ram is sitting to the right of Ankit. Who is sitting at the extreme right end?

- A) Amit
- B) Ankit
- C) Priya
- D) Anjum

Q9.Directions: Amit, Bhuwan, Chetan, Dilip, Lalit, and Fahim are sitting in a row facing west. Chetan is between Amit and Lalit. Bhuwan is just to the left of Lalit

but right of Dilip. Chetan is sitting to the immediate right of Lalit. Fahim is at the extreme left end. Which pair is sitting by the side of Dilip?

- A) Lalit and Bhuwan
- B) Bhuwan and Fahim

- C) Amit and Fahim
- D) Chetan and Amit

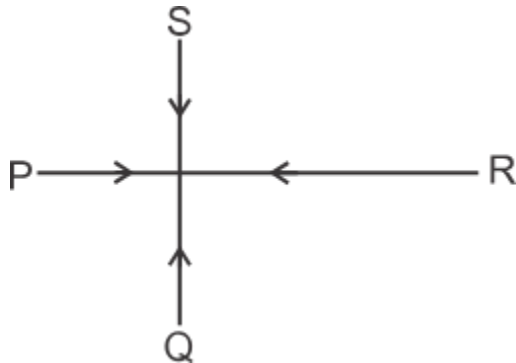
Q10.Directions: Six people are sitting in a row. A is sitting to the immediate left of B and to the immediate right of C. C is sitting to the immediate right of F. If D is to the immediate right of E, who is to the left of F, then which two people are sitting in the center?

- A) D and B
- B) A and B
- C) F and C
- D) E and D

SOLUTIONS

1-A

Firstly, we will draw the diagram as per the given instructions –

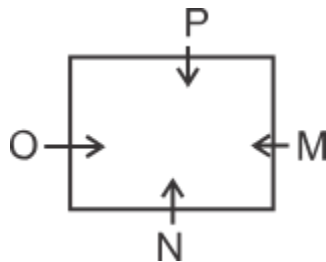


So, Q is facing in the North direction. Hence, the first option is correct.

2-D

Given:

Four persons M, N, O, and P are playing cards. M is on the right of N and P is on the left of O.



So, M and O are partners, and N and P are partners. Hence, the fourth option is correct.

3-A

Given:

The weight of the four boxes is 20, 40, 80, and 90 kilograms.

The total weight of all possible combinations of boxes is as follows –

$$20 + 40 = 60; 20 + 80 = 100; 20 + 90 = 110; 40 + 80 = 120;$$

$$40 + 90 = 130; 80 + 90 = 170; 20 + 40 + 80 = 140;$$

$$20 + 40 + 90 = 150; 20 + 80 + 90 = 190; 40 + 80 + 90 = 210;$$

$$20 + 40 + 80 + 90 = 230$$

There is no total weight of 220 kilograms in any combination. Hence, the first option is correct.

4-B

Given:

The weights of 4 boxes are 30, 20, 60 and 70 kilograms.

The total weight of all possible combinations of boxes is as follows –

$$30 + 20 = 50; 30 + 60 = 90; 30 + 70 = 100; 20 + 60 = 80;$$

$$20 + 70 = 90; 60 + 70 = 130; 30 + 20 + 60 = 110;$$

$$30 + 60 + 70 = 160; 30 + 20 + 70 = 120; 20 + 60 + 70 = 150;$$

$$20 + 60 + 70 + 30 = 180$$

There is no total weight of 170 kilograms in any combination. Hence, the second option is correct.

5-A

Given:

The weights of 4 boxes are 90, 40, 80, and 50 kilograms.

The total weight of all possible combinations of boxes is as follows –

$$90 + 40 = 130; 90 + 80 = 170; 90 + 50 = 140; 40 + 80 = 120;$$

$$40 + 50 = 90; 80 + 50 = 130; 90 + 40 + 80 = 210;$$

$$90 + 40 + 50 = 180; 90 + 80 + 50 = 220; 40 + 80 + 50 = 170;$$

$$40 + 80 + 50 + 90 = 260$$

There is no total weight of 200 kilograms in any combination. Hence, the first option is correct.

6-A

Given:

The weights of the four boxes are 90, 30, 40, and 60 kilograms.

The total weight of all possible combinations of boxes is as follows –

$$90 + 30 = 120; 90 + 40 = 130; 90 + 60 = 150; 30 + 40 = 70;$$

$$30 + 60 = 90; 40 + 60 = 100; 90 + 30 + 40 = 160;$$

$$90 + 30 + 60 = 180; 90 + 40 + 60 = 190; 30 + 40 + 60 = 130;$$

$$90 + 30 + 40 + 60 = 220$$

There is no total weight of 200 kilograms in any combination. Hence, the first option is correct.

7-D

Given:

The weights of 4 boxes are 90, 30, 20, and 50 kilograms.

The total weight of all possible combinations of boxes is as follows –

$$90 + 30 = 120; 90 + 20 = 110; 90 + 50 = 140; 30 + 20 = 50;$$

$$30 + 50 = 80; 20 + 50 = 70; 90 + 30 + 20 = 140;$$

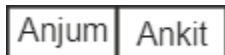
$$90 + 30 + 50 = 170; 90 + 20 + 50 = 160; 30 + 20 + 50 = 100;$$

$$90 + 30 + 20 + 50 = 190$$

There is no total weight of 150 kilograms in any combination. Hence, the fourth option is correct.

8-C

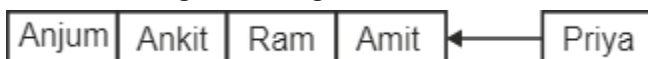
Ankit is sitting to the immediate right of Anjum. So, the seating arrangement is:



Amit is sitting to the left of Priya and to the immediate right of Ram. So, the seating arrangement is:

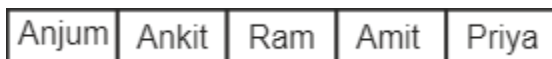


Ram is sitting to the right of Ankit. So the seating arrangement is:



Since there are only five people, there cannot be anyone between Amit and Priya.

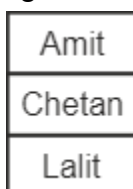
So, the final seating is:



So, Priya is sitting in the extreme right position. Hence, the third option is correct.

9-B

It is given that Chetan is between Amit and Lalit. Also, Chetan is sitting to the immediate right of Lalit. So, the seating arrangement is:



Bhuvan is just to the left of Lalit but right of Dilip. So, the seating arrangement is:

| |
|--------|
| Amit |
| Chetan |
| Lalit |
| Bhuvan |
| Dilip |

Fahim is at the extreme left end. So, the final seating arrangement is:

| |
|--------|
| Amit |
| Chetan |
| Lalit |
| Bhuvan |
| Dilip |
| Fahim |

So, Bhuvan and Fahim are sitting to the side of Dilip. Hence, the second option is correct.

10-C

Assuming that all the people are sitting in a row facing north, the following arrangements can be made as per the given information –

(i) A is sitting to the immediate left of B and to the immediate right of C.

| | | |
|---|---|---|
| C | A | B |
|---|---|---|

(ii) C is sitting to the immediate right of F.

| | | | |
|---|---|---|---|
| F | C | A | B |
|---|---|---|---|

(iii) D is to the immediate right of E, who is to the left of F.

| | | | | | |
|---|---|---|---|---|---|
| E | D | F | C | A | B |
|---|---|---|---|---|---|

So, F and C are sitting at the center. Hence, the third option is correct.

AGE-RELATED PROBLEMS

Definition:

Problems on ages involve determining the age of one or more persons in the past, present, or future using the given conditions. These problems often require the application of the principles of linear algebra and, in some cases, the use of averages.

Foundation Building Questions:

Question: Ten years ago, A's age was half of the age he will be in 20 years. How old is A now?

Solution:

Let's assume A's current age is x years.

According to the problem:

A's age 10 years ago = $x - 10$

A's age 20 years from now = $x + 20$

Given:

$$x - 10 = 12(x + 20)$$

Expanding:

$$x - 10 = 0.5x + 10$$

Collecting like terms:

$$0.5x = 20$$

So, $x = 40$

Answer: A is 40 years old now.

Tips and Tricks:

1. Use Variables: Assign a variable (like x) to the present age. Then express other ages in relation to this variable.
2. Draw a Timeline: Visualizing the problem on a timeline can often make it easier to understand the relationships between the different ages given.
3. Average Age Trick: In problems where you're given the average age of a group and then told how that average changes when one person leaves/joins the group, remember the concepts of weighted average. It'll make the calculations faster and easier.
4. Ratio Technique: Some age problems can be translated into ratios, especially when they mention the age ratios of two or more people. This can simplify calculations.
5. Cross-check with Options: Often, the options given in such problems can be quickly verified. Once you have a rough idea or range of the age, checking the options can save time.

Remember, age problems are a blend of logic and algebra. Visualization and understanding the problem statement are key. Ensure you're clear about what age is being referred to (past, present, future) before setting up equations.

PRACTICE QUESTIONS BASED ON AGE-RELATED PROBLEMS

Q1. If John is currently twice as old as Mary, and the sum of their ages is 45, how old is Mary?

- A) 15
- B) 20
- C) 25
- D) 30

Q2. If Alice is 5 years older than Bob, and their combined age is 60, how old is Bob?

- A) 25
- B) 27.5
- C) 30
- D) 32.5

Q3. If a person is currently 40 years old and ages 3 years in the next decade, what will be their age in ten years?

- A) 43
- B) 47
- C) 50
- D) 53

Q4. The average age of a family of four is 30 years. If the father is 35 years old, what is the average age of the other three family members?

- A) 25
- B) 30
- C) 31
- D) 28

Q5. Jane is three times as old as her son. If the sum of their ages is 40, how old is Jane's son?

- A) 5
- B) 8
- C) 10
- D) 24

Q6. If the sum of the ages of a grandfather and his grandson is 80, and the grandfather is 3 times as old as the grandson, how old is the grandson?

- A) 10
- B) 15
- C) 20
- D) 25

Q7. A group of 4 friends has an average age of 25 years. If one friend, who is 30 years old, joins the group, what is the new average age?

- A) 25
- B) 26
- C) 27
- D) 28

Q8. Tom is twice as old as his sister. If the difference in their ages is 10 years, how old is Tom?

- A) 15
- B) 20
- C) 25
- D) 30

Q9. In 5 years, Alice will be twice as old as Bob. If Alice is currently 25 years old, how old is Bob currently?

- A) 20
- B) 15
- B) 25
- D) 30

Q10. The sum of the ages of a father and son is 45. If the father is 3 times as old as the son, how old is the son?

- A) 10
- B) 15
- D) 18
- D) 12

SOLUTIONS

1-D

Let Mary's age be x , then John's age is $2x$. The equation is $x+2x=45$, solving for x gives $x=15$, so Mary is 15, and John is $2 \times 15=30$.

2-C

Let Bob's age be x , then Alice's age is $x+5$. The equation is $x+(x+5)=60$, solving for x gives $x=25$, so Bob is 25, and Alice is $25+5=30$.

3-A

The person will be $40+3=43$ years old in ten years.

4-D

The sum of ages for the family is $4 \times 30=120$. If the father is 35, then the sum of the ages of the other three is $120-35=85$. The average age is $85/3=28.3$, rounding to the nearest whole number gives 28.

5-B

Let the son's age be x , then Jane's age is $3x$. The equation is $x+3x=40$, and solving for x gives $x=8$. So, Jane's son is 8 years old, and Jane is $3 \times 8=24$ years old.

6-B

Let the grandson's age be x , then the grandfather's age is $3x$. The equation is $x+3x=80$, and solving for x gives $x=15$. So, the grandson is 15, and the grandfather is $3 \times 15=45$ years old.

7-B

$25 = s/4$
 $s = 100$
 $A = 100 + 30 / 4 + 1$
 $A = 130/5$
 $A = 26$ is the new average age.

8-B

Let the sister's age be x , then Tom's age is $2x$. The equation is $2x-x=10$, and solving for x gives $x=10$. So, Tom's sister is 10, and Tom is $2 \times 10=20$ years old.

9-A

Let the age of Bob = x
 In 5 years, Alice will be
 $25+5=30$

and Bob will be
 $x+5$. The equation is
 $30=2\times(x+5)$, solving for
 x gives
 $x=20$. So, Bob is currently 20 years old.

10-D

Let the son's age be
 x , then the father's age is
 $3x$. The equation is
 $x+3x=45$, and solving for
 x gives
 $x=11.25$.
So the nearest number is 12
Therefore, the son is 12 years old, and the father is
 $3\times 12=36$
 $3\times 12=36$ years old.

SYLLOGISM, STATEMENT AND CONCLUSION

Syllogism, derived from the Greek word "syllogismos," refers to a logical argument employing deductive reasoning to reach a conclusion. Often attributed to Aristotle, syllogisms involve major and minor premises leading to a specific conclusion. In the context of competitive exams, questions present statements and conclusions, requiring candidates to determine which conclusions logically follow from the given statements.

The process of solving syllogism questions involves creating Venn diagrams based on the major and minor premises. By drawing all possible diagrams and analyzing them individually, the correct answer can be identified by finding the common conclusion across all diagrams.

Syllogism statements typically consist of a major premise (a general statement believed to be true), a minor premise (a specific example of the major premise), and a conclusion that logically follows both premises. Venn diagrams are employed to visually represent the relationships between different categories.

The application of Venn diagrams involves checking the validity of conclusions by comparing them with the diagrams drawn based on the major and minor premises. The conclusion must hold true in all possible cases represented by the diagrams.

The process of solving syllogism questions can be summarized in several steps:

Identify the number of variables in the given statements.

Draw a Venn diagram for each variable, with the number of diagrams equal to the number of variables.

Deduce the logical relationships by reading the statements and draw corresponding Venn diagrams.

Check the given conclusions against the obtained Venn diagrams.

Select the correct conclusion that holds true in all possible cases.

In essence, syllogism problem-solving involves a systematic approach, utilizing deductive reasoning and visual representation to arrive at logically sound conclusions.

PRACTICE QUESTIONS BASED ON STATEMENT AND CONCLUSION

Q1.

Directions: In the following question, two statements are given, each followed by two Conclusions I and II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You have to decide which of the given Conclusions, if any, follows from the given statements.**Statements:**

I. The pass percentage in the subject of Political Science is very low as compared to others in the same curriculum.

II. The students who were admitted to the program did not study Political Science earlier.

Conclusions:

I. The foundation of the subject is very important for a student to perform well in examinations.

II. Political Science is a generic subject, and students can attempt it without any problem.

- A) Only Conclusion II follows
- B) Conclusion I and II both follow
- C) Neither I nor II follows
- D) Only Conclusion I follows

Q2.Directions: In the following question below, some statements are followed by some conclusions. Taking the given statements to be true, even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows from the given statements.

Statements:

I. We are going back again to our ancestors and finding out the importance of Yoga and Pranayam.

II. People in the West have already opted it. It does not require any external equipment but only body and soul.

Conclusions:

I. Ancient science is the treasure of many cures and natural remedies for various diseases.

II. Technology has overshadowed these ancient sources and introduced new concepts of fitness called gy

- A) Only Conclusion II follows
- B) Conclusion I conclusion both follow
- C) Neither I nor II follows
- D) Only Conclusion I follows

Q3.Directions: In the following question below, some statements are followed by some conclusions. Taking the given statements to be true, even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows from the given statements.

Statements:

- I. Children play in the playground.
- II. It gives them a different approach to problem-solving and decision-making.

Conclusions:

- I. Playing outdoors is very necessary for the overall development of the child.
- II. There should be a balance between playing and studying for the child.

- A) Only Conclusion II follows
- B) Conclusions I and II both follow
- C) Neither Conclusion I nor II follows
- D) Only Conclusion I follows

Q4.Directions: In the following question, a statement is given, followed by two arguments, I and II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You have to decide which of the given arguments, if any, follows from the given statement.

Statement:

Should songs be eliminated from Indian movies?

Arguments:

- I. Yes, Hollywood movies are hits despite having no songs.
- II. No, songs help to increase the length of the movie.

- A) If neither I nor II is strong
- B) If only argument I is strong
- B) If only argument II is strong
- C) If both I and II are strong

Q5.Directions: In the following question, a statement is given, followed by two arguments, I and II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You have to decide which of the given arguments, if any, follows from the given statement.

Statement:

Should songs be eliminated from Indian movies?

Arguments:

- I. Yes, Hollywood movies are hits despite having no songs.
- II. No, songs help to increase the length of the movie.

- A) If only argument I is strong
- B) If only argument II is strong
- C) If both I and II are strong
- D) If neither I nor II is strong

Q6.Directions: In the following question below, some statements are followed by some conclusions. Taking the given statements to be true, even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows from the given statements.

Statements:

- (I) No women can vote.
- (II) Some women are politicians.

Conclusions:

- (I) Male politicians can vote.
- (II) Some politicians can vote.

- A) Conclusion I follows
- B) Conclusion II follows
- C) Neither I nor II follows
- D) Both I and II follow

Q7. Directions: In the following question below, some statements are followed by some conclusions. Taking the given statements to be true, even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows from the given statements.

Statements:

1. All young girls are modern.
2. No modern men are superstitious.

Conclusions:

- I. No girls are superstitious.
- II. No young men are superstitious.

- A) Conclusion I follow
- B) Conclusion II follow
- C) Neither conclusion I nor conclusion II follows
- D) Both conclusion I and conclusion II follows

Q8.Directions: In the following question, two statements are given followed by two conclusions I and II. You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

Statements:

No man is a donkey.

Rahul is a man.

Conclusions:

- I. Rahul is not a donkey.
- II. All men are not Rahul.

- A) Either conclusion I or conclusion II follow.
- B) Neither Conclusion I nor II follow
- C) Only conclusion I follow
- D) Only conclusion II follow

Q9.Directions: In the following question two statements are given, followed by two conclusions I and II. You have to consider the statements to be true even if they are seen to be at variance from commonly known facts. You have to decide which of the given conclusions, if any follows from the given statements.

Statements:

- I. All clouds are fogs.
- II. All fogs are white.

Conclusions:

- I. Some white are clouds.
- II. Some fogs are clouds.

- A) Conclusion I follows
- B) Conclusion II follows
- C) Neither I nor II follows
- D) Both I and II follow

Q10.Directions: In the following question two statements are given, followed by two conclusions I and II. You have to consider the statements to be true even if they are seen to be at variance from commonly known facts. You have to decide which of the given conclusions, if any follows from the given statements.

Statements:

- I. All flowers are leaves.**
- II. Some flowers are plants.**

Conclusions:

- I. Some leaves are plants.**
- II. Some plants are flowers.**

- A) Conclusion I follows
- B) Conclusion II follows
- C) Neither I nor II follows
- D) Both I and II follow

SOLUTIONS

1-D

Given:

Statements:

- I. The pass percentage in the subject of Political Science is very low as compared to others in the same curriculum.
- II. The students who were admitted to the program did not study Political Science earlier.

Conclusions:

- I. The foundation of the subject is very important for a student to perform well in examinations.
- II. Political Science is a generic subject, and students can attempt it without any problem.

Based on the given statements,

Conclusion I logically follows from Statement I. The low pass percentage in Political Science suggests that students without a solid foundation in the subject may struggle in exams.

Conclusion II doesn't directly follow from the given statements. While Statement II mentions that admitted students did not study Political Science earlier, it doesn't necessarily imply that Political Science is a generic subject that students can attempt without any problem.

So, in this case, only Conclusion I logically follows from the given statements. Hence, the fourth option is correct.

2-D

Given:

Statements:

- I. We are going back again to our ancestors and finding out the importance of Yoga and Pranayam.
- II. People in the West have already opted it. It does not require any external equipment but only body and soul.

Conclusions:

- I. Ancient science is the treasure of many cures and natural remedies for various

diseases.

II. Technology has overshadowed these ancient sources and introduced new concepts of fitness called gym.

Based on the given statements,

Conclusion I logically follow from the given statements. Statement I suggests that people are exploring the importance of Yoga and Pranayam, which implies that ancient practices like Yoga and Pranayam offer remedies for various diseases.

Conclusion II doesn't directly follow from the statements. While the statements discuss the adoption of Yoga and Pranayam, they don't explicitly mention that technology has introduced gym-based fitness concepts.

Thus, only Conclusion I logically follows from the given statements. Hence, the fourth option is correct.

3-D

Given:

Statements:

I. Children play in the playground.

II. It gives them a different approach to problem-solving and decision-making.

Given Conclusions:

I. Playing outdoors is very necessary for the overall development of the child.

II. There should be a balance between playing and studying for the child.

Based on the given statements,

Conclusion I logically follow from the statements. The fact that children play in the playground suggests that playing outdoors is essential for a child's overall development.

Conclusion II doesn't directly follow from the statements. While the benefits of outdoor play are implied, the statements don't explicitly address the need for a balance between playing and studying.

So, the correct answer is only Conclusion I logically follows from the given statements. Hence, the fourth option is correct.

4-A

According to the given statement –

Argument I states that Hollywood movies are successful despite not having songs. While this suggests that songs might not be a crucial factor for success, it doesn't directly address whether songs should be eliminated from Indian movies.

Argument II points out that songs help to increase the length of the movie. It doesn't provide a strong reason for keeping songs in Indian movies.

Neither argument I nor II strongly follows the given statement. Hence, the fourth option is correct.

5-B

11-B

According to the given statement –

Argument I states that Hollywood movies are successful despite not having songs. While this suggests that songs might not be a crucial factor for success, it doesn't directly address whether songs should be eliminated from Indian movies.

Argument II points out that songs help to increase the length of the movie. It doesn't provide a strong reason for keeping songs in Indian movies.

Neither argument I nor II strongly follows the given statement. Hence, the fourth option is correct.

6-C

Given:

Statements:

(I) No women can vote.

(II) Some women are politicians.

Let's analyze the conclusions

Conclusion (I): Male politicians can vote.

This conclusion isn't directly supported by the given statements. We know that no woman can vote, but the statements don't give us any information about whether male politicians can vote or not. So, this conclusion does not follow.

Conclusion (II): Some politicians can vote.

This conclusion isn't directly supported by the given statements. The statements do not mention anything about whether politicians can vote or not. So, this conclusion does not follow.

Hence, the third option is correct.

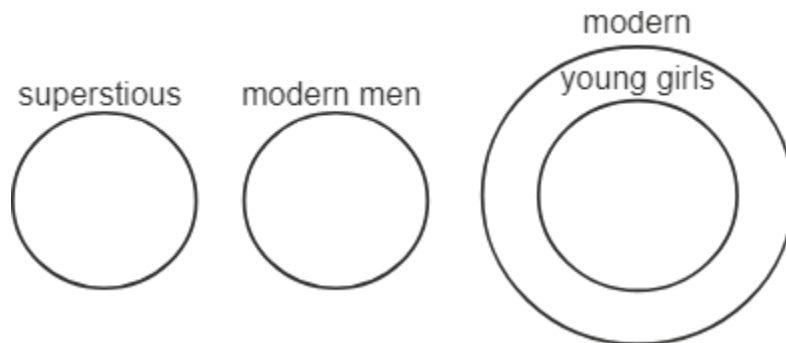
7-C

Given:

Statements:

1. All young girls are modern.
2. No modern men are superstitious.

The venn diagram is:



Let's analyze the conclusions

Conclusion (I): No girls are superstitious.

The statements only mention young girls. None of the statements contain any information about girls. So, This conclusion does not follow.

Conclusion (II): No young men are superstitious.

The statements only mention modern men. None of the statements contain any information about young men. So, This conclusion does not follow.

So, neither Conclusion I nor Conclusion II follows. Hence, the third option is correct.

8-C

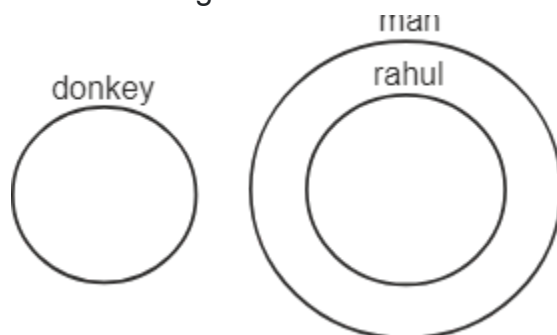
Given:

Statements:

No man is a donkey.

Rahul is a man.

The Venn diagram is:



Let's analyze the conclusions–

Conclusion (I): Rahul is not a donkey.

From the Venn diagram, we can see that the circles that represent Rahul and the donkey do not overlap. So, Rahul is not a donkey. This conclusion follows.

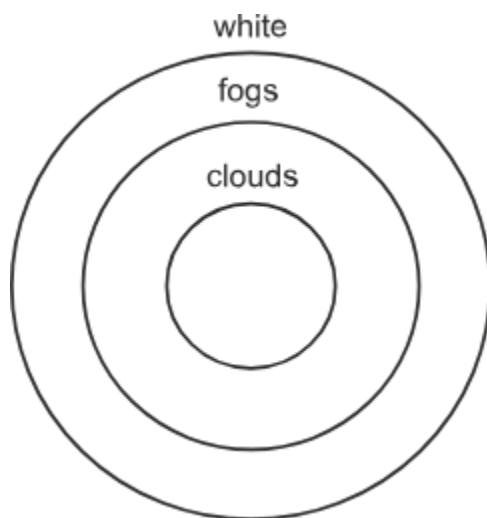
Conclusion (II): All men are not Rahul.

This conclusion does not follow because there is a possibility that Rahul is the name of all the men.

So, the only conclusion I follow. Hence, the third option is correct.

9-D

According to the given statements, the Venn diagram will be –



Now, let's analyse the conclusions –

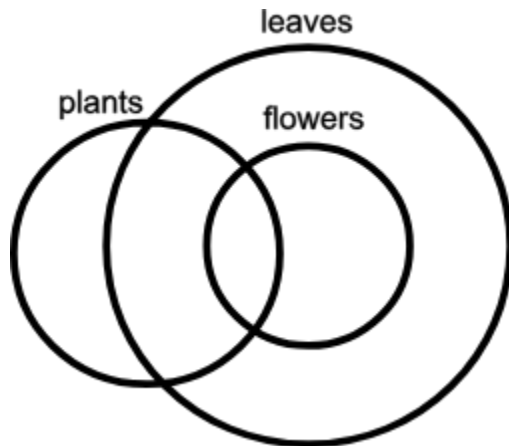
Conclusion (I): Some white are clouds – From the diagram, we can see that the circle that represents white overlaps the circle that represents clouds completely which means the relation of 'some' between white and clouds can be drawn from this. So, this conclusion follows.

Conclusion (II): Some fogs are clouds – From the diagram, we can see that some part of the circle that represents fogs overlaps the circle that represents clouds completely which means the relation of 'some' between fogs and clouds can be drawn from this. So, this conclusion follows.

Both conclusions I and II follow. Hence, the third option is correct.

10-D

According to the given statements, the Venn diagram will be –



Now, let's analyse the conclusions –

Conclusion (I): Some leaves are plants – From the diagram, we can see that some parts of the circles that represent plants and leaves overlap each other which means that the given conclusion can be drawn from the statements. So, this conclusion follows.

Conclusion (II): Some plants are flowers – From the diagram, we can see that some parts of the circles that represent plants and flowers overlap each other. which means that the given conclusion can be drawn from the statements. So, this conclusion follows.

Both conclusions I and II follow. Hence, the third option is correct.

CODING-DECODING

Coding is a technique used for transmitting messages between a sender and a receiver, ensuring privacy from third parties. It involves encoding data before transmission and decoding it at the receiver's end using common keys.

Coding and decoding are integral components of the Reasoning Section in competitive exams, with varying difficulty levels. The approach to solving these questions involves carefully observing the given alphabets or numbers, identifying their sequences (ascending or descending), and deducing the rules governing their arrangement.

The process includes noting the number of variables, drawing corresponding Venn diagrams, and deducing logical relationships based on the statements. The correct conclusion is then selected by comparing it with the obtained Venn diagrams.

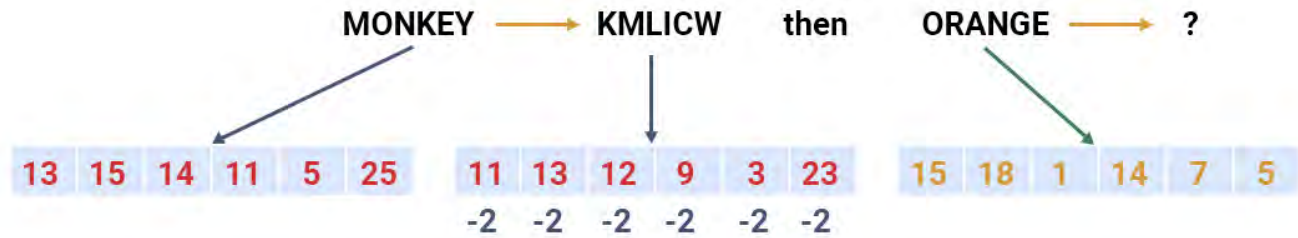
Coding, decoding, and reasoning are crucial in competitive exams, assessing logical aptitude. Learning these skills is essential for success in entrance tests, job qualifications, and recruitment processes. These skills not only contribute to exam performance but also enhance logical thinking in day-to-day life.

Coding involves encrypting words or numbers using specific patterns, while decoding decrypts these patterns to retrieve the original data. Reasoning, on the other hand, evaluates logical aptitude.

The importance of learning coding, decoding, and reasoning lies in their significance in competitive examinations and job qualifications. Aptitude skills, tested through these questions, play a vital role in qualifying for further rounds in job selection processes.

Various types of coding and decoding include letter coding, substitution, mixed letter coding, and mixed number coding. These types are commonly featured in bank exams, each requiring a different approach for solution.

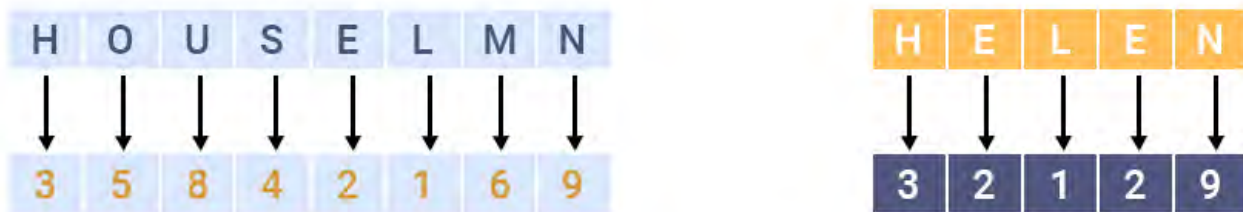
Letter coding involves replacing real alphabets in a word with other alphabets according to a specific rule.



So, each alphabet of ORANGE should be decreased by 2



Substitution entails replacing object names with different names, requiring careful tracing. Mixed letter coding and mixed number coding involve decoding complete messages or groups of numbers, respectively, based on common elements.



HELEN is coded as 32129

In conclusion, mastering coding, decoding, and reasoning skills is crucial for success in competitive exams, job selections, and overall logical thinking. The ability to decode patterns and apply logical reasoning is a valuable asset in various aspects of life.

PRACTICE QUESTIONS BASED ON CODING-DECODING PROBLEMS

Q1.Direction: If MIGHT is written as KGEFR, how can DIARY be written in that code?

- A) AGZPV
- B) BGYPW
- C) BGWOV
- D) AGYNW

Q2.Direction: In a certain code, REDIP is the code for PRIDE. Which is the word for AERDC is that code?

- A) CADRE
- B) CARED
- C) RACED
- D) CEDAR

Q3.Direction: If MARCH is coded as PXUZK, what will be the code of APRIL?

- A) DMUFO
- B) DSULO
- C) ZKIRO
- D) ZKRIO

Q4.Direction: In a coded language, BRINJAL is written as LAJNIRB. How will LADYFINGER be written in that code?

- A) RNEGIFYDAL
- B) RINEGIFYDAL
- C) REGNIFYDAL
- D) RGENIFYDAL

Q5.Direction: In a certain code, RELIGION is written as NOIGILER, how SECULAR can be written in that code?

- A) RALCUCES
- B) RALCUES
- C) RALUCES
- D) RAULSEC

Q6.Direction: If BAT = CBU, CAT =?

- A) DBU
- B) BUD
- C) DBV
- D) None of the above

Q7.Direction: The question given below is based on the following set of codes.

| | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|
| Digit | 1 | 3 | 5 | 4 | 6 | 0 | 8 | 7 | 2 |
| Code | A | O | Z | L | D | T | N | H | Q |

Find the code for 21500.

- A) SLPHO
- B) SHLPO
- C) SLOPH
- D) QAZTT

Q8.Direction: If REASON is coded as 5 and BELIEVED as 7, what is the code number for GOVERNMENT?

- A) 6
- B) 8
- C) 9
- D) 10

Q9.Directions: In a certain code language, CASIO is written as 3119915. How is CITIZEN written in that code language?

- A) 295629134
- B) 3192295614
- C) 3912659214
- D) 3920926514

Q10.Direction: A group of alphabets is given with each being assigned a number. These have to be unscrambled into a meaningful word and the correct order of the letters may be indicated from the given responses.

| | | | | | |
|------------|-------------|--------------|-------------|------------|-------------|
| E | R | D | I | S | P |
| (i) | (ii) | (iii) | (iv) | (v) | (vi) |

- A) (v), (iv), (vi), (i), (ii), (iii)
- B) (vi), (v), (iv), (ii), (iii), (i)
- C) (ii), (iii), (iv), (v), (vi), (i)
- D) (v), (vi), (iv), (iii), (i), (ii)

SOLUTIONS

1-B

Given:

MIGHT is written as KGEFR

Here, $M - 2 = K$; $I - 2 = G$; $G - 2 = E$; $H - 2 = F$; $T - 2 = R$

Similarly, DIARY will be coded as:

$D - 2 = B$; $I - 2 = G$; $A - 2 = Y$; $R - 2 = P$; $Y - 2 = W$

Therefore, the required code is BGYPW.

Hence, the second option is correct.

2-A

Given:

REDIP is the code for PRIDE.

Like, The letters of REDIP have been rearranged to form the word PRIDE.

Similarly, The word CADRE will be formed by rearranging the letters of the letter cluster AERDC.

Hence, the first option is correct.

3-A

Given:

MARCH is coded as PXUZK

Here, $M + 3 = P$; $A - 3 = X$; $R + 3 = U$; $C - 3 = Z$; $H + 3 = K$

Similarly, APRIL will be coded as:

$A + 3 = D$; $P - 3 = M$; $R + 3 = U$; $I - 3 = F$, $L + 3 = O$

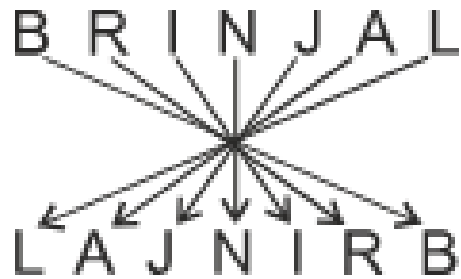
Hence, the first option is correct.

4-C

Given:

BRINJAL is written as LAJNIRB

Reverse the order of the letters in the word BRINJAL to get the required code –



Thus, BRINJAL is coded as LAJNIRB.

Similarly, follow the same pattern for LADYFINGER –



So, LADYFINGER is written as REGNIFYDAL. Hence, the third option is correct.

5-C

Given:

RELIGION is written as NOIGILER.

Reverse each letter of RELIGION to obtain the required code –

Here, RELIGION is reversed then we get NOIGILER.

Thus, RELIGION is coded as NOIGILER.

Similarly, follow the same pattern for SECULAR –

Here, SECULAR is reversed then we get RALUCES.

So, SECULAR is coded as RALUCES. Hence, the third option is correct.

6-A

Given:

BAT = CBU

Add 1 to each letter of the word;

$B + 1 = C$; $A + 1 = B$; $T + 1 = U$

Similarly, for CAT; $C + 1 = D$; $A + 1 = B$; $T + 1 = U$

So, CAT = DBU. Hence, the first option is correct.

7-D

Given:

| | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|
| Digit | 1 | 3 | 5 | 4 | 6 | 0 | 8 | 7 | 2 |
| Code | A | O | Z | L | D | T | N | H | Q |

$2 \rightarrow Q$; $1 \rightarrow A$; $5 \rightarrow Z$; $0 \rightarrow T$

So, the code for 21500 is QAZTT. Hence, the fourth option is correct.

8-C

Given:

REASON is coded as 5 and BELIEVED as 7.

The number of letters in the word REASON is 6 and $6 - 1 = 5$

The number of letters in the word BELIEVED is 8 and $8 - 1 = 7$

Similarly, the number of letters in the word GOVERNMENT is 10 and $10 - 1 = 9$

So, GOVERNMENT is coded as 9. Hence, the third option is correct.

9-D

Given:

CASIO is written as 3119915.

The position value of the letters of CASIO –

| | | | | | |
|---------|---|---|---|---|---|
| LETTERS | C | A | S | I | O |
|---------|---|---|---|---|---|

| | | | | | |
|----------------|---|---|----|---|----|
| POSITION VALUE | 3 | 1 | 19 | 9 | 15 |
|----------------|---|---|----|---|----|

Thus, CASIO is coded as 3119915.

Similarly, follow the same pattern for CITIZEN –
Position value of the letters of CITIZEN –

| | | | | | | | |
|----------------|---|---|----|---|----|---|----|
| LETTERS | C | I | T | I | Z | E | N |
| POSITION VALUE | 3 | 9 | 20 | 9 | 26 | 5 | 14 |

Thus, CITIZEN is coded as 3920926514.

Only the fourth option follows the same pattern as followed by the given word. Hence, the fourth option is correct.

10-D

Given:

| | | | | | |
|-----|------|-------|------|-----|------|
| E | R | D | I | S | P |
| (i) | (ii) | (iii) | (iv) | (v) | (vi) |

Now, unscramble the given letter cluster into a meaningful word –
ERDISP → SPIDER

Now, rearrange the assigned numbers according to the word SPIDER as shown below –

| | | | | | |
|-----|------|------|-------|-----|------|
| S | P | I | D | E | R |
| (v) | (vi) | (iv) | (iii) | (i) | (ii) |

Therefore, SPIDER is coded as (v), (vi), (iv), (iii), (i), (ii). Hence, the fourth option is correct.

FULL MOCK TEST

Q1.Assertion (A): The Bauhaus movement emphasized the relationship between form and function in design.

Reason (R): Bauhaus was grounded in the idea of creating practical, usable objects with an aesthetic appeal.

- A] Both A and R are true and R is the correct explanation of A.
- B] Both A and R are true but R is not the correct explanation of A.
- C] A is true but R is false.
- D] A is false but R is true.

Q2.Assertion (A): Sustainable fashion is becoming increasingly popular as it addresses environmental and ethical concerns in the fashion industry.

Reason (R): Sustainable fashion involves using eco-friendly materials, ethical manufacturing practices, and promoting recycling and upcycling in fashion.

- A] Both A and R are true and R is the correct explanation of A.
- B] Both A and R are true but R is not the correct explanation of A.
- C] A is true but R is false.
- D] A is false but R is true.

Q3.Direction: In each of the following questions, two statements are given followed by two conclusions I and II. You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You are to decide which of the given conclusions, if any, follow from the given statements to indicate your answer.

Statements

- a. Best performance in the Olympics fetches a gold medal.
- b. The player X got a gold medal but later was found to be using a prohibited drug.

Conclusions

- I. X should be allowed to keep the gold medal.
- II. The gold medal should be withdrawn and given to the next person.

1. Only conclusion II follows

2. Neither conclusion I nor II follows
3. Both conclusions I and II follow
4. Only conclusion I follows

Q4.Direction: In the following questions, two statements are given followed by two conclusions I and II. You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follow from the given statements.

Statements

- I. The Constitution assures fundamental rights.
- II. Parliament has the right to amend the Constitution.

Conclusions

- I. Parliament included fundamental rights in the Constitution.
- II. Parliament did not assure the fundamental rights.

1. Only conclusion I follows
2. Only conclusion II follows
3. Both conclusions I and II follow
4. None of them

Q5 .Direction: In the following question, a series is given with one number missing. Select the missing number from the given alternatives.

19, 9, 28, 37, 65, ?

1. 99
2. 97
3. 102
4. 113

Q6.Direction: A series is given below with one term missing. Choose the correct alternative from the given ones that will complete the series.

HPA, FMZ, DJY, BGX, ?

1. ZDW
2. ZEV
3. YDW

4. YEV

Q7.Direction: Which of the following terms follows the trend of the given list?

abABABAB, ABabABAB, ABABabAB, ABABABab, abABABAB, ?

1. ABABAbab
2. abABABAB
3. ABabABAA
4. ABabABAB

Q8. Direction: In the following question, find the odd letter from the given alternatives.

1. NT
2. WC
3. JP
4. GE

Q9.Direction: In the following question, select the odd one from the given alternatives.

1. RTV
2. HJL
3. KMP
4. BDF

Q10.Direction: In the following question, select the odd letter cluster from the given alternatives.

1. OMK
2. RPN
3. USP
4. XVT

Q11.Direction: A is the father of B, B is the daughter of C, D is the brother of B and N is the sister of C. How is B related to N?

1. Daughter
2. Niece
3. Mother

4. Sister

Q12 Direction: There are five girls — R, S, T, P, and Q — sitting in a row facing north. T is sitting exactly in the middle of the row. Q is sitting to the immediate right and immediate left of P and T, respectively. S is not sitting at the extreme end. Who is sitting third to the left of R?

1. P
2. Q
3. S
4. T

Q13.Direction: In a certain code language, RUN is written as 50, and BUS is written as 39. How is GUN written in that code language?

1. 37
2. 38
3. 39
4. 42

Q14.Direction: Sunita walks 45 meters towards the south, then turns right and walks another 45 meters. She then turns right and walks for 20 meters to reach point L. She then again turns to her right and walks for 45 meters. How far (in meters) is she from point L?

1. 50
2. 45
3. 25
4. 60

Q15.If the sum of two numbers is 10 where as their difference is 4, then the greater number is_____.

1. 5
2. 7
3. 4
4. 3

Q16.Direction: In the following question below, some statements are followed by some conclusions. Taking the given statements to be true, even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows from the given statements.

Statements:

- I. Only first-division holders are admitted.
- II. Ram is a first-division holder.

Conclusions:

- I. Ram is admitted.
- II. Only Ram is admitted.

- A) Conclusion I follows
- B) Conclusion II follows
- C) Neither I nor II follows
- D) Both I or II follow

Q17..Direction: In the following question, two statements are given, each followed by two Conclusions I and II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You have to decide which of the given Conclusions, if any, follows from the given statements.

Statements:

- I. The pass percentage in the subject of Political Science is very low as compared to others in the same curriculum.
- II. The students who were admitted to the program did not study Political Science earlier.

Conclusions:

- I. The foundation of the subject is very important for a student to perform well in examinations.

II. Political Science is a generic subject and students can attempt it without any problem.

- A) Only Conclusion II follows
- B) Conclusion I and II both follow
- C) Neither I nor II follows
- D) Only Conclusion I follows

Q18. Assertion: Plants are green in color.

Reason: Plants contain a pigment called chlorophyll, which appears green.

- A) Both the assertion and reason are true, and the reason is a correct explanation of the assertion.
- B) Both the assertion and reason are true, but the reason is not a correct explanation of the assertion.
- C) The assertion is true, but the reason is false.
- D) The assertion is false, but the reason is true.

Q19. Assertion:Lightning is accompanied by thunder.

Reason: Lightning and thunder occur simultaneously during a thunderstorm.

- A) Both the assertion and reason are true, and the reason is a correct explanation of the assertion.
- B) Both the assertion and reason are true, but the reason is not a correct explanation of the assertion.
- C) The assertion is true, but the reason is false.
- D) The assertion is false, but the reason is true.

Q20.According to the given statements, Which of the following options is correct.

1. Statement 1:

Water boils at 100 degrees Celsius at standard atmospheric pressure.

Statement 2:

Water boils at 50 degrees Celsius at standard atmospheric pressure.

- A) Statement 1 is correct, but Statement 2 is incorrect.
- B) Statement 2 is correct, but Statement 1 is incorrect.
- C) Statement 1 is incorrect.
- D) Statement 2 is incorrect.

Q21. According to the given statements, Which of the following options is correct.

Statement 1:

Photosynthesis is the process by which plants convert sunlight into energy.

Statement 2:

Respiration is the process by which plants convert carbon dioxide into oxygen.

- A) Statement 1 is correct, but Statement 2 is incorrect.
- B) Statement 2 is correct, but Statement 1 is incorrect.
- C) Statement 1 is incorrect.
- D) Statement 2 is incorrect.

Q22. Direction: In the following question, select the odd letter cluster from the given alternatives.

- A) DG
- B) PS
- C) VY
- D) NR

Q23. Direction: In the following question, select the odd letter cluster from the given alternatives.

- A) OMK
- B) RPN
- C) USP
- D) XVT

Q24. Direction: Prema has a son named Anand. Rajiv is Prema's brother. Neha has a daughter named Rashmi. Neha is Rajiv's sister. What is Anand's relationship with Rashmi?

- A) Nephew
- B) Uncle
- C) Brother-in-Law
- D) Cousin

Q25.Direction: There are five friends. I, J, K, L, and M. K's income is more than L's income but less than M's income. J's income is the least. I's income is less than K's income. Whose income is the maximum?

- A) L
- B) I
- C) K
- D) M

Q26. Direction: In a certain coded language, chips are good is written as lo pur tan, soul are mate is written as tan fu gil and chips contain metal is written as pur st mo. What is the code for contain in that language?

- A) Tan
- B) St
- C) Mo
- D) st or mo

Q27. Direction: In a certain code language, peanuts are salt is written as tu pi ro, men are handsome is written as no so pi and handsome is smart is written as so pa la. What is the code for men in that code language?

- A) Pi
- B) Fo
- C) Ro
- D) no

Q28 Direction: In a certain code language, SUN is written as 54 and PUT is written as 57. How is CAT written in that code language?

- A) 28
- B) 24
- C) 52
- D) 36

Q29. Direction: In a certain code language, HIM - ACE is written as 21. How is SIP - TAG written in that code language?

- A) 12
- B) 16
- C) 14
- D) 19

Q30. Direction: There are five girls—R, S, T, P, and Q—sitting in a row facing north. T is sitting exactly in the middle of the row. Q is sitting to the immediate right and immediate left of P and T, respectively. S is not sitting at the extreme end. Who is sitting third to the left of R?

- A) P
- B) Q
- C) S
- D) T

Q31. Direction: In the following question, two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if they are seen to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statements:

1. All dawns are day.
2. No day is night.

Conclusions:

- I. No night is day.
- II. Some dawns are night.

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

Q32. Direction: In the following question two statements are given, followed by two conclusions I and II. You have to consider the statements to be true even if they are seen to be at variance from commonly known facts. You have to decide which of the given conclusions, if any follows from the given statements.

Statements:

- I. All flowers are leaves.**
- II. Some flowers are plants.**

Conclusions:

- I. Some leaves are plants.**
- II. Some plants are flowers.**

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

Q33. Assertion:The process of nuclear fusion powers the Sun and other stars.
Reason:Nuclear fusion occurs when atomic nuclei combine, releasing a tremendous amount of energy.

- A) Both the assertion and reason are true, and the reason is a correct explanation of the assertion.
- B) Both the assertion and reason are true, but the reason is not a correct explanation of the assertion.
- C) The assertion is true, but the reason is false.
- D) The assertion is false, but the reason is true.

Q34. Assertion:The primary function of red blood cells is to transport oxygen to body tissues.

Reason:Red blood cells contain hemoglobin, a molecule that binds to oxygen and carries it in the bloodstream.

- A) Both the assertion and reason are true, and the reason is a correct explanation of the assertion.
- B) Both the assertion and reason are true, but the reason is not a correct explanation of the assertion.

- C) The assertion is true, but the reason is false.
- D) The assertion is false, but the reason is true.

Q35. According to the given statements, Which of the following options is correct.

Statement 1: The Amazon River is the longest river in the world.

Statement 2: The Nile River is the second-longest river in the world.

- A) Statement 1 is correct, but Statement 2 is incorrect.
- B) Statement 2 is incorrect.
- C) Statement 1 is incorrect.
- D) Statement 2 is correct, but Statement 1 is also correct.

Q36. According to the given statements, Which of the following options is correct.

Statement 1: Neon is a noble gas.

Statement 2: Helium is a halogen.

- A) Statement 1 is correct, but Statement 2 is incorrect.
- B) Statement 2 is incorrect.
- C) Statement 1 is incorrect.
- D) Statement 2 is correct, but Statement 1 is also correct.

Q37. Direction: In the following question, four number pairs are given. The number on the left side of (–) is related to the number on the right side of (–) with some logic, rule, or relationship. Three are similar on the basis of the same logic, rule, or relationship. Select the odd one out of the given alternatives.

- A) 20 – 30
- B) 35 – 45
- C) 45 – 55
- D) 25 – 30

Q38. Direction: In the following question, four number pairs are given. The number on the left side of (–) is related to the number on the right side of (–) with some logic, rule, or relationship. Three are similar on the basis of the same logic, rule, or relationship. Select the odd one out of the given alternatives.

- A) (1, 11, 1111)
- B) (2, 22, 4444)

- C) (4, 44, 4444)
D) (8, 88, 8888)

Q39. Direction: Introducing a girl, Raju says, "She is the daughter of my grandfather's son's daughter". How is the girl related to Raju?

- A) Cousin
B) Wife
C) Sister
D) Niece

Q40.Direction: The weight of P is twice that of Q. The weight of Q is half that of R. The weight of R is 3 times of T. The weight of T is half that of S. The weight of T is greater than the weight of how many people among P, Q, R, and S?

- A) 1
B) 0
C) 3
D) 4

Q41.Direction: In a certain code KINDLE is written as ELDNIK. How can EXOTIC be written in that code?

- A) EXIOTC
B) COXITE
C) CXOTIE
D) CITOXE

Q42.Direction: In a code language, the following alphabets are coded in a particular way as shown.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | C | N | P | R | M | D | Y | Z | Q |
| 4 | 9 | 0 | 6 | 2 | 1 | 7 | 8 | 3 | 5 |

How are the given letters coded in that language?

QRCYNPD

- A) 5298067
B) 5298061

- C) 5984067
- D) 5298306

Q43.Direction: If CAT is coded as 3120, then what code can be given to NAVIN?

- A) 14122914
- B) 49274654
- C) 73957614
- D) None of these

Q44. Direction: To attend an exam, Sudhir reached the school by travelling 5 km towards the south, and after a sharp left turn, he travelled for about 10 km. He again made a sharp left turn and reached the school by travelling 5 km more. Which direction is Sudhir's starting point from the school?

- A) East
- B) West
- C) North
- D) South

Q45.Direction: In the following question, which one set of letters, when sequentially placed at the gaps in the given letter series, will complete it?

a_d_bd_ab_dd

- A) badd
- B) ddba
- C) bcda
- D) dbac

Q46. Direction: If JACOB can be written as QZXLY, then KENDY can be written as

-----.

- A)PVWMA
- B) PVMWB
- C) PUMWB
- D) PVMWA

Q47.Direction: If DELHI is coded as 73541 and CALCUTTA as 82589662, then how would be CALICUT coded in that code?

- A) 5978213
- B) 8251896

- C) 8543691
- D) 5279431

Q48.Direction: If NASCENT is written as 2734526, how is SENTENCE written in that code?

- A) 35265235
- B) 35256245
- C) 35265245
- D) 35256275

Q49. Direction: Mr. A travelled from a point X straight towards east at a distance of 80 m. He turned to his right and walked 40 m. He again turned to his right and walked 80 m. He then turned his left and walked 20 m and took left and walked again 80 m. Now he turned towards his left and walked 60 m and stopped. How far and in which direction is he from the starting point X?

- A) 80 m towards North
- B) 60 m towards East
- C) 80 m towards West
- D) 80 m towards East

Q50..Direction: Which of the following terms follows the trend of the given list? ABABAbab, ABABabaB, ABAbabAB, ABabaBAB, AbabABAB, ?

- A) aBABABab
- B) abaBABAB
- C) ABABAbab
- D) ABABabaB

ANSWER KEY

| | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| A | A | A | 4 | C | A | D | D | C | C |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| B | B | C | B | B | A | D | A | A | A |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| A | D | C | D | D | D | D | B | B | B |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| A | C | A | A | D | A | D | B | D | B |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| D | A | A | B | A | B | B | C | D | B |

SOLUTIONS

1-A

The Bauhaus movement indeed emphasized the relationship between form and function, aiming to merge aesthetics with practicality. This movement was centered around creating usable objects that also held aesthetic value, thus making Reason (R) the correct explanation of Assertion (A).

2-A

The rise of sustainable fashion is indeed a response to environmental and ethical concerns within the fashion industry. Sustainable fashion practices such as using eco-friendly materials, employing ethical manufacturing practices, and promoting recycling and upcycling are aimed at addressing these concerns, making Reason (R) the correct explanation of Assertion (A).

3- A

Given:

Statements

- a. Best performance in the Olympics fetches a gold medal.
- b. The player X got a gold medal but later was found to be using a prohibited drug.

Now, let's consider the conclusions:

I. X should be allowed to keep the gold medal.

This conclusion does not logically follow from the given statements. The use of a prohibited drug in sports is typically considered cheating and is against the rules of fair competition. Therefore, allowing X to keep the gold medal would be against the principles of fair play and the rules of the Olympics.

II. The gold medal should be withdrawn and given to the next person.

This conclusion logically follows from the given statements. If an athlete is found to have used a prohibited drug, it is common practice in sports to disqualify that athlete and strip

them of any medals or awards they received. The gold medal should be awarded to the next deserving athlete who did not violate the rules.

So, conclusion II is the correct conclusion based on the given statements.

Hence, the first option is correct.

4-D

Given:

Statements

I. The Constitution assures fundamental rights.

II. Parliament has the right to amend the Constitution.

Let's analyze the conclusions:

I. Parliament included fundamental rights in the Constitution.

This conclusion does not logically follow from the given statements. Statement I tells us that the Constitution assures fundamental rights but doesn't specify that Parliament included these rights. Fundamental rights could have been included when the Constitution was initially drafted or through amendments, but this statement doesn't provide information about the process.

II. Parliament did not assure the fundamental rights.

This conclusion does not logically follow from the given statements. Statement I clearly states that the Constitution assures fundamental rights. While Parliament has the right to amend the Constitution, it doesn't mean that Parliament did not ensure the fundamental rights. Fundamental rights could have been included in the Constitution initially. Parliament's role may be to amend or modify the Constitution as needed, which doesn't imply that Parliament did not ensure these rights.

So, neither Conclusion I nor Conclusion II logically follows from the given statements.

Hence, the fourth option is correct.

5-C

Given:

19, 9, 28, 37, 65, ?

$19 + 9 = 28$; $9 + 28 = 37$; $28 + 37 = 65$; $37 + 65 = 102$

So, the series becomes –

19, 9, 28, 37, 65, 102

Hence, the third option is correct.

6-A

Given:

HPA, FMZ, DJY, BGX, ?

HPA; $H - 2 = F$; $P - 3 = M$; $A - 1 = Z$

FMZ; $F - 2 = D$; $M - 3 = J$; $Z - 1 = Y$

DJY; $D - 2 = B$; $J - 3 = G$; $Y - 1 = X$

BGX; $B - 2 = Z$; $G - 3 = D$; $X - 1 = W$

So, the series becomes –

HPA, FMZ, DJY, BGX, ZDW

Hence, the first option is correct.

7-D

Given:

abABABAB, ABabABAB, ABABabAB, ABABABab, abABABAB, ?

In all terms, the letters ab are changed from lowercase to uppercase, and the letters AB are changed from uppercase to lowercase as we move from left to right.

So, the sixth term becomes ABabABAB

Hence, the fourth option is correct.

8-D

Let's check the options —

First option: NT \rightarrow N + 6 = T

Second option: WC \rightarrow W + 6 = C

Third option: JP \rightarrow J + 6 = P

Fourth option: GE \rightarrow G - 2 = E

Therefore, the fourth option is different from the other three. So, it's an odd one out.

Hence, the fourth option is correct.

9-C

Let's check the options –

First option: RTV; R + 2 = T; T + 2 = V

Second option: HJL; H + 2 = J; J + 2 = L

Third option: KMP; K + 2 = M; M + 3 = P

Fourth option: BDF; B + 2 = D; D + 2 = F

The difference between the letters of the third option is different from the other options. So, the third option is different from the others.

Hence, the third option is correct.

10-C

Let's check the options –

First option: OMK; O - 2 = M; M - 2 = K

Second option: RPN; $R - 2 = P$; $P - 2 = N$

Third option: USP; $U - 2 = S$; $S - 3 = P$ (The third option is different from the other three.)

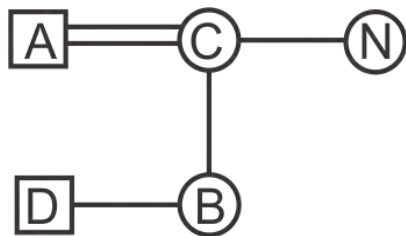
Fourth option: XVT; $X - 2 = V$; $V - 2 = T$

Hence, the third option is correct.

11-B

Given:

$B \Rightarrow$ daughter of A and C; $C \Rightarrow$ mother of B; $N \Rightarrow$ sister of C



Therefore, **B** is the **niece** of **N**.

Hence, the **second option** is correct.

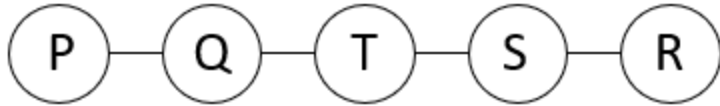
12-B

Given:

(i) T is sitting exactly in the middle of the row.



(ii) Q is sitting to the immediate right and immediate left of P and T, respectively. S is not sitting at the extreme end.



From the final seating arrangement, 'Q' is sitting third to the left of 'R'.

Hence, the **second option** is correct.

13-C

Given:

RUN \rightarrow 50; BUS \rightarrow 39; GUN \rightarrow ?

Add the place values of each letter of RUN and subtract 3 from it –

$$\text{RUN} \rightarrow (18 + 21 + 14) - 3 = 53 - 3 = 50$$

Thus, RUN is coded as 50.

$$\text{Likewise, BUS} \rightarrow (2 + 21 + 19) - 3 = 42 - 3 = 39$$

Thus, BUS is coded as 39.

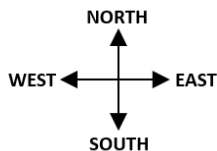
Similarly, follow the same pattern for GUN –

$$\text{GUN} \rightarrow (7 + 21 + 14) - 3 = 42 - 3 = 39$$

Thus, GUN is coded as 39.

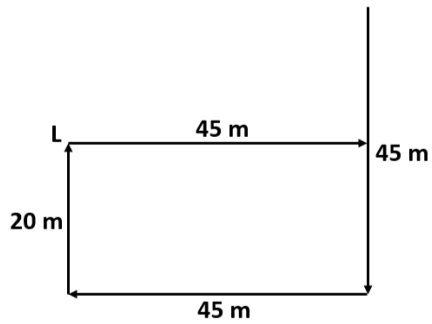
Hence, the third option is correct.

14-B

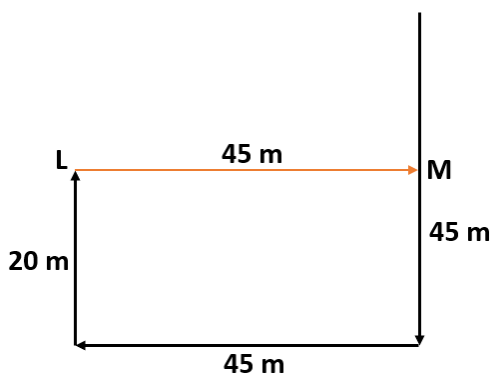


Given:

Firstly, we will draw the diagram as per the given instructions:



Now, we have to find the distance between point L and the end point covered by Sunita:



The distance between point L and the endpoint

$$= LM$$

$$= 45 \text{ m}$$

So, the distance between point L and the endpoint covered by Sunita is 45 m.

Hence, the **second option** is correct.

15-B

Let the two numbers be x and y

according to question

$$x + y = 10 \quad \dots(1)$$

and

$$x - y = 4 \quad \dots(2)$$

Add (1) and (2)

$$2x = 14$$

$$x = 7 \text{ and } y = 3$$

Greater number is 7.

16-A

I. Ram is admitted.

II. Only Ram is admitted.

Based on the given statements,

Conclusion I (Ram is admitted) logically follows, but Conclusion II (Only Ram is admitted) does not necessarily follow because the given statements only imply that first-division holders are admitted, but they do not provide enough information to conclude that only Ram is admitted. Other first-division holders could also be admitted.

Therefore, Conclusion I follows. Hence, the **first option** is correct.

17-D

I. The foundation of the subject is very important for a student to perform well in examinations.

II. Political Science is a generic subject and students can attempt it without any problem.

Based on the given statements,

Conclusion I logically follows from Statement I. The low pass percentage in Political Science suggests that students without a solid foundation in the subject may struggle in exams.

Conclusion II doesn't directly follow from the given statements. While Statement II mentions that admitted students did not study Political Science earlier, it doesn't necessarily imply that Political Science is a generic subject that students can attempt without any problem.

So, in this case, only Conclusion I logically follows from the given statements. Hence, the **fourth option** is correct.

18-A

The green color of plants is due to the presence of the chlorophyll pigment, which is involved in photosynthesis.

19-A

Lightning and thunder are closely associated with each other and occur simultaneously. Lightning produces thunder due to the rapid heating and expansion of air around the lightning bolt, resulting in the sound of thunder.

20-A

Water indeed boils at 100 degrees Celsius at standard atmospheric pressure (1 atm). Statement 1 is correct. Statement 2 is incorrect because it does not represent the boiling point of water under standard conditions.

21-A

Statement 1 accurately describes photosynthesis, where plants convert sunlight into energy. Statement 2 is incorrect because respiration in plants involves the conversion of oxygen into carbon dioxide, not the other way around.

22-D

Let's check the options –

First option: DG; $D + 3 = G$

Second option: PS; $P + 3 = S$

Third option: VY; $V + 3 = Y$

Fourth option: NR; $N + 4 = R$ (The fourth option is different from the other three.)

Hence, the fourth option is correct.

23-C

Let's check the options –

First option: OMK; $O - 2 = M$; $M - 2 = K$

Second option: RPN; $R - 2 = P$; $P - 2 = N$

Third option: USP; $U - 2 = S$; $S - 3 = P$ (The third option is different from the other three.)

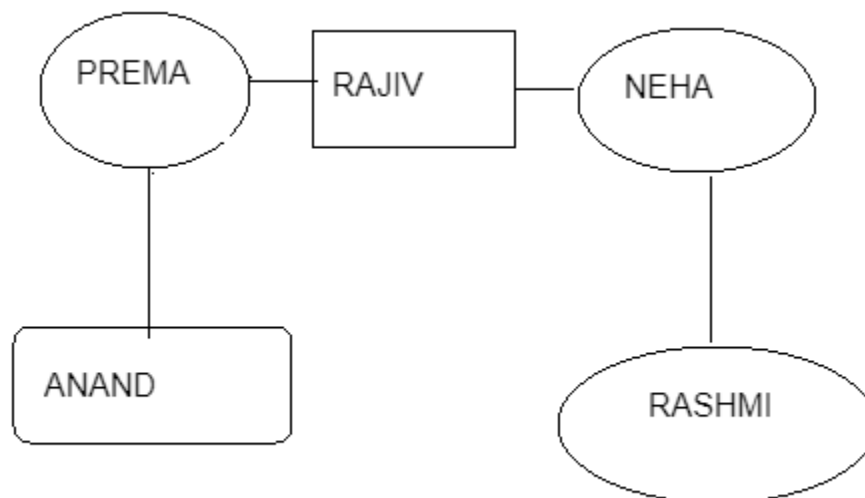
Fourth option: XVT; $X - 2 = V$; $V - 2 = T$

Hence, the third option is correct.

24-D

As per the instructions given, the family tree will be –

According to the above family tree, **Rashmi is the cousin of Anand.**



25-D

Given:

K's income is more than L's income but less than M's income, i.e. $M > K > L$.

Income of I is lower than income K. J has the lowest income, i.e. $M > K > L > J$.

Therefore, M's income is maximum. Hence, the fourth option is correct.

26-D

Given:

chips are good \Rightarrow lo pur tan; soul are mate \Rightarrow tan fu gil; chips contain metal \Rightarrow pur sti mo

By comparing all the three coded sentences, we find that –

chips \Rightarrow pur; are \Rightarrow tan; contain \Rightarrow sti or mo

Hence, the fourth option is correct.

27-D

Given:

peanuts are salt \Rightarrow tu pi ro; men are handsome \Rightarrow no so pi; handsome is smart \Rightarrow so pa la

By comparing all the three coded sentences, we find that –

are \Rightarrow pi; handsome \Rightarrow so; men \Rightarrow no

Hence, the fourth option is correct.

28-B

Given:

SUN is written as 54

S \rightarrow 19; U \rightarrow 21; N \rightarrow 14

Add all the place values to get the number; $19 + 21 + 14 = 54$

PUT is written as 57

P \rightarrow 16; U \rightarrow 21; T \rightarrow 20

Add all the place values to get the number; $16 + 21 + 20 = 57$

Similarly, for CAT; $C \rightarrow 3$; $A \rightarrow 1$; $T \rightarrow 20$

Add all the place values to get the number; $3 + 1 + 20 = 24$

Thus, CAT is coded as 24.

Hence, the second option is correct.

29-B

Given:

HIM - ACE is written as 21

$H \rightarrow 8$; $I \rightarrow 9$; $M \rightarrow 13$; add all the place values to get the number; $8 + 9 + 13 = 30$

$A \rightarrow 1$; $C \rightarrow 3$; $E \rightarrow 5$; add all the place values to get the number; $1 + 3 + 5 = 9$

Now, subtract both the values; $30 - 9 = 21$

Similarly, for SIP - TAG

$S \rightarrow 19$; $I \rightarrow 9$; $P \rightarrow 16$; add all the place values to get the number; $19 + 9 + 16 = 44$

$T \rightarrow 20$; $A \rightarrow 1$; $G \rightarrow 7$; add all the place values to get the number; $20 + 1 + 7 = 28$

Now, subtract both the values; $44 - 28 = 16$

Thus, SIP - TAG is coded as 16.

30-B

Given:

(i) T is sitting exactly in the middle of the row.



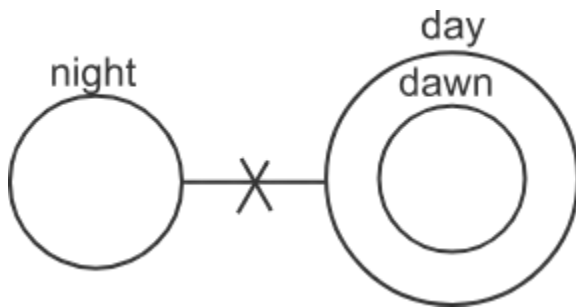
(ii) Q is sitting to the immediate right and immediate left of P and T, respectively. S is not sitting at the extreme end.



From the final seating arrangement, Q is sitting third to the left of R.

Hence, the second option is correct.

31-A



Now, let's analyze the conclusions –

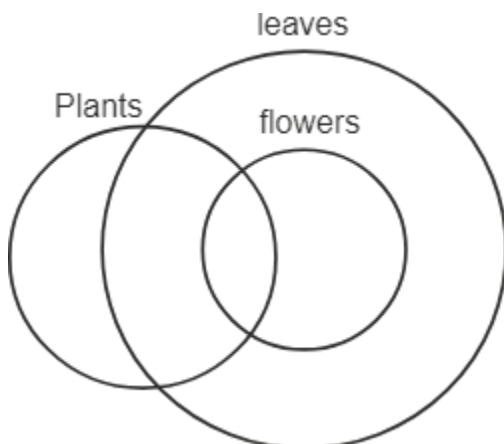
Conclusion (I): No night is day – From the diagram, we can see that circles representing night and day do not overlap which means there can not be any positive relation between them. So, this conclusion follows.

Conclusion (II): Some dawns are night – From the diagram, we can see that circles that represent dawn and night do not overlap. which means there can not be any positive relation between them. So, this conclusion does not follow.

So, from the above, the only conclusion I follow. Hence, the first option is correct.

32-C

According to the given statements, the Venn diagram will be –



Now, let's analyse the conclusions –

Conclusion (I): Some leaves are plants – From the diagram, we can see that some part of the circles that represent plants and leaves overlap each other which means that the given conclusion can be drawn from the statements. So, this conclusion follows.

Conclusion (II): Some plants are flowers – From the diagram, we can see that some part of the circles that represent plants and flowers overlap each other. which means that the given conclusion can be drawn from the statements. So, this conclusion follows. So, this conclusion follows.

So, both Conclusion I and II follow. Hence, the third option is correct.

33-A

Nuclear fusion is the process by which stars like the Sun produce energy. It occurs when atomic nuclei combine to form a heavier nucleus, releasing a tremendous amount of energy in the process.

34-A

The primary function of red blood cells is to transport oxygen to body tissues, and they do so by containing hemoglobin, which binds to oxygen and carries it throughout the body.

35-D

Both statements are true. The Nile River is indeed the longest river in the world, and the Amazon River is the second-longest.

36-A

Neon is a noble gas, but helium is not a halogen.

37-D

Let's check the options —

First option: $20 - 30$; $20 + 10 = 30$

Second option: $35 - 45$; $35 + 10 = 45$

Third option: $45 - 55$; $45 + 10 = 55$

Fourth option: $25 - 30$; $25 + 5 = 30$; This option is different from the other options.

Hence, the fourth option is correct.

38-B

Let's check the options —

First option: (1, 11, 1111); $1 \times 11 = 11$; $1 \times 1111 = 1111$

Second option: (2, 22, 4444); $2 \times 11 = 22$; $2 \times 1111 = 2222$ is not equal to 4444; This option is different from the other options.

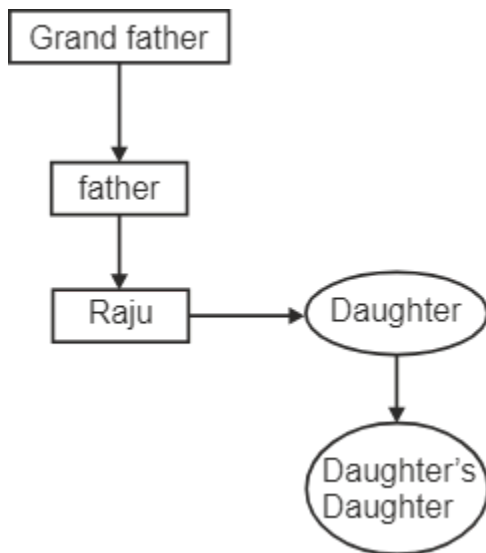
Third option: (4, 44, 4444); $4 \times 11 = 44$; $4 \times 1111 = 4444$

Fourth option: (8, 88, 8888); $8 \times 11 = 88$; $8 \times 1111 = 8888$

Hence, the second option is correct.

39-D

First, we need to draw a family tree.



Now, from the above diagram—

Raju's grandfather's son's daughter is Raju's sister.

So, that girl is the daughter of Raju's sister and Raju is her uncle.

Therefore, the girl is Raju's niece. Hence, the fourth option is correct.

40-B

Given:

The weight of P is twice that of Q, i.e., $P = 2Q$

The weight of Q is half that of R, i.e., $R = 2Q$

The weight of R is 3 times of T, i.e., $R = 3T$

The weight of T is half that of S, i.e., $S = 2T$

By concluding all the given information, we have:

$$P = R > S > Q > T$$

Therefore, it is clear that the weight of T is not more than any of P, Q, R, or S.

Hence, the second option is correct.

41-D

Given:

KINDLE is written as ELDNIK.

This code is obtained by reversing the order of the letters.

Similarly, EXOTIC will be coded as CITOXE.

Hence, the fourth option is correct.

42-A

Given:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | C | N | P | R | M | D | Y | Z | Q |
| 4 | 9 | 0 | 6 | 2 | 1 | 7 | 8 | 3 | 5 |

Here,

A is coded as 4, C is coded as 9, N is coded as 0, P is coded as 6, R is coded as 2, M is coded as 1, D is coded as 7, Y is coded as 8, Z is coded as 3 and Q is coded as 5.

Now, in QRCYNPD –

$Q = 5, R = 2, C = 9, Y = 8, N = 0, P = 6$ and $D = 7$.

So, the code for QRCYNPD is 5298067.

Hence, the first option is correct.

43-A

The position value of each letter of **CAT** –

| | | | |
|------------------------|---|---|----|
| LETTERS | C | A | T |
| POSITION VALUES | 3 | 1 | 20 |

Thus, **CAT** is coded as **3120**.

Similarly, follow the same pattern for **NAVIN** –

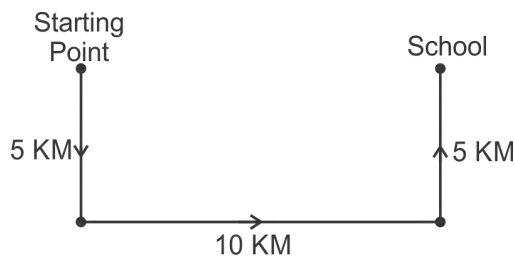
| | | | | | |
|------------------------|----|---|----|---|----|
| LETTERS | N | A | V | I | N |
| POSITION VALUES | 14 | 1 | 22 | 9 | 14 |

Thus, **NAVIN** is coded as **14122914**.

Hence, the **first option** is correct.

44-B

Firstly we will draw the direction and distance diagram according to the instructions –



Therefore west is the correct answer. Hence, the second option is correct.

45-A

Given:

a_d_bd_ab_dd

To fill the series we have to divide the series – a_d / _bd_ / ab_dd

Let's check each option

First option: badd; abd / abdd / abddd (abd is repeated and number of d increased)

Second option: ddba; add / dbdb / abadd (No pattern repeated.)

Third option: bcda; abd / cbdd / abadd (No pattern repeated.)

Fourth option: dbac; add / bbda / abcdd (No pattern repeated.)

Now, check the order of the letters and fill in the series – abd / abdd / abddd

So, the series becomes → abdabddabddd. Hence, the first option is correct.

46-B

Given:

JACOB can be written as QZXLY

Let's find the numerical value of all alphabets →

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| ALPH ABET S | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| ORDE R | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| REVE RSE | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

Here, place value of J → 10 (same place of Q in reverse order); A → 26 (same place of Z in reverse order); C → 3 (same place of X in reverse order); O → 15 (same place of Q in reverse order); B → 2 (same place of Q in reverse order)

And, place value of K → 11 (same place of P in reverse order); E → 5 (same place of V in reverse order); N → 14 (same place of M in reverse order); D → 4 (same place of W in reverse order); Y → 25 (same place of B in reverse order);

So, **KENDY** is written as **PVMWB**

Hence, the **second option** is correct.

47-B

Given:

DELHI is coded as 73541 and CALCUTTA is coded as 82589662

The code of letters in the given word DELHI is $D \rightarrow 7$; $E \rightarrow 3$; $L \rightarrow 5$; $H \rightarrow 4$; $I \rightarrow 1$

The code of letters in the given word CALCUTTA is $C \rightarrow 8$; $A \rightarrow 2$; $L \rightarrow 5$; $C \rightarrow 8$; $U \rightarrow 9$; $T \rightarrow 6$; $T \rightarrow 6$; $A \rightarrow 2$

The code of the letters of CALICUT can be taken from the letters of DELHI and CALCUTTA.

The letters of CALICUT will be coded as $C \rightarrow 8$; $A \rightarrow 2$; $L \rightarrow 5$; $I \rightarrow 1$; $C \rightarrow 8$; $U \rightarrow 9$; $T \rightarrow 6$

So, CALICUT will be coded as 8251896

Hence, the second option is correct.

48-C

Given:

Like, NASCENT is written as 2734526.

Here, The code of letters in the given word **NASCENT** is $N \rightarrow 2$; $A \rightarrow 7$; $S \rightarrow 3$; $C \rightarrow 4$; $E \rightarrow 5$; $N \rightarrow 2$; $T \rightarrow 6$

The code of the letters of **SENTENCE** can be taken from the letters of **NASCENT**.

Similarly, The code of letters in the given word **SENTENCE** is $S \rightarrow 3$; $E \rightarrow 5$; $N \rightarrow 2$; $T \rightarrow 6$; $E \rightarrow 5$; $N \rightarrow 2$; $C \rightarrow 4$; $E \rightarrow 5$

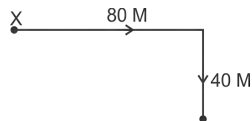
So, SENTENCE will be coded as 35265245.

Hence, the **third option** is correct.

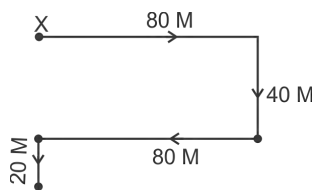
49-D

From the given information,

Step 1: From point X, Mr. A travelled towards East for 80 m and then turned to his right and walked 40 m.



Step 2: He turned to his right and walked 80 m and then turned his left and walked 20 m.

**50-B**

Given:

ABABAbab, ABABabaB, ABAbabAB, ABabaBAB, AbabABAB, ?

In the second term **ABABabaB**, b is changed from lowercase to uppercase and A is changed from uppercase to lowercase.

In the third term **ABAbabAB**, a is changed from lowercase to uppercase and B is changed from uppercase to lowercase.

In the fourth term **ABabaBAB**, b is changed from lowercase to uppercase and A is changed from uppercase to lowercase.

In the fifth term **AbabABAB**, a is changed from lowercase to uppercase and **B** is changed from uppercase to lowercase.

In the sixth term, b is changed from lowercase to uppercase and A is changed from uppercase to lowercase. So, the sixth term will be **abaBABAB**.

Hence, the **second option** is correct.

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