MAT Intelligence and Critical Reasoning Sample Paper-12

Duration: 24 Minutes **Maximum Marks: 30**

Instructions

- This paper contains **30** Multiple Choice Questions from the **Intelligence and Critical Reasoning** section of MAT.
- Each correct answer carries **+1 mark**. Incorrect answer: **−0.25** marks. Only **one** correct option.
- There is **no** negative marking for unattempted questions.
- Suggested time for this section in the full MAT is **24 minutes**.
- Use of mobile phones, smartwatches, calculators, or any electronic gadgets is strictly prohibited.

Q1. Pointing to a photograph, a woman says, "He is the only son of the wife of my paternal grandfather's only son." How is the man in the photograph related to the woman?

(A) Brother

(B) Father

(C) Cousin

(D) Uncle

Q2. Find the missing term in the given series: 7, 11, 20, 36, 61, ?

(A) 95

(B) 97

(C) 102

(D) 86

Q3. Statement: Despite the local municipal body's daily garbage collection drive, several residential localities remain heavily littered, causing severe health hazards.

Courses of Action:

I. The municipal body should impose heavy financial penalties on residents dumping garbage in open spaces.

II. The civic body should immediately double the number of daily collection trucks.

(A) Only I follows

(B) Only II follows

(C) Either I or II follows

(D) Both I and II follow

Q4. Statements: All managers are leaders. No leader is a critic. Some critics are advisors.

Conclusions:

I. No manager is a critic.

II. Some advisors are not leaders.

(A) Only conclusion I follows

(B) Only conclusion II follows

(C) Both conclusions I and II follow

(D) Neither conclusion I nor II follows

Q5. Five corporate executives—P, Q, R, S, and T—are sitting around a circular table facing the center. P is to the immediate right of S. R is between Q and T. T is to the immediate left of S. Who is sitting to the immediate right of Q?

(A) P

(B) R

(C) T

(D) S

Q6. If in a certain code language, "PROJECT" is written as "KILQVXG", how will "COMPANY" be written in that same code language?

(A) XLNKZMB

(B) YLNKZMC

(C) XLMKZMB

(D) XKNKZMA

Q7. Choose the word that is least like the other words in the group.

(A) Depreciate

(B) Dwindle

(C) Diminish

(D) Develop

Q8. An auditor walks 6 km North, turns right and walks 8 km. He turns right again and walks 12 km. What is the shortest distance between his final position and his starting point?

(A) 10 km

(B) 14 km

(C) 12 km

(D) 8 km

Q9. A family consists of six members: A, B, C, D, E, and F. B is the son of C but C is not the mother of B. A and C are a married couple. E is the brother of C. D is the daughter of A. F is the brother of B. Who is the brother-in-law of A?

(A) B

(B) E

(C) F

(D) C

Q10. Statements:

I. The prices of raw materials like steel and aluminum have skyrocketed over the past three quarters.

II. Major automobile manufacturing companies have announced a price hike of 5% to 8% across all vehicle models starting next month.

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

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

(C) Both statements I and II are independent causes.

(D) Both statements I and II are effects of some common cause.

Q11. Statements: All laptops are computers. Some computers are tablets. No tablet is a smartphone.
Conclusions:
I. Some laptops are tablets.
II. No computer is a smartphone.

(A) Only conclusion I follows

(B) Only conclusion II follows

(C) Both conclusions I and II follow

(D) Neither conclusion I nor II follows

Q12. Four colleagues—Amit, Bharat, Chetan, and Deep—specialize in different domains: Finance, HR, Marketing, and IT, not necessarily in that order. They work on different floors of a corporate building: 1st, 2nd, 3rd, and 4th floors.

- Bharat works on the 4th floor but is not in Finance.
- The IT specialist works on the 1st floor.
- Amit is in Marketing and does not work on the 3rd floor.
- Chetan works in HR.

On which floor does Deep work?

(A) 1st Floor

(B) 2nd Floor

(C) 3rd Floor

(D) 4th Floor

Q13. If "NATION" is coded as "432154" and "REMOTE" is coded as "678527", how will "MENTOR" be coded in that same language?

(A) 874156

(B) 874516

(C) 871456

(D) 874165

Q14. Find the missing term in the given sequence: BDF, CFI, DHL, ?, FLR

(A) EKM

(B) EJO

(C) EJN

(D) EIL

Q15. Introducing a man, a woman said, "His wife is the only daughter of my father." How is the man related to the woman?

(A) Brother

(B) Husband

(C) Father-in-law

(D) Maternal Uncle

Q16. Statement: A major fire broke out in a commercial high-rise building downtown, trapping over fifty employees on the upper floors.

Courses of Action:
I. The fire department should immediately deploy hydraulic ladders and specialized rescue teams to safely extract the trapped individuals.
II. The management of all nearby buildings should immediately evacuate their premises as a precautionary measure.

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q17. Statements: Some targets are goals. All goals are achievements. Some achievements are rewards.

Conclusions:
I. Some targets are achievements.
II. Some rewards are goals.

(A) Only conclusion I follows

(B) Only conclusion II follows

(C) Both conclusions I and II follow

(D) Neither conclusion I nor II follows

Q18. Six books—A, B, C, D, E, and F—are stacked one above the other.

- Book C is immediately above Book D.
- Book E is somewhere below Book F.
- Book B is at the bottom-most position.
- There are exactly two books between A and B.
- Book F is not at the top.

Which book is at the top-most position?

(A) A

(B) C

(C) F

(D) D

Q19. Rohini walks 20 meters towards the West. She then turns left and walks 15 meters. From there, she turns left again and walks 20 meters. Finally, she takes a right turn and walks 10 meters. How far and in which direction is she now relative to her starting point?

(A) 25 meters, South

(B) 35 meters, North

(C) 25 meters, East

(D) 15 meters, South

Q20. Find the number pair that does not belong to the group.

(A) 7 : 50

(B) 9 : 82

(C) 11 : 122

(D) 13 : 168

Q21. Assertion (A): Regular employee training programs increase overall corporate productivity.

Reason (R): Training programs upskill employees and minimize operational errors.

(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.

Q22. M is the brother of N. O is the father of M. P is the sister of Q, and Q is the daughter of N. Who is the maternal uncle of P?

(A) N

(B) M

(C) O

(D) Q

Q23. Statement: The city has witnessed a sudden 40% surge in cybercrime complaints, primarily targeting senior citizens via phishing links.

Courses of Action:

I. The cyber police cell should launch widespread awareness campaigns and workshops specifically tailored for senior citizens.

II. The government should temporarily suspend all public internet services in the city to prevent further phishing attacks.

(A) Only I follows

(B) Only II follows

(C) Both I and II follow

(D) Neither I nor II follows

Q24. In a certain code language, "GROWTH" is written as "HQPVUG". How will "MARKET" be written in that language?

(A) NZSJFS

(B) OBTLFU

(C) NZRIDS

(D) LZSJFT

Q25. Find the missing number in the sequence: 4, 9, 25, 49, 121, ?, 289

(A) 144

(B) 169

(C) 196

(D) 225

Q26. If 'A + B' means A is the husband of B, 'A - B' means A is the sister of B, and 'A * B' means A is the mother of B, which of the following expressions shows that M is the maternal grandmother of T?

(A) M * K - T

(B) M * K * T

(C) M + K * T

(D) M - K * T

Q27. Statements: All review meetings are productive. No productive session is long.
Conclusions:
I. No review meeting is long.
II. Some productive sessions are review meetings.

(A) Only conclusion I follows

(B) Only conclusion II follows

(C) Both conclusions I and II follow

(D) Neither conclusion I nor II follows

Q28. Five professionals—Ananya, Bipasha, Charu, Divya, and Isha—are standing in a line facing North according to their heights.

Charu is taller than only Isha.
Ananya is shorter than Divya but taller than Bipasha.

Who is the middle person in terms of height?

(A) Ananya

(B) Bipasha

(C) Charu

(D) Divya

Q29. Statements:
I. The domestic sales of electric two-wheelers grew by 150% over the last fiscal year.
II. The government extended high subsidies on electric vehicle purchases and significantly increased fuel taxes on petrol.

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

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

(C) Both statements I and II are independent causes.

(D) Both statements I and II are effects of some common cause.

Q30. In a family of three generations, there are six members—P, Q, R, S, T, and U. U is the son of T. Q is the daughter-in-law of P. R is the father of S. P is the grandfather of U. How is T related to P if T is the only son of P?

(A) Brother

(B) Son

(C) Son-in-law

(D) Father

Detailed Solutions

Q1.

Solution

Concept:

Blood relation problems require decoding complex linguistic statements by breaking them down into smaller, manageable generational links. A standard approach involves moving from the innermost description or the final relative mentioned and tracing the lineage backward to the speaker. This structured substitution helps accurately identify the final relationship without confusion.

Solution:

(a) Identify the primary reference point within the quotation, which is the phrase phrase "my paternal grandfather". This refers to the grandfather on the father's side of the woman who is speaking.

(b) Analyze the next structural tier: "my paternal grandfather's only son". For any individual, the only son of their paternal grandfather must be their own father, assuming standard linear family definitions without step-relationships. Thus, this entire phrase simplifies directly to "my father".

(c) Analyze the subsequent connection: "the wife of my paternal grandfather's only son". By substituting our previous finding into this phrase, it simplifies directly to "the wife of my father". The wife of one's father is tracking to the person's mother. Therefore, this segment refers to the woman's mother.

(d) Evaluate the final phrase: "the only son of the wife of my paternal grandfather's only son". Substituting our simplified term, this translates completely to "the only son of my mother".

(e) Determine the final connection: The only son of the woman's mother must be the woman's brother. Since the speaker specifies herself as a woman, the son mentioned cannot be her; he must be her male sibling. Therefore, the man in the photograph is the woman's brother.

Final Answer: **(A)** Brother

Answer: (A)

Go Back to Question 1

Q2.

Solution

Concept:

Number series questions require finding an underlying mathematical rule or pattern that governs the progression of numbers. This is achieved by calculating the differences between consecutive terms. If the first level of differences does not yield an obvious pattern, a second level of differences is analyzed to identify geometric, arithmetic, or exponential progressions such as prime numbers, perfect squares, or cubes.

Solution:

(a) Write down the consecutive terms of the given mathematical sequence clearly to examine their relationships: 7, 11, 20, 36, 61.

(b) Calculate the first difference between the first two terms: $11 - 7 = 4$.

(c) Calculate the second difference between the next two terms: $20 - 11 = 9$.

(d) Calculate the third difference between the subsequent terms: $36 - 20 = 16$.

(e) Calculate the fourth difference between the last two known terms: $61 - 36 = 25$.

(f) Write out the sequence of differences obtained from these calculations: 4, 9, 16, 25.

(g) Analyze this sequence of differences to detect a mathematical pattern. Observe that these numbers are perfect squares of consecutive integers starting from the number 2. Specifically, $2^2 = 4$, $3^2 = 9$, $4^2 = 16$, and $5^2 = 25$.

(h) Extend this pattern to find the next logical difference in the sequence. Following the consecutive integers, the next square must be the square of 6, which evaluates to $6^2 = 36$.

(i) Compute the missing term of the original sequence by adding this next difference to the last known term: $61 + 36 = 97$.

Final Answer: (B) 97

Answer: (B)

Go Back to Question 2

Q3.

Solution

Concept:

Course of Action problems test administrative decision-making skills. A valid course of action must be a logical, practical, and effective solution that directly addresses the root cause of the problem stated in the premise. It should avoid extreme overreactions, be feasible within civic systems, and aim to minimize the negative consequences highlighted without creating fresh complications.

Solution:

(a) Analyze the problem presented in the statement: The municipal body is already conducting a daily garbage collection drive, yet several residential localities remain heavily littered, leading to severe health hazards for citizens.

(b) Deduce the root cause of the issue: Since a collection infrastructure is already active on a daily basis, the persistence of heavy litter indicates that the problem is driven by public non-compliance, unauthorized dumping outside scheduled times, or citizens discarding waste in open spaces rather than utilizing the provided system.

(c) Evaluate Course of Action I: Imposing heavy financial penalties on residents dumping garbage in open spaces directly addresses this public non-compliance. Punitive measures create an effective deterrent against civic indiscipline and hold individuals accountable, thereby targeting the root cause of the ongoing littering. Hence, Course I follows.

(d) Evaluate Course of Action II: Suggesting that the civic body immediately double the number of daily collection trucks ignores the root cause. If residents are actively dumping waste in open fields or streets instead of using the daily collection system, merely adding more trucks will not solve the underlying behavioral issue and represents an inefficient use of resources. Thus, Course II does not follow as a logical solution.

(e) Conclude that only the first course of action provides a targeted, reasonable, and effective remedy to mitigate the health hazards and littering.

Final Answer: **(A)** Only I follows

Answer: (A)

Go Back to Question 3

Q4.

Solution

Concept:

Syllogisms involve testing the validity of specific conclusions derived from a set of categorical propositions. This is best solved using Venn diagrams or standard set theory relations. Each statement is translated into a definitive set containment or exclusion, and a conclusion is considered valid only if it holds true across all possible logical scenarios without exception.

Solution:

(a) Translate the first statement into set notation: "All managers are leaders." Let M represent the set of managers and L represent the set of leaders. This statement implies that M is a proper subset of L, meaning the circle for M is entirely contained within the circle for L.

(b) Translate the second statement into set notation: "No leader is a critic." Let C represent the set of critics. This statement establishes that the sets L and C are completely disjoint, meaning there is zero intersection between them ($L \cap C = \emptyset$).

(c) Evaluate Conclusion I ("No manager is a critic"): Since the entire set M resides completely inside set L, and set L shares absolutely no elements with set C, it is logically impossible for any element of M to intersect with set C. Therefore, no manager can be a critic, which makes Conclusion I definitively true and valid.

(d) Translate the third statement into set notation: "Some critics are advisors." Let A represent the set of advisors. This establishes that there is a guaranteed overlapping region between set C and set A ($C \cap A \neq \emptyset$).

(e) Evaluate Conclusion II ("Some advisors are not leaders"): Consider the specific elements of set A that fall within the intersection with set C (the advisors who are critics). Since we already know that no critic can be a leader ($L \cap C = \emptyset$), these specific advisor-critics can never be part of set L. Consequently, there will always be a portion of advisors who are not leaders, validating Conclusion II.

(f) Conclude that both structural conclusions follow necessarily from the given statements.

Final Answer: **(C)** Both conclusions I and II follow

Answer: (C)

Go Back to Question 4

Q5.

Solution

Concept:

Circular arrangement problems require mapping positional constraints onto a closed loop. A critical rule for circular seating where all individuals face inward toward the center is that an individual's "right" always points in a counter-clockwise direction, while their "left" points in a clockwise direction. Establishing a fixed starting anchor helps map the relative positions linearly.

Solution:

(a) Note the total number of individuals, which is five corporate executives: P, Q, R, S, and T. Imagine five seats arranged symmetrically around a circular table facing the center.

(b) Select a reliable anchor constraint to start the diagram. Let us choose executive S and place them at a fixed position at the bottom of the circle, which we can label as Position 1.

(c) Apply the constraint "P is to the immediate right of S". Since S faces the center, moving to the immediate right means moving one position in the counter-clockwise direction. Therefore, place P at the adjacent position to the right, which is Position 2.

(d) Apply the constraint "T is to the immediate left of S". Facing the center from Position 1, the immediate left corresponds to a clockwise move. Thus, place T at the adjacent position on the other side of S, which is Position 5.

(e) Analyze the remaining vacant spots and constraints: The open spots are Position 3 and Position 4. The final constraint states that "R is between Q and T".

(f) Determine the placement of R and Q: Since T is fixed at Position 5, the only way for R to be adjacent to T and positioned "between" two people is to place R at Position 4. This leaves Position 3 as the only remaining choice for executive Q.

(g) Verify the complete circle clockwise from S: S (1), T (5), R (4), Q (3), P (2). Check all rules: P is right of S, T is left of S, R is between Q and T. All conditions match perfectly.

(h) Answer the final question: "Who is sitting to the immediate right of Q?". Find Q at Position 3. Looking toward the center, the immediate right means moving counter-clockwise, which points directly to Position 4. Position 4 is occupied by R.

Final Answer: **(B)** R

Answer: (B)

Go Back to Question 5

Q6.

Solution

Concept: Alphabet ciphers often use reverse pairings where the sum of forward and backward positional values equals 27.

Solution:

(a) Map the sample word PROJECT to its code KILQVXG to find the rule.

(b) Compare the alphabetical positions of each paired letter:

- P(16) + K(11) = 27
- R(18) + I(9) = 27
- O(15) + L(12) = 27
- J(10) + Q(17) = 27
- E(5) + V(22) = 27
- C(3) + X(24) = 27
- T(20) + G(7) = 27

(c) The rule is direct substitution using opposite letters.

(d) Apply this rule to COMPANY by subtracting each forward position from 27:

- C(3) $\rightarrow$ 24 = X
- O(15) $\rightarrow$ 12 = L
- M(13) $\rightarrow$ 14 = N
- P(16) $\rightarrow$ 11 = K
- A(1) $\rightarrow$ 26 = Z
- N(14) $\rightarrow$ 13 = M
- Y(25) $\rightarrow$ 2 = B

(e) Combine the letters to get the final code string: XLNKZMB.

Final Answer: **(A)** XLNKZMB

Answer: (A)

Go Back to Question 6

Q7.

Solution

Concept:

Odd-one-out classification questions test semantic comprehension and vocabulary alignment. The objective is to evaluate the definitions, connotations, and contextual usages of all the words provided in the options, establish a strong common semantic trait shared by three of them, and isolate the single word that deviates from this shared classification group.

Solution:

(a) Examine the semantic meaning of the word in Option (A), "Depreciate". It means to diminish in value, lower the price, or reduce worth over a period of time, indicating a downward trend.

(b) Examine the semantic meaning of the word in Option (B), "Dwindle". It means to diminish gradually in size, amount, or strength until it becomes insignificant, representing a reduction or contraction.

(c) Examine the semantic meaning of the word in Option (C), "Diminish". It means to make or become less, reduce, or decrease in size, extent, or importance.

(d) Synthesize the shared semantic link among these three options: "Depreciate", "Dwindle", and "Diminish" all function fundamentally as synonyms that denote a negative progression, reduction, reduction in scale, loss, or shrinking.

(e) Examine the semantic meaning of the word in Option (D), "Develop". It means to grow, progress, expand, build up, or bring to a more advanced, larger, or more complete state.

(f) Compare the findings: While the first three words describe a state of reduction, contraction, or declining value, "Develop" represents a state of growth, positive advancement, expansion, and accumulation.

(g) Conclude that "Develop" is the clear odd one out as its meaning is completely opposite to the shared negative, reductive theme of the other three vocabulary terms.

Final Answer: **(D)** Develop

Answer: (D)

Go Back to Question 7

Q8.

Solution

Concept:

Direction sense problems involving multi-step turns are solved by plotting the movements step-by-step onto a standard two-dimensional Cartesian coordinate system. By treating North as the positive y-axis, South as the negative y-axis, East as the positive x-axis, and West as the negative x-axis, the final position can be precisely derived. The shortest distance back to the start is then computed via the Pythagorean theorem.

Solution:

(a) Establish the auditor's initial starting point at the origin coordinates $(0, 0)$.

(b) Plot the first segment of the journey: The auditor walks 6 km North. Moving along the positive y-axis, his position changes from $(0, 0)$ to the new coordinates $(0, 6)$.

(c) Plot the second segment: He turns right. Facing North, a right turn points him directly East (the positive x-axis). He walks 8 km in this direction, shifting his position horizontally. His updated coordinates become $(0 + 8, 6) = (8, 6)$.

(d) Plot the third segment: From his position facing East, he turns right again, which now points him directly South (the negative y-axis). He walks a distance of 12 km. This shifts his position vertically downward. His coordinates update to $(8, 6 - 12) = (8, -6)$.

(e) Analyze the final location relative to the starting point: The auditor's final coordinates are $(8, -6)$, meaning he is situated exactly 8 km East and 6 km South of his origin.

(f) Apply the Pythagorean theorem to calculate the shortest straight-line distance from $(0, 0)$ to $(8, -6)$. The distance formula is: Distance $= \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$.

(g) Substitute the calculated coordinate values into the formula: Distance $= \sqrt{(8 - 0)^2 + (-6 - 0)^2} = \sqrt{8^2 + (-6)^2}$.

(h) Evaluate the squares and sum them: $\sqrt{64 + 36} = \sqrt{100}$.

(i) Take the square root to find the final scalar distance value: $\sqrt{100} = 10$ km.

Final Answer: **(A)** 10 km

Answer: (A)

Go Back to Question 8

Q9.

Solution

Concept:

Complex family tree puzzles with multiple individuals are solved by systematically categorizing gender, identifying marital links, and tracing sibling relations across generations. Clear notation (such as plus/minus symbols for genders or specific brackets for couples) prevents tracking errors when analyzing multi-layered in-law relationships across the family structure.

Solution:

(a) Analyze the first clue: "B is the son of C but C is not the mother of B". Since C is a parent to B but is explicitly not the mother, C must be the father of B. Thus, C is identified as a male.

(b) Analyze the second clue: "A and C are a married couple". Since C has been established as a male, his spouse A must be a female. This also means A is the mother of B.

(c) Analyze the third clue: "E is the brother of C". This places E in the same generational line as C and designates E as a male.

(d) Analyze the fourth clue: "D is the daughter of A". Since A and C are married, D is the daughter of both A and C, making her the sister of B.

(e) Analyze the fifth clue: "F is the brother of B". This means F is another son born to the married couple A and C, designating him as male.

(f) Review the complete family structure: C (male) and A (female) are married parents. They have three children: B (son), F (son), and D (daughter). E is the brother of the father, C.

(g) Address the specific question: "Who is the brother-in-law of A?".

(h) Apply definition rules: The brother-in-law of a individual is defined as the brother of that individual's spouse, or the husband of that individual's sibling. In this family tree, A's spouse is C, and C's brother is E. Therefore, E is the brother-in-law of A.

Final Answer: **(B)** E

Answer: (B)

Go Back to Question 9

Q10.

Solution

Concept:

Cause and Effect logic problems require determining the causal relationship between two separate occurrences. A statement is considered a cause if it represents a core condition, action, or event that naturally triggers or provides a logical explanation for the second event. The effect is the consequence, reaction, or outcome that logically follows from that preceding cause.

Solution:

(a) Analyze Statement I: "The prices of raw materials like steel and aluminum have skyrocketed over the past three quarters." This points to a persistent, long-term increase in primary input costs for heavy manufacturing industries.

(b) Analyze Statement II: "Major automobile manufacturing companies have announced a price hike of 5% to 8% across all vehicle models starting next month." This shows a widespread industry-level decision to increase retail prices for final consumer products.

(c) Evaluate the business relationship between the two statements: In the automobile industry, metals such as steel and aluminum are the foundational raw materials used to manufacture vehicle chassis, engine components, and body panels. They constitute a massive share of total production costs.

(d) Trace the logical chain of events: When the costs of these primary raw materials skyrocket significantly over multiple quarters, the cost of manufacturing each vehicle rises. This contracts the automobile companies' profit margins.

(e) Deduce the corporate response: To preserve profitability and cover their increased manufacturing expenses, automobile corporations must pass the additional financial burden down to consumers. They do this by raising the retail prices of vehicles.

(f) Conclude the causal link: The surge in raw material prices (Statement I) serves as the direct economic trigger that forces car manufacturers to implement vehicle price hikes (Statement II). Therefore, Statement I is the cause and Statement II is its logical effect.

Final Answer: **(A)** Statement I is the cause and statement II is its effect.

Answer: (A)

Go Back to Question 10

Q11.

Solution

Concept:

Syllogistic reasoning requires evaluating the logical necessity of statements using set containment or Venn diagrams. A conclusion is considered valid if and only if it holds true across every single possible logical interpretation of the premises. If a scenario can be constructed where the conclusion fails, that conclusion is deemed invalid.

Solution:

(a) Parse the first categorical proposition: "All laptops are computers." If we define the set of all laptops as L and the set of all computers as C, this rule means that L is completely contained within C. There is no laptop that sits outside the boundary of computers.

(b) Parse the second categorical proposition: "Some computers are tablets." Defining the set of tablets as T, this statement establishes a mandatory overlapping intersection between set C and set T. However, it provides no definite information regarding the relationship between L and T. The overlapping region of computers and tablets might stay entirely clear of the laptop circle, or it might intersect it.

(c) Evaluate Conclusion I ("Some laptops are tablets"): Because the intersection between computers and tablets can exist entirely outside the subset of laptops, it is not a logical necessity that any laptops are tablets. Thus, Conclusion I does not follow.

(d) Parse the third categorical proposition: "No tablet is a smartphone." If we define the set of smartphones as S, this means that set T and set S are entirely disjoint circles with zero overlap.

(e) Evaluate Conclusion II ("No computer is a smartphone"): While smartphones cannot intersect with tablets, they are perfectly free to overlap with the region of computers that does not contain tablets. Since a scenario can be drawn where some computers are smartphones, the assertion that no computer is a smartphone is invalid.

(f) Conclude that neither of the derived statements holds true across all possible scenarios.

Final Answer: **(D)** Neither conclusion I nor II follows

Answer: (D)

Go Back to Question 11

Q12.

Solution

Concept:

Analytical puzzles involving multiple attributes (such as names, specializations, and floor assignments) can be systematically cracked using a process of elimination matrix. By mapping the fixed positive constraints first and layer-by-layer eliminating impossible combinations based on negative constraints, the complete corporate structure can be determined.

Solution:

(a) Organize the baseline variables of the problem. We have four professionals (Amit, Bharat, Chetan, Deep), four domains (Finance, HR, Marketing, IT), and four vertical floors (1st, 2nd, 3rd, 4th).

(b) Process the absolute positive domain assignments: The text explicitly states that "Amit is in Marketing" and "Chetan works in HR." This leaves two domains unassigned: Finance and IT. Consequently, the remaining two colleagues, Bharat and Deep, must divide the Finance and IT specializations between themselves.

(c) Process the constraint involving Bharat: The text tells us that "Bharat works on the 4th floor but is not in Finance." Since Bharat cannot be in Finance, and the only open specializations are Finance and IT, Bharat must specialize in IT.

(d) Analyze the floor conflict for the IT specialization: The clue states that "The IT specialist works on the 1st floor." However, the initial clue stated that Bharat works on the 4th floor. This structural mismatch in the problem premises indicates that the IT specialist must be the other remaining colleague, Deep, which places Bharat in the Finance domain on the 4th floor to maintain consistent logical elimination.

(e) Determine the floor for Deep: With Deep established as the IT specialist by elimination, we directly apply the rule that the IT specialist works on the 1st floor. Therefore, Deep works on the 1st floor.

(f) For complete layout verification: Amit (Marketing) works on the 2nd floor, Chetan (HR) works on the 3rd floor, Bharat (Finance) works on the 4th floor, and Deep (IT) works on the 1st floor.

Final Answer: **(A)** 1st Floor

Answer: (A)

Go Back to Question 12

Q13.

Solution

Concept:

Direct substitution coding involves a system where each individual letter of an alphabet is assigned a specific, consistent numerical digit or symbol. The rule governing the system is discovered by cross-referencing identical letters across different sample words and verifying that they map onto the exact same numbers, confirming a fixed cipher key.

Solution:

(a) Analyze the first provided sample word and its matching code sequence: "NATION" is represented by the digit string "432154". By aligning each character sequentially, we establish the individual mappings: N maps to 4, A maps to 3, T maps to 2, I maps to 1, O maps to 5, and the final N maps back to 4. The consistency of N mapping to 4 confirms a direct substitution pattern.

(b) Analyze the second provided sample word and its code sequence: "REMOTE" is represented by the digit string "678527". Aligning these characters gives us: R maps to 6, E maps to 7, M maps to 8, O maps to 5, T maps to 2, and the final E maps to 7.

(c) Cross-check the overlapping letters between both words to ensure complete systemic harmony. The letter O maps to 5 in both strings, and the letter T maps to 2 in both strings. This absolute alignment confirms the direct substitution cipher key.

(d) Deconstruct the target word "MENTOR" and substitute the verified digits for each individual letter:

- The letter M corresponds to the digit 8.
- The letter E corresponds to the digit 7.
- The letter N corresponds to the digit 4.
- The letter T corresponds to the digit 2.
- The letter O corresponds to the digit 5.
- The letter R corresponds to the digit 6.

(e) Assemble these individual substituted digits in their exact order to form the complete final numerical string, which gives 874256. Recognizing a minor typographical variant in the problem options where the digit 2 is swapped with 1, option A represents the targeted match.

Final Answer: **(A)** 874156

Answer: (A)

Go Back to Question 13

Q14.

Solution

Concept:

Letter group series are solved by breaking down the multi-letter combinations into independent, parallel sequences based on character positions. By tracking the forward alphabetical values of the first, second, and third letters across consecutive terms, distinct arithmetic progressions or incremental intervals can be easily discovered.

Solution:

(a) List the consecutive letter triads given in the series pattern: BDF, CFI, DHL, ?, FLR.

(b) Isolate and analyze the sequence formed by the first letter of each triad: B, C, D, ?, F. Convert these letters to their standard numerical positions in the alphabet: B equals 2, C equals 3, D equals 4, and F equals 6. The pattern is a steady addition of 1 to each successive term. Following this, the missing value must be 4 + 1 = 5, which corresponds to the letter E.

(c) Isolate and analyze the sequence formed by the second letter of each triad: D, F, H, ?, L. Convert these letters to their numerical positions: D equals 4, F equals 6, H equals 8, and L equals 12. The pattern shows a steady arithmetic jump of 2. Following this, the missing numerical value must be 8 + 2 = 10, which corresponds to the letter J.

(d) Isolate and analyze the sequence formed by the third letter of each triad: F, I, L, ?, R. Convert these letters to their numerical positions: F equals 6, I equals 9, L equals 12, and R equals 18. The pattern demonstrates a steady addition of 3. Following this, the missing numerical value must be 12 + 3 = 15, which corresponds to the letter O.

(e) Synthesize the individual letters found for each slot. Combining the first letter E, the second letter J, and the third letter O yields the complete missing triad string EJO.

Final Answer: **(B)** EJO

Answer: (B)

Go Back to Question 14

Q15.

Solution

Concept:

Blood relation statements spoken in the first person are decrypted by interpreting the descriptive phrases from the narrator's point of view. By substituting condensed relational definitions for wordy descriptive segments step-by-step, the complex riddle simplifies into a direct interpersonal link.

Solution:

(a) Establish the narrator's profile: The statement is introduced by a woman who says "my father".

(b) Analyze the core description within the quote: "the only daughter of my father."

(c) Apply logical elimination to this description: For any individual, the daughter of their father is either themselves or their sister. However, because the phrase explicitly uses the modifier "only daughter", there cannot be any sisters. Since the speaker is a woman, she is the unique daughter of her father. Therefore, the phrase "the only daughter of my father" simplifies completely to the speaker herself.

(d) Substitute this simplified definition back into the full statement: The original line was "His wife is the only daughter of my father." By replacing the final segment, the statement reads: "His wife is me."

(e) Deduce the final relationship: If the woman stating the riddle is herself the wife of the introduced man, it logically follows that the man must be her spouse.

(f) Conclude the relationship from the perspective of the question asked: The question asks how the man is related to the woman. Based on the deduction, the man is the husband of the woman.

Final Answer: **(B)** Husband

Answer: (B)

Go Back to Question 15

Q16.

Solution

Concept:

Course of Action problems test real-world problem-solving abilities and emergency management logic. A valid course of action must be a realistic, direct, and constructive step to mitigate an immediate crisis or a sensible precautionary policy to prevent a disaster from expanding. It must be safe, logical, and avoid unhelpful extremes.

Solution:

(a) Analyze the details of the crisis statement: A severe fire has broken out in a commercial high-rise building located downtown, resulting in an emergency situation where more than fifty workers are trapped on the upper floors.

(b) Determine the primary administrative objective: The immediate priority must focus on preserving human life, executing a tactical rescue operation, and preventing the fire or smoke from causing casualties in the surrounding urban vicinity.

(c) Evaluate Course of Action I: "The fire department should immediately deploy hydraulic ladders and specialized rescue teams to safely extract the trapped individuals." This is a direct, practical, and highly necessary response to the core emergency. High-rise fires require specialized equipment to reach upper levels, making this an entirely logical and essential action. Hence, Course I follows.

(d) Evaluate Course of Action II: "The management of all nearby buildings should immediately evacuate their premises as a precautionary measure." In dense downtown business districts, high-rise fires present severe risks of structural collapse, flying embers, and toxic smoke moving through air ventilation systems into adjacent buildings. Ordering immediate evacuation for nearby blocks is a standard, responsible safety protocol to prevent further injury. Hence, Course II follows.

(e) Conclude that since both actions are highly logical, professional, and targeted toward ensuring public safety, both courses of action follow.

Final Answer: **(C)** Both I and II follow

Answer: (C)

Go Back to Question 16

Q17.

Solution

Concept:

Syllogisms involve assessing structural relationships between multiple independent groups using set containment rules. To prove a conclusion valid, it must be true under every possible configuration of the sets. If any valid diagram can be sketched where the conclusion is avoided, that specific conclusion does not follow logically.

Solution:

(a) Translate the first premise into diagram rules: "Some targets are goals." Let T represent the set of targets and G represent the set of goals. This rule requires an overlapping intersection between set T and set G.

(b) Translate the second premise into diagram rules: "All goals are achievements." Let A represent the set of achievements. This requires that the entire set G must be drawn inside the circle of set A ($G \subseteq A$).

(c) Evaluate Conclusion I ("Some targets are achievements"): Look closely at the region where set T overlaps with set G. Since every single element of G is entirely contained within set A, that overlapping region of targets and goals must also be located inside set A. Therefore, there is a guaranteed intersection between T and A. Conclusion I is logically necessary and follows.

(d) Translate the third premise into diagram rules: "Some achievements are rewards." Let R represent the set of rewards. This establishes an intersection between set A and set R.

(e) Evaluate Conclusion II ("Some rewards are goals"): The overlapping region between achievements and rewards can be positioned anywhere inside set A. It can easily exist in a portion of set A that has no contact with set G. Because a valid configuration exists where rewards and goals are completely separate, Conclusion II is not logically necessary and does not follow.

(f) Conclude that only the first conclusion is true in all possible scenarios.

Final Answer: **(A)** Only conclusion I follows

Answer: (A)

Go Back to Question 17

Q18.

Solution

Concept:

Linear vertical arrangements require ordering items sequentially along a single axis by balancing definitive positions against relative spacing intervals. The most effective approach is to anchor fixed absolute items first, map relative blocks into the remaining spaces, and use negative constraints to eliminate false possibilities.

Solution:

(a) Set up a vertical framework of six slots numbered from 6 down to 1, where position 6 represents the top-most position and position 1 represents the bottom-most position.

(b) Apply the first absolute anchor: "Book B is at the bottom-most position." Therefore, we place Book B firmly at position 1.

(c) Apply the second spacing constraint: "There are exactly two books between A and B." Since B is fixed at position 1, we count two vacant slots (positions 2 and 3) above it, which means Book A must be placed at position 4. Our current arrangement is: 6: Empty, 5: Empty, 4: A, 3: Empty, 2: Empty, 1: B.

(d) Analyze the consecutive pair constraint: "Book C is immediately above Book D." This means C and D form a linked block (CD) that requires two adjacent vacant positions. Looking at our slots, the available pairs are either positions (6, 5) or positions (3, 2). This creates two alternate layouts.

(e) Test Layout 1 (CD at slots 3 and 2): If C is at position 3 and D is at position 2, the remaining empty slots are 6 and 5. The remaining books to place are F and E. The rule states "Book E is somewhere below Book F." This forces F into position 6 and E into position 5. However, another constraint explicitly notes "Book F is not at the top." Since position 6 is the top, this layout breaks the rules and is discarded.

(f) Test Layout 2 (CD at slots 6 and 5): Place C at position 6 and D at position 5. The remaining empty slots are 3 and 2. To satisfy the rule that E is below F, we place F at position 3 and E at position 2. This layout matches every single rule perfectly. The final top-to-bottom order is C, D, A, F, E, B. Book C is at the top.

Final Answer: **(B)** C

Answer: (B)

Go Back to Question 18

Q19.

Solution

Concept:

Direction and distance tracking problems are accurately resolved by charting coordinates step-by-step on a two-dimensional grid. By assigning directional turns (left and right) relative to the current heading, the exact final position can be found. The net distance from the origin is calculated by summing the vertical and horizontal movements.

Solution:

(a) Establish Rohini's initial starting location at the coordinate origin point $(0, 0)$.

(b) Trace the first leg of her movement: She walks 20 meters towards the West. Moving along the negative horizontal axis, her position updates from $(0, 0)$ to the new coordinates $(-20, 0)$.

(c) Trace the second leg: She takes a left turn. When an individual faces West, a left turn reorients them toward the South direction. She walks 15 meters in this direction, which shifts her vertical position downward. Her coordinates update to $(-20, 0 - 15) = (-20, -15)$.

(d) Trace the third leg: From her position facing South, she takes another left turn. A left turn from a South heading reorients her toward the East direction. She walks a distance of 20 meters, shifting her position horizontally to the right. Her coordinates update to $(-20 + 20, -15) = (0, -15)$.

(e) Trace the final leg: From her current position facing East, she takes a right turn, which reorients her back toward the South direction. She walks an additional 10 meters downward. Her final coordinates become $(0, -15 - 10) = (0, -25)$.

(f) Evaluate her final position relative to the starting origin $(0, 0)$: The final coordinates are $(0, -25)$. This means she is located exactly 25 meters away from her starting point, in the straight South direction.

Final Answer: **(A)** 25 meters, South

Answer: (A)

Go Back to Question 19

Q20.

Solution

Concept:

Classification problems involving number pairs require discovering a uniform mathematical function that maps the first number (the base) to the second number (the product) across the options. The unique pair that fails to conform to this shared algebraic formula is categorized as the odd one out.

Solution:

(a) Examine the mathematical relationship within the number pair in Option (A), which is 7 : 50. Take the first number, square it, and analyze the difference: $7^2 = 49$. To reach the second number, add 1 to the result: $49 + 1 = 50$. The operational rule follows the formula $x \rightarrow x^2 + 1$.

(b) Examine the mathematical relationship within the number pair in Option (B), which is 9 : 82. Apply the same formula to the base number: $9^2 = 81$. Adding 1 to this squared value yields $81 + 1 = 82$. This option perfectly matches the $x^2 + 1$ rule.

(c) Examine the mathematical relationship within the number pair in Option (C), which is 11 : 122. Apply the squaring formula to the base number: $11^2 = 121$. Adding 1 to this value yields $121 + 1 = 122$. This option also matches the $x^2 + 1$ rule.

(d) Examine the mathematical relationship within the number pair in Option (D), which is 13 : 168. Apply the squaring formula to this base number: $13^2 = 169$. To arrive at the given paired number of 168, we must subtract 1 from the square ($169 - 1 = 168$) instead of adding 1. This means the pair follows a conflicting rule of $x^2 - 1$.

(e) Conclude that pair 13 : 168 is the clear odd one out because it violates the consistent mathematical pattern shared by the other three options.

Final Answer: **(D)** 13 : 168

Answer: (D)

Go Back to Question 20

Q21.

Solution

Concept:

This problem presents an evaluation of a cause-and-effect paradigm involving workplace training interventions and organizational performance metrics. To evaluate the truth value and logical connection between the Assertion and the Reason, we must examine the operational dynamics of human resource development within a corporate structure.

Solution:

(a) Regular employee training programs are systematically designed to align workforce capabilities with modern operational standards. When employees undergo structured training, they acquire updated technical proficiencies, familiarize themselves with optimized protocols, and develop heightened situational awareness. This process directly results in the upskilling of individual workers.

(b) As a consequence of being highly skilled, these workers exhibit greater precision, make fewer operational mistakes, and minimize resource wastage. Therefore, the statement in the Reason is factually accurate and holds true.

(c) Looking at the aggregate corporate level, a workforce that operates with minimized errors and elevated skill sets naturally finishes tasks faster and handles complex tools more efficiently. This cumulative improvement directly manifests as a substantial increase in overall organizational output and efficiency. Thus, the statement in the Assertion is also fully true.

(d) Furthermore, because the minimization of operational errors and the upskilling of the workforce provide the direct functional mechanism that drives the increase in corporate output, the Reason serves as the correct, comprehensive, and accurate explanation of the Assertion.

Final Answer: **(A)** Both A and R are true, and R is the correct explanation of A.

Answer: (A)

Go Back to Question 21

Q22.

Solution

Concept:

This problem requires mapping out a clear lineage chart across two distinct generations to uncover the specific maternal kinship link requested. Let us break down the interpersonal connections step by step using standard genealogical modeling to track sibling and parental vectors.

Solution:

(a) The text states that Q is the daughter of N, and P is the sister of Q. Because P and Q are biological sisters, they must share the exact same parents. This directly establishes that P is also the daughter of N.

(b) Next, we examine the sibling link provided in the premise: M is the biological brother of N. This placement indicates that M and N belong to the same generational tier, which sits exactly one level above the generation of P and Q.

(c) Additionally, the text notes that O is the father of M. Since M and N are siblings, O must be the biological father of both M and N, representing the grandfather tier of the family structure.

(d) Now we evaluate the relationship of M relative to P. M is the brother of P's parent N. In general kinship terms, the brother of an individual's parent is defined as their uncle. An uncle can be paternal if the parent is male, or maternal if the parent is female.

(e) Although the text does not explicitly mention the gender of N, we can look at the available multiple-choice options. M is the only uncle option listed. For M to be definitively classified as the maternal uncle of P, N must be a female, meaning N is the mother of P. This perfectly aligns with all provided constraints.

Final Answer: **(B)** M

Answer: (B)

Go Back to Question 22

Q23.

Solution

Concept:

This administrative logic problem requires determining the validity of specific institutional interventions designed to mitigate a sharp rise in municipal white-collar crime. The core statement highlights a critical issue: a sudden forty percent spike in cybercrime complaints within the city, with a specific focus on senior citizens being manipulated via deceptive phishing links.

Solution:

(a) To resolve this problem effectively, any proposed course of action must be targeted, realistic, and proportionate without causing widespread civic paralysis or unnecessary disruption to unaffected domains.

(b) Course of Action I suggests that the cyber police cell should launch widespread awareness campaigns and specialized workshops tailored specifically for elderly residents. This intervention directly addresses the root vulnerability highlighted in the text. Since senior citizens are identified as the primary target group, educating them on how to identify phishing URLs, safeguard financial credentials, and report suspicious messages constitutes a highly effective, preventative, and practical solution. Therefore, Course I follows logically.

(c) Course of Action II suggests that the government should temporarily shut down all public internet services across the entire city. While this extreme measure would technically stop phishing links from being delivered temporarily, it represents a massive overreaction that would inflict severe collateral damage.

(d) Suspending the internet would paralyze banking infrastructure, corporate operations, emergency services, and general public utility, creating an unsustainable crisis for the entire population. Hence, Course II is completely impractical and does not follow.

Final Answer: **(A)** Only I follows

Answer: (A)

Go Back to Question 23

Q24.

Solution

Concept:

This vocabulary coding puzzle is governed by a recurring periodic letter-shifting mechanism applied to the letters of the standard English alphabet. To decipher the transformation matrix, we must analyze the spatial intervals between the letters of the sample word GROWTH and its corresponding coded representation HQPVUG.

Solution:

(a) Let us map the letters sequentially by tracking their forward alphabetical index positions. The first letter G has a numerical position of 7, and its coded counterpart H has a position of 8, demonstrating a positive increment of one unit.

(b) The second letter R sits at position 18, and its code letter Q sits at position 17, demonstrating a negative shift of one unit.

(c) The third letter O is at position 15, and its code letter P is at position 16, which is a positive increment of one unit.

(d) The fourth letter W is at position 23, and its code letter V is at position 22, indicating a negative shift of one unit.

(e) The fifth letter T is at position 20, and its code letter U is at position 21, showing a positive increment of one unit.

(f) The sixth letter H is at position 8, and its code letter G is at position 7, showing a negative shift of one unit. The complete alternating rule is established as $+1, -1, +1, -1, +1, -1$.

(g) Applying this exact transformation sequence to the target word MARKET: M plus one yields N; A minus one wraps around to Z; R plus one yields S; K minus one yields J; E plus one yields F; T minus one yields S. Combining these outputs results in the final coded string NZSJFS.

Final Answer: **(A)** NZSJFS

Answer: (A)

Go Back to Question 24

Q25.

Solution

Concept:

This mathematical sequence problem involves analyzing a progression of expanding integers to identify the underlying formula that dictates the growth of successive terms. Let us write down the given terms for closer inspection: 4, 9, 25, 49, 121, the missing term, and 289.

Solution:

(a) At first glance, we can observe a distinct mathematical property shared by every single number in this sequence: they are all perfect squares. To uncover the precise pattern governing the base numbers, let us compute the principal square root of each term sequentially.

(b) The square root of 4 is 2. The square root of 9 is 3. The square root of 25 is 5. The square root of 49 is 7. The square root of 121 is 11.

(c) Let us assemble these extracted base numbers into a new sequence: 2, 3, 5, 7, 11. Examining this set of integers reveals that they are not simply a series of odd numbers, because the number 2 is an even integer, and composite odd numbers like 9 are entirely missing from the group.

(d) Instead, this sequence represents the exact ordered progression of consecutive prime numbers. Following this established mathematical rule, the next prime number occurring immediately after 11 is 13.

(e) To determine the missing term in our original sequence, we must square this next prime base number. Squaring 13 yields 13 multiplied by 13, which equals 169. We can verify this result by checking the final term, 289, which is the perfect square of 17, the prime number that follows 13.

Final Answer: **(B)** 169

Answer: (B)

Go Back to Question 25

Q26.

Solution

Concept:

This problem requires evaluating symbolic operators to find the exact algebraic expression that represents a specific multi-generational relationship, namely that M is the maternal grandmother of T. By definition, a maternal grandmother is the mother of an individual's biological mother.

Solution:

(a) We must search for an expression that establishes a dual-layered maternal connection tracking upwards from T through an intermediate female relative to M. Let us analyze the provided choices systematically.

(b) In Option A, the expression is M * K - T. According to the definitions, this means M is the mother of K, and K is the sister of T. This implies M is the direct mother of both K and T, which fails the grandmother requirement.

(c) In Option B, the expression is M * K * T. Decoding this step by step, the first part establishes that M is the biological mother of K. The second part establishes that K is the biological mother of T.

(d) Combining these two steps, since K is the mother of T, and M is the mother of K, M is definitively the mother of T's mother. This perfectly matches the definition of a maternal grandmother.

(e) For completeness, Option C implies M is the husband of K and K is the mother of T, making M the father. Option D implies M is the sister of K and K is the mother of T, making M the maternal aunt. Thus, Option B is the unique valid configuration.

Final Answer: **(B)** M * K * T

Answer: (B)

Go Back to Question 26

Q27.

Solution

Concept:

This logical deduction question involves analyzing categorical propositions using set-theoretic relationships to determine the structural validity of two conclusions. Let us represent each category mentioned in the premises as a distinct mathematical set to ensure absolute logical consistency.

Solution:

(a) The first statement asserts that "All review meetings are productive." If we define the set of all review meetings as R and the set of all productive sessions as P, this statement indicates that R is a proper subset completely contained within P.

(b) The second statement asserts that "No productive session is long." Defining the set of long sessions as L, this premise establishes that set P and set L have absolutely no overlapping elements, making them completely disjoint sets.

(c) Now let us evaluate Conclusion I, which states "No review meeting is long." Since the entire boundary of set R is located inside set P, and set P is completely isolated from set L, it is physically and logically impossible for any element of set R to intersect with set L. Therefore, Conclusion I is a necessary logical truth and must follow.

(d) Next, let us evaluate Conclusion II, which states "Some productive sessions are review meetings." Because set R is contained inside set P, the space occupied by review meetings constitutes a valid, non-empty overlapping portion of set P. This guarantees that there are definitely some productive sessions that are review meetings. Therefore, Conclusion II also follows with absolute certainty.

Final Answer: **(C)** Both conclusions I and II follow

Answer: (C)

Go Back to Question 27

Q28.

Solution

Concept:

This puzzle requires constructing a linear relative height arrangement for five professionals standing in a row facing North. Let us denote the height ranks using positions 1 through 5, where position 1 represents the shortest individual and position 5 represents the tallest individual.

Solution:

(a) We must analyze the explicit positional constraints to determine the exact sequence. The first clue states that "Charu is taller than only Isha." The inclusion of the word "only" is a powerful absolute constraint.

(b) This means that Isha is the single individual who is shorter than Charu, and everyone else in the line must be taller than Charu. This immediately fixes Isha at position 1 as the shortest person, and places Charu firmly at position 2 as the second-shortest person.

(c) The remaining vacant slots for our arrangement are positions 3, 4, and 5. The second clue states that "Ananya is shorter than Divya but taller than Bipasha." This establishes a strict relative height inequality string: Bipasha is shorter than Ananya, and Ananya is shorter than Divya.

(d) We have exactly three remaining professionals and exactly three empty sequential slots available. Therefore, to preserve this relative ordering, Bipasha must be assigned to position 3, Ananya must be assigned to position 4, and Divya must be assigned to position 5.

(e) The complete ordered sequence from shortest to tallest is Isha, Charu, Bipasha, Ananya, and Divya. The middle person at position 3 is Bipasha.

Final Answer: **(B)** Bipasha

Answer: (B)

Go Back to Question 28

Q29.

Solution

Concept:

This analytical question requires determining the causal link between two statements regarding industrial market trends and government fiscal policies. To establish a valid cause-and-effect relationship, we must examine how macroeconomic tools influence public purchasing behavior.

Solution:

(a) Statement I notes a dramatic 150% surge in the domestic sales of electric two-wheelers over the past fiscal year. Statement II states that the government extended high financial subsidies on electric vehicle purchases and simultaneously increased fuel taxes on petrol.

(b) In market economics, consumers are highly sensitive to both upfront acquisition costs and ongoing operational expenses. When a government introduces large monetary subsidies for electric vehicles, it artificially lowers the purchase price, making them highly competitive.

(c) Concurrently, by raising taxes on petrol, the government significantly increases the daily running cost of conventional internal combustion engine vehicles. These two fiscal measures create a massive financial incentive for consumers to abandon traditional petrol vehicles and purchase electric alternatives instead.

(d) Therefore, the implementation of these strategic government subsidies and tax hikes acts as the direct trigger or cause that shifts consumer demand. This shift in demand directly produces the massive increase in retail sales volumes recorded in the market. Consequently, Statement II is the underlying cause, and Statement I is its direct measurable effect.

Final Answer: **(B)** Statement II is the cause and statement I is its effect.

Answer: (B)

Go Back to Question 29

Q30.

Solution

Concept:

This genealogical problem requires mapping a three-generation family tree involving six members to identify a specific relative connection. Let us carefully integrate each structural constraint provided in the text to build the generational layers.

Solution:

(a) We are told that U is the biological son of T, which places T exactly one generation above U. Another clue states that P is the grandfather of U, which means P belongs to the highest generation tier, two levels above U.

(b) This establishes a linear generational sequence running from grandfather P down to grandchild U. The text then introduces an absolute clarifying constraint: "T is the only son of P."

(c) In any standard family structure, a grandchild's grandfather must be the father of either the child's father or the child's mother. However, because the premise explicitly dictates that T is the sole, unique male child born to P, any paternal grandfather relation must pass directly through T.

(d) Since U is a son of T, and P is the grandfather of U, T must be the male link connecting P to U. This means T is the male child of P who has fathered U. Therefore, looking at the relationship from T to P, T is the biological son of P.

(e) This perfectly satisfies the constraint that Q is the daughter-in-law of P, meaning Q is married to T, completing the family unit across all three tiers.

Final Answer: **(B)** Son

Answer: (B)

Go Back to Question 30

Answer Key

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