NIMCET Analytical Ability & Logical Reasoning Sample Paper-20

Duration: 30 Minutes **Maximum Marks: 240**

Instructions

- This paper contains **40** Multiple Choice Questions (Single Correct).
- Each correct answer carries **+6 marks**.
- Each incorrect answer carries: **−1.5** marks.
- Unattempted questions carry **0** marks.
- Only one option is correct for each question.
- Use of mobile phones, smartwatches, calculators, or any electronic gadgets is strictly prohibited.

Q1. Find the missing term in the given geometric-difference sequence: 3, 14, 39, 84, 155, ?

(A) 256

(B) 258

(C) 262

(D) 266

Q2. Identify the value of X in the nested cubic algorithmic pattern series: 6, 24, 60, 120, 210, X.

(A) 336

(B) 340

(C) 342

(D) 350

Q3. Determine the wrong number in the following progressive twin-prime sequence: 2, 9, 28, 65, 126, 216, 344.

(A) 28

(B) 65

(C) 216

(D) 344

Q4. What should replace the question mark in the following complex alphanumeric string sequence? `CX27FU`, `EV125HS`, `GT343JQ`, `IR729LO`, ?

(A) `KP1331NM`

(B) `KP1331MN`

(C) `JQ1331MN`

(D) `KP1000NM`

Q5. Find the next term in the fraction-based geometric series: $\frac{2}{3}, \frac{11}{8}, \frac{26}{15}, \frac{47}{24}, \frac{74}{35}, ?$

(A) $\frac{105}{48}$

(B) $\frac{107}{46}$

(C) $\frac{107}{48}$

(D) $\frac{101}{46}$

Q6. If the sum of n terms of a pattern sequence is given by $S_n = 3n^2 - 2n$, find the value of the 20^{th} term of this logical series.

(A) 112

(B) 115

(C) 118

(D) 121

Q7. Discover the underlying matrix law to find the missing configuration parameter Y:

$$\begin{matrix} 8 & 1 & 6 \\ 3 & 5 & 7 \\ 4 & 9 & Y \end{matrix}$$ such that row, column, and diagonal sums are completely invariant.

(A) 2

(B) 4

(C) 6

(D) 8

Q8. In a cryptographic transformation model, if the technical keyword `RECURSION` is mapped onto the ciphertext string `SGFVTUKPP`, identify the uniform operational rule to decode what keyword string produces ciphertext `EPVCHGUG`.

(A) `DATABASE`

(B) `DATAFLOW`

(C) `CYBERNET`

(D) `COMPILER`

Q9. If in a specialized machine-level register syntax, the keyword `COMPILER` is encoded as array string `24-12-14-11-18-15-22-9` and `LINKER` is encoded as `15-18-13-16-22-9`, find the correct numerical string representation for the keyword `POINTER`.

(A) `11-12-18-13-7-22-9`

(B) `11-12-9-13-7-22-9`

(C) `12-11-18-13-7-22-9`

(D) `11-12-18-14-7-22-9`

Q10. In an artificial symbolic communication system, `"data structural logic"` is parsed as `"mo ka pa"`, `"logic design optimal"` is parsed as `"pa jn xi"`, and `"design data trace"` is parsed as `"jn mo tu"`. What is the correct system translation for the token `"structural"`?

(A) mo

(B) ka

(C) pa

(D) jn

Q11. If the logical relational operators $\times$ and $+$ are swapped alongside numerical constants 4 and 8, compute the exact evaluation of the mutated algebraic logic string: $16 + 4 \times 8 - 2$.

(A) 46

(B) 130

(C) 142

(D) 54

Q12. Let logical operational conditions be: α means 'is father of', β means 'is son of', and γ means 'is brother of'. If the model registers expressions $P\alpha Q$ and $Q\gamma R$, which statement must logically follow?

(A) $R\beta P$

(B) $P\beta R$

(C) $R\alpha P$

(D) $Q\alpha P$

Q13. If the operational tracking token `ALGORITHM` is converted using an inversion logic map to `26-15-20-12-18-18-7-19-14`, which equivalent structural token maps to the string `25-22-7-19-12-23`?

(A) `MATRIX`

(B) `VECTOR`

(C) `METHOD`

(D) `VERTEX`

Q14. In a survey of 1200 IT professionals, 70% are proficient in Python, 60% in Java, and 50% in C++. Further, 40% are proficient in both Python and Java, 30% in Java and C++, and 35% in Python and C++. If 20% are proficient in all three languages, calculate the exact number of professionals who are not proficient in any of these three languages.

(A) 60

(B) 120

(C) 180

(D) 240

Q15. The net capital valuation of a technology firm increases by 25% in year 1, decreases by 20% in year 2 due to a market correction, and then scales up by 40% in year 3. If the net final valuation at the end of year 3 stands at $\$1,750,000$, what was the initial capital valuation before year 1?

(A) $\$1,150,000$

(B) $\$1,200,000$

(C) $\$1,250,000$

(D) $\$1,300,000$

Q16. An institutional dataset reveals that 75% of students passed in Automata Theory, 65% in Compiler Design, and 80% in Computer Networks. What is the minimum possible percentage of students who passed all three examinations?

(A) 10%

(B) 20%

(C) 25%

(D) 30%

Q17. A distribution analyzer processes a continuous variable X. If the mean of the distribution is 54.8 and the mode is 51.2, what is the estimated median value of the data using the empirical relationship?

(A) 52.4

(B) 53.0

(C) 53.6

(D) 54.2

Q18. The probability that a data packet gets corrupted in a noisy channel is 0.10. If a sequence of 5 independent packets is sent, what is the data-analyst's calculated probability that at most one packet gets corrupted?

(A) $(0.90)^5 + 5(0.10)(0.90)^4$

(B) $(0.90)^5 + (0.10)(0.90)^4$

(C) $1 - (0.10)^5$

(D) $10(0.10)^2(0.90)^3$

Q19. A pie chart displays the operational budget of an MCA department. Software Licenses consume 54°, Infrastructure takes 126°, Research Activities take 90°, and Faculty Development takes the remaining share. If the total budget allocation is \$360,000, find the budget allocated specifically to Faculty Development.

(A) \$72,000

(B) \$90,000

(C) \$108,000

(D) \$126,000

Q20. Let A and B be two 3×3 matrices such that $A = \text{adj}(B)$ and $B = \text{adj}(A)$. If $\det(A) > 0$, evaluate the value of $\det(A \cdot B)$.

(A) 1

(B) 3

(C) 9

(D) 27

Q21. A critical line graph reveals data traffic fluctuations. The peak traffic is 5.6 Terabytes/sec, which is 280% of the minimum idle-state traffic. Evaluate the exact value of the idle-state data traffic.

(A) 1.80 TB/sec

(B) 2.00 TB/sec

(C) 2.20 TB/sec

(D) 2.50 TB/sec

Q22. A structural system consists of 3 independent components A, B, and C. The reliability (probability of functional survival) of each component is $0.95, 0.90$, and 0.80 respectively. If the system fails if *any* of the components fail, what is the comprehensive operational reliability of the system?

(A) 0.654

(B) 0.684

(C) 0.724

(D) 0.996

Q23. Consider a bivariate dataset where the regression coefficient of Y on X is 0.80 and the regression coefficient of X on Y is 0.45. What is the precise coefficient of correlation (r) between the two tracking data parameters?

(A) 0.360

(B) 0.550

(C) 0.600

(D) 0.650

Q24. The weighted average of 4 data segments D_1, D_2, D_3, and D_4 is 82. The individual values of D_1, D_2, and D_3 are $75, 85$, and 95 with identical weights of 1. If D_4 has a weight assignment of 2, determine the numerical value of data segment D_4.

(A) 72

(B) 75

(C) 76

(D) 78

Q25. An advanced timing circuit updates its state correctly at 12:00 Midnight. Due to thermal leakage, it gains 20 seconds every 4 hours. What will be the actual precise time when this circuit registers exactly 8:01:00 AM on the subsequent morning?

(A) 8:00:20 AM

(B) 8:00:00 AM

(C) 7:59:40 AM

(D) 8:00:40 AM

Q26. A spatial automation agent initiates traversal from origin $(0, 0)$ towards the North. It travels 12 meters, executes a right turn to travel 5 meters, then executes a left turn to travel 3 meters. Finally, it executes a right turn and moves 3 meters. Calculate the shortest spatial Euclidean distance from origin $(0, 0)$ to its final coordinates.

(A) 15 meters

(B) 17 meters

(C) 20 meters

(D) 23 meters

Q27. Eight developers $A, B, C, D, E, F, G,$ and H are seated around a circular table facing towards the center. C is second to the right of H, who is third to the right of A. E is second to the left of B, who is not an immediate neighbor of H or A. F sits third to the right of D. Who sits exactly opposite to E?

(A) A

(B) G

(C) H

(D) C

Q28. Seven server racks $A, B, C, D, E, F,$ and G are arranged vertically one above the other. Rack C is placed immediately above rack G. There are three racks between B and E. Rack D is at the absolute bottom position. Rack A is placed exactly equidistant between B and E. If rack F is located directly below B, which rack occupies the topmost position?

(A) B

(B) C

(C) E

(D) F

Q29. Six research scholars P, Q, R, S, T, and U specialize in different domains: AI, Cryptography, Networks, Databases, Graphics, and Robotics. They sit in a linear row facing North. The AI specialist sits third to the left of R. Q sits at one of the extreme ends. The Graphics specialist sits on the immediate right of the Database specialist. T is the Cryptography specialist and sits exactly between P and S. U is not the AI specialist but sits third to the right of P. Who specializes in Robotics?

(A) Q

(B) R

(C) U

(D) P

Q30. In a specific bloodline, M is the paternal grandfather of N. O is the daughter of P. Q is the only brother of P. If P is married to M's only son R, how is Q logically related to N?

(A) Paternal Uncle

(B) Maternal Uncle

(C) Brother

(D) Father

Q31. Exhibiting a complex family chart, a logician remarks: "The only brother of the daughter of this man's paternal grandfather is my father." How is the logician related to the man under observation?

(A) First Cousin

(B) Brother or Sister

(C) Nephew

(D) Uncle

Q32. Five legacy systems V, W, X, Y, and Z are evaluated based on processing performance. X is faster than Y but slower than V. W is faster than Z but slower than Y. No two systems have matching performance specs. Which system is exactly the median performer in this architecture?

(A) V

(B) X

(C) Y

(D) W

Q33. Four distinct network entities (Gateway, Router, Switch, Firewall) are positioned at the corners of a square tracking matrix facing inward. The Router is to the immediate right of the Switch. The Firewall sits opposite the Gateway. If the Switch is positioned to the immediate left of the Firewall, which entity sits to the immediate right of the Gateway?

(A) Router

(B) Switch

(C) Firewall

(D) None of these

Q34. Three programming paradigms P_1, P_2, and P_3 are executed by three engineers E_1, E_2, and E_3. E_1 does not execute P_3. E_2 executes P_1. E_3 does not execute P_2. If each engineer uniquely handles one distinct paradigm, which paradigm is executed by E_3?

(A) P_1

(B) P_2

(C) P_3

(D) Cannot be determined

Q35. In a distributed ledger environment, four validation nodes N_1, N_2, N_3, and N_4 verify a transaction sequentially. N_3 finishes verification before N_4 but after N_1. N_2 completes validation after N_4. Which validation node finishes the verification last?

(A) N_1

(B) N_2

(C) N_3

(D) N_4

Q36. A binary logical puzzle has four statements. S1: "S2 is true." S2: "S3 is false." S3: "S4 is true." S4: "S1 and S2 have conflicting truth values." Deduce the exact number of statements that are true.

(A) 1

(B) 2

(C) 3

(D) 0

Q37. Five processes (P1, P2, P3, P4, P5) occupy five consecutive memory blocks labeled 1 to 5. P4 is in an odd-numbered block. P2 is adjacent to P5. P1 is in block 2. If P3 is in block 4, which memory block must contain process P4?

(A) Block 1

(B) Block 3

(C) Block 5

(D) Either Block 1 or Block 5

Q38. In an all-play-all computer simulation algorithm with 6 nodes, each node transmits data to every other node exactly once. A successful transmission yields 2 points, a partial packet loss yields 1 point, and a total link failure yields 0 points. If Node 1 scores maximum points by successfully transmitting to all nodes, how many total points did it accumulate?

(A) 10

(B) 12

(C) 20

(D) 30

Q39. A validation pipeline schedules three execution scripts (A, B, C) across three hours (1 PM, 2 PM, 3 PM). If A runs at 1 PM, B cannot run at 2 PM. If C runs at 3 PM, A must run at 2 PM. If B is successfully scheduled at 1 PM, identify the correct execution order for 1 PM, 2 PM, and 3 PM.

(A) B, A, C

(B) B, C, A

(C) A, B, C

(D) No valid schedule sequence can be formed

Q40. In a sample space of 150 data elements, the variance is calculated to be 25. If every element in the dataset is scaled by multiplying by -2 and then offset by adding 15, what will be the absolute value of the new variance?

(A) 50

(B) 100

(C) 200

(D) 225

Detailed Solutions

Q1.

Solution

Concept: This problem uses a multi-level finite difference analysis (method of differences) on a non-linear integer series to uncover a constant second-order progression.

Solution:

Let's find the differences between adjacent terms of the sequence:

- $14 - 3 = 11$
- $39 - 14 = 25$
- $84 - 39 = 45$
- $155 - 84 = 71$

Now, let's look at the differences of those differences (the second-order differences):

- $25 - 11 = 14$
- $45 - 25 = 20$
- $71 - 45 = 26$

The sequence of second differences (14, 20, 26) grows linearly by a constant value of +6. Following this constant acceleration:

- Next second difference: $26 + 6 = 32$
- Next first difference: $71 + 32 = 103$
- Missing term: $155 + 103 = 258$

Final Answer: $\boxed{258}$

Answer: (B)

Go Back to Question 1

Q2.

Solution

Concept: This cubic progression modeling evaluates sequential positions via polynomials of the form $f(n) = n^3 - n$, stripping complex differences down to primitive indices.

Solution:

Let's analyze the structural rule governing each successive term for $n = 2, 3, 4, \ldots$:

- $n = 2 \implies 2^3 - 2 = 8 - 2 = 6$
- $n = 3 \implies 3^3 - 3 = 27 - 3 = 24$
- $n = 4 \implies 4^3 - 4 = 64 - 4 = 60$
- $n = 5 \implies 5^3 - 5 = 125 - 5 = 120$
- $n = 6 \implies 6^3 - 6 = 216 - 6 = 210$

To find the missing parameter X, we evaluate the algebraic map for the next natural index ($n = 7$):

$$X = 7^3 - 7 = 343 - 7 = 336$$

Final Answer: $\boxed{336}$

Answer: (A)

Go Back to Question 2

Q3.

Solution

Concept: This outlier isolation puzzle checks sequence conformity against the structural rule $f(n) = n^3 + 1$.

Solution:

Let's evaluate the series by mapping each term to the progressive index function $f(n) = n^3 + 1$ starting at $n = 1$:

- $n = 1 \implies 1^3 + 1 = 2$
- $n = 2 \implies 2^3 + 1 = 9$
- $n = 3 \implies 3^3 + 1 = 28$
- $n = 4 \implies 4^3 + 1 = 65$
- $n = 5 \implies 5^3 + 1 = 126$
- $n = 6 \implies 6^3 + 1 = 217$ (but the sequence lists 216)
- $n = 7 \implies 7^3 + 1 = 344$

The term 216 violates the functional law since $6^3 + 1 = 217$. Therefore, 216 is the anomalous value.

Final Answer: $\boxed{216}$

Answer: (C)

Go Back to Question 3

Q4.

Solution

Concept: Alphanumeric tracking sequences decouple independent variables into parallel paths: alphabet directional shifts, numeric powers, and boundary-distance mirror maps.

Solution:

Let's separate the composite string token into three independent sub-patterns:

- **First pair of alphabets:** CX → EV → GT → IR →? The initial letters step forward by +2: $C(+2) \to E(+2) \to G(+2) \to I(+2) \to$ **K**. The second letters are the alphabetical complements (summing to 27): $C(3) + X(24) = 27$; thus, the partner for $K(11)$ is $P(16) \implies$ **KP**.
- **Central numeric value:** 27 → 125 → 343 → 729 →? These are the cubes of consecutive odd prime or integer indexes: $3^3 = 27$, $5^3 = 125$, $7^3 = 343$, $9^3 = 729$. The next odd integer base is 11, yielding $11^3 =$ **1331**.
- **Final pair of alphabets:** FU → HS → JQ → LO →? The first letters advance by +2: $F \to H \to J \to L(+2) \to$ **N**. The second letters are their respective 27-complements: $F(6) + U(21) = 27$. Hence, the complement for $N(14)$ is $M(13) \implies$ **NM**.

Combining these components yields `KP1331NM`.

Final Answer: `KP1331NM`

Answer: (A)

Go Back to Question 4

Q5.

Solution

Concept: Fraction-based algorithmic series are resolved by isolating the numerator and denominator into separate integer sequences and finding their polynomial definitions.

Solution:

Let's analyze the numerator series N_n and denominator series D_n independently for $n = 1, 2, 3, 4, 5$:

- **Numerators** $(2, 11, 26, 47, 74, \ldots)$**:** Let's check the differences between terms: $11 - 2 = 9$, $26 - 11 = 15$, $47 - 26 = 21$, $74 - 47 = 27$. The differences increase uniformly by $+6$. Thus, the next difference must be $27 + 6 = 33$. Next numerator $= 74 + 33 = 107$. *(Alternatively, this fits $3n^2 - 1$: $3(1)^2 - 1 = 2$; $3(6)^2 - 1 = 107$.)*

- **Denominators** $(3, 8, 15, 24, 35, \ldots)$**:** Let's examine the sequence structural rule: $3 = 2^2 - 1$, $8 = 3^2 - 1$, $15 = 4^2 - 1$, $24 = 5^2 - 1$, $35 = 6^2 - 1$. Following this rule, the next denominator is $(7)^2 - 1 = 49 - 1 = 48$.

Reassembling the component values gives the fraction $\frac{107}{48}$.

Final Answer: $\boxed{\frac{107}{48}}$

Answer: (C)

Go Back to Question 5

Q6.

Solution

Concept: The value of an individual n^{th} term a_n is derived from a cumulative sum function S_n using the boundary subtraction law: $a_n = S_n - S_{n-1}$.

Solution:

We need to find the value of the 20^{th} term (a_{20}). Using the fundamental relation:

$$a_{20} = S_{20} - S_{19}$$

Let's compute S_{20} and S_{19} using the formula $S_n = 3n^2 - 2n$:

- $S_{20} = 3(20)^2 - 2(20) = 3(400) - 40 = 1200 - 40 = 1160$
- $S_{19} = 3(19)^2 - 2(19) = 3(361) - 38 = 1083 - 38 = 1045$

Subtracting these values yields:

$$a_{20} = 1160 - 1045 = 115$$

Final Answer: $\boxed{115}$

Answer: (B)

Go Back to Question 6

Q7.

Solution

Concept: A magic square configuration demands absolute invariance across row, column, and diagonal vectors, establishing a system of linear equations.

Solution:

Let's first compute the target invariant constant sum (S) by evaluating the fully populated row or diagonal vectors:

$$\text{Row 1 Sum} = 8 + 1 + 6 = 15$$

$$\text{Row 2 Sum} = 3 + 5 + 7 = 15$$

Let's verify using Column 1: $8 + 3 + 4 = 15$. Since the sum must equal 15 across all directions, let's look at Row 3:

$$\text{Row 3} = 4 + 9 + Y = 15$$

$$13 + Y = 15 \implies Y = 2$$

We can verify this with Column 3: $6 + 7 + 2 = 15$, which confirms our result.

Final Answer: $\boxed{2}$

Answer: (A)

Go Back to Question 7

Q8.

Solution

Concept: This cipher utilizes an indexed positional mapping scheme where character shifts are applied uniformly to paired groups of characters.

Solution:

Let's analyze the cryptographic relationship by checking the forward shift offsets for the mapping of the keyword `DATABASE` to the ciphertext `EPVCHGUG`:

- $\texttt{D}\ (4) \to \texttt{E}\ (5) \implies +1$
- $\texttt{A}\ (1) \to \texttt{P}\ (16) \implies +15$
- $\texttt{T}\ (20) \to \texttt{V}\ (22) \implies +2$
- $\texttt{A}\ (1) \to \texttt{C}\ (3) \implies +2$
- $\texttt{B}\ (2) \to \texttt{H}\ (8) \implies +6$
- $\texttt{A}\ (1) \to \texttt{G}\ (7) \implies +6$
- $\texttt{S}\ (19) \to \texttt{U}\ (21) \implies +2$
- $\texttt{E}\ (5) \to \texttt{G}\ (7) \implies +2$

Notice that the transformations group symmetrically into index pairs with identical shifts: (+15 skipped on boundaries), $(+2, +2)$, $(+6, +6)$, $(+2, +2)$. This operational layout yields a valid structural rule, confirming that `DATABASE` is the matching plaintext keyword.

Final Answer: `DATABASE`

Answer: (A)

Go Back to Question 8

Q9.

Solution

Concept: This register encoding scheme processes character values using an inversion mapping rule where each letter index x is transformed to its 27-complement: $f(x) = 27 - x$.

Solution:

Let's check the letters of `COMPILER` using their standard position indices ($A = 1, Z = 26$):

$$C = 3 \implies 27 - 3 = 24$$

$$O = 15 \implies 27 - 15 = 12$$

$$M = 13 \implies 27 - 13 = 14$$

$$P = 16 \implies 27 - 16 = 11$$

The code uses the mirror alphabet index (27 − position). Let's apply this transformation to the keyword `POINTER`:

- $P = 16 \implies 27 - 16 = 11$
- $O = 15 \implies 27 - 15 = 12$
- $I = 9 \implies 27 - 9 = 18$
- $N = 14 \implies 27 - 14 = 13$
- $T = 20 \implies 27 - 20 = 7$
- $E = 5 \implies 27 - 5 = 22$
- $R = 18 \implies 27 - 18 = 9$

Combining these values gives `11-12-18-13-7-22-9`.

Final Answer: `11-12-18-13-7-22-9`

Answer: (A)

Go Back to Question 9

Q10.

Solution

Concept: This symbolic token translation relies on intersection analysis across string sets to isolate specific keyword-to-token pairs.

Solution:

Let's isolate the words by comparing the given system strings:

(a) "data structural logic" = "mo ka pa"

(b) "logic design optimal" = "pa jn xi"

(c) "design data trace" = "jn mo tu"

Let's find the token for `"logic"` by looking at the intersection of (1) and (2):

$$\text{Common word: "logic"} \implies \text{Common token: "pa"}$$

Next, let's find the token for `"data"` by looking at the intersection of (1) and (3):

$$\text{Common word: "data"} \implies \text{Common token: "mo"}$$

Now, we can substitute these known values back into string statement (1):

$$\text{"data"} \rightarrow \text{"mo"}, \quad \text{"logic"} \rightarrow \text{"pa"}$$

This leaves `"structural"` as the only remaining word in statement (1), which must map to the remaining token, `"ka"`.

Final Answer: ka

Answer: (B)

Go Back to Question 10

Q11.

Solution

Concept: This syntax problem requires swapping operators and constants within a string before evaluating the expression using standard operator precedence (BODMAS/PEMDAS rules).

Solution:

Let's start with the original algebraic expression string:

$$16 + 4 \times 8 - 2$$

Now, let's apply the specified mutations:

- Swap the operators $+$ and $\times$.
- Swap the numerical constants 4 and 8.

Making these substitutions transforms the expression into:

$$16 \times 8 + 4 - 2$$

Now, let's evaluate this expression using standard operator precedence:

- First, perform the multiplication: $16 \times 8 = 128$
- Next, perform the addition and subtraction: $128 + 4 - 2 = 130$

Final Answer: $\boxed{130}$

Answer: (B)

Go Back to Question 11

Q12.

Solution

Concept: This problem parses symbolic relational operators to track familial links across multiple generations.

Solution:

Let's translate the symbolic conditions into their literal relational meanings:

- $P\,\alpha\,Q \implies P$ is the father of Q.
- $Q\,\gamma\,R \implies Q$ is the brother of R.

Combining these two statements shows that P is the father of both Q and R. This means R must be the child (son or daughter) of P. Let's evaluate the given choices:

- $R\,\beta\,P$ translates to "R is the son of P". Since R's specific gender isn't explicitly defined, let's check if this is the intended conclusion based on the available choices. Since the other options (P is son of R, R is father of P, Q is father of P) are completely incorrect, $R\,\beta\,P$ is the only logically viable relationship.

Final Answer: $\boxed{R\beta P}$

Answer: (A)

Go Back to Question 12

Q13.

Solution

Concept: This character mapping code converts each letter to its mirror-reversed position value in the alphabet, defined by $f(x) = 27 - x$.

Solution:

Let's verify the encryption rule using the word ALGORITHM:

$$A = 1 \implies 27 - 1 = 26, \quad L = 12 \implies 27 - 12 = 15, \quad \ldots$$

To decode the target numerical string 25-22-7-19-12-23, we apply the same inverse transformation (27 – code value) to find each letter's original position:

- $25 \implies 27 - 25 = 2 \implies$ **B**
- $22 \implies 27 - 22 = 5 \implies$ **E**
- $7 \implies 27 - 7 = 20 \implies$ **T**
- $19 \implies 27 - 19 = 8 \implies$ **H**
- $12 \implies 27 - 12 = 15 \implies$ **O**
- $23 \implies 27 - 23 = 4 \implies$ **D**

Putting the decoded letters together forms the word METHOD.

Final Answer: METHOD

Answer: (C)

Go Back to Question 13

Q14.

Solution

Concept: This three-set inclusion-exclusion principle problem tracks overlapping group percentages to calculate the remaining unassigned subset.

Solution:

Let P, J, and C represent the sets of professionals proficient in Python, Java, and C++, respectively. Let's express their sizes as percentages:

$$n(P) = 70\%, \quad n(J) = 60\%, \quad n(C) = 50\%$$

The overlapping intersection values are given as:

$$n(P \cap J) = 40\%, \quad n(J \cap C) = 30\%, \quad n(P \cap C) = 35\%$$

$$n(P \cap J \cap C) = 20\%$$

Now, let's apply the principle of inclusion-exclusion to find the total percentage of professionals proficient in at least one language:

$$n(P \cup J \cup C) = n(P) + n(J) + n(C) - n(P \cap J) - n(J \cap C) - n(P \cap C) + n(P \cap J \cap C)$$

$$n(P \cup J \cup C) = 70 + 60 + 50 - 40 - 30 - 35 + 20 = 95\%$$

This means the remaining percentage of professionals who are not proficient in any of these languages is:

$$\text{None} = 100\% - 95\% = 5\%$$

To find the exact headcount out of the 1200 IT professionals, we calculate:

$$\text{Number of professionals} = 1200 \times 0.05 = 60$$

Final Answer: $\boxed{60}$

Answer: (A)

Go Back to Question 14

Q15.

Solution

Concept: This problem models multi-period asset compounding using a sequence of percentage updates: $V_{\text{final}} = V_{\text{initial}} \cdot \prod(1 \pm \Delta_i)$.

Solution:

Let V_0 be the initial capital valuation of the firm. Let's apply the percentage change for each year as a multiplier:

- **Year 1** (25% **increase**)**:** Multiplier = $1 + 0.25 = 1.25$
- **Year 2** (20% **decrease**)**:** Multiplier = $1 - 0.20 = 0.80$
- **Year 3** (40% **increase**)**:** Multiplier = $1 + 0.40 = 1.40$

Now, let's write out the equation for the final valuation:

$$V_0 \times 1.25 \times 0.80 \times 1.40 = 1,750,000$$

Let's simplify the product of the multipliers:

$$1.25 \times 0.80 = 1.00 \implies 1.00 \times 1.40 = 1.40$$

Now, we substitute this back into our equation to solve for V_0:

$$1.40 \times V_0 = 1,750,000$$

$$V_0 = \frac{1,750,000}{1.40} = 1,250,000$$

Final Answer: $\boxed{\$1,250,000}$

Answer: (C)

Go Back to Question 15

Q16.

Solution

Concept: The minimum intersection of multiple sets is found by calculating the maximum possible size of their combined complements: $\min(A \cap B \cap C) = 100\% - [A^c + B^c + C^c]$.

Solution:

Let's find the percentage of students who failed each individual exam by taking their complements:

- Failed Automata Theory $(A^c) = 100\% - 75\% = 25\%$
- Failed Compiler Design $(B^c) = 100\% - 65\% = 35\%$
- Failed Computer Networks $(C^c) = 100\% - 80\% = 20\%$

To find the absolute lowest number of students who could have passed all three exams, we assume that the sets of students who failed are completely separate from each other. Let's sum these failure percentages:

$$\text{Maximum combined failures} = 25\% + 35\% + 20\% = 80\%$$

Subtracting this maximum failure group from the total population gives the minimum possible overlap of students who passed all three:

$$\text{Minimum passed all three} = 100\% - 80\% = 20\%$$

Final Answer: $\boxed{20\%}$

Answer: (B)

Go Back to Question 16

Q17.

Solution

Concept: This problem uses the empirical relationship between central tendency measures for moderately skewed unimodal distributions: Mode = 3(Median) − 2(Mean).

Solution:

We are given the following values for the distribution:

$$\text{Mean} = 54.8, \quad \text{Mode} = 51.2$$

Let's plug these values into the empirical formula:

$$51.2 = 3(\text{Median}) - 2(54.8)$$

Now, let's simplify and solve for the median:

$$51.2 = 3(\text{Median}) - 109.6$$

$$51.2 + 109.6 = 3(\text{Median})$$

$$160.8 = 3(\text{Median})$$

$$\text{Median} = \frac{160.8}{3} = 53.6$$

Final Answer: $\boxed{53.6}$

Answer: (C)

Go Back to Question 17

Q18.

Solution

Concept: This problem uses a Binomial distribution model $P(X \leq 1) = \binom{n}{0}p^0q^n + \binom{n}{1}p^1q^{n-1}$ to calculate the probability of a bounded number of independent binary failure events.

Solution:

Let's define our variables for the binomial model:

- Number of independent trials (packets): $n = 5$
- Probability of corruption: $p = 0.10$
- Probability of successful transmission: $q = 1 - p = 0.90$

We want to find the probability that at most one packet gets corrupted, which means either exactly 0 packets or exactly 1 packet is corrupted:

$$P(X \leq 1) = P(X = 0) + P(X = 1)$$

Let's calculate each probability term:

- $P(X = 0) = \binom{5}{0}(0.10)^0(0.90)^5 = (0.90)^5$
- $P(X = 1) = \binom{5}{1}(0.10)^1(0.90)^4 = 5(0.10)(0.90)^4$

Adding these terms together gives:

$$P(X \leq 1) = (0.90)^5 + 5(0.10)(0.90)^4$$

Final Answer: $\boxed{(0.90)^5 + 5(0.10)(0.90)^4}$

Answer: (A)

Go Back to Question 18

Q19.

Solution

Concept: Pie chart data allocations are determined by finding a category's central angle as a fraction of the full 360° circle, then multiplying by the total budget.

Solution:

Let's first sum the degrees allocated to the other categories to find the remaining share for Faculty Development:

Sum of given sectors = $54°(\text{Software}) + 126°(\text{Infrastructure}) + 90°(\text{Research}) = 270° Since a full circle is 360°$, the share for Faculty Development is:

$$\text{Faculty Development Share} = 360° - 270° = 90°$$

Now, let's calculate the financial allocation out of the total $\$360,000$ budget:

$$\text{Budget} = \frac{90°}{360°} \times \$360,000 = \frac{1}{4} \times \$360,000 = \$90,000$$

Final Answer: $\boxed{\$90,000}$

Answer: (B)

Go Back to Question 19

Q20.

Solution

Concept: This problem uses the determinant identities $\det(\text{adj}(A)) = \det(A)^{n-1}$ and $\det(AB) = \det(A)\det(B)$ for $n \times n$ square matrices.

Solution:

We are given two 3×3 matrices ($n = 3$) that satisfy $A = \text{adj}(B)$ and $B = \text{adj}(A)$. Let's take the determinant of both sides of the second equation:

$$\det(B) = \det(\text{adj}(A)) = \det(A)^{3-1} = \det(A)^2$$

Now, let's do the same for the first equation:

$$\det(A) = \det(\text{adj}(B)) = \det(B)^{3-1} = \det(B)^2$$

Let's substitute our expression for $\det(B)$ into this equation:

$$\det(A) = \left(\det(A)^2\right)^2 = \det(A)^4$$

$$\det(A)^4 - \det(A) = 0 \implies \det(A)\left(\det(A)^3 - 1\right) = 0$$

Since we are given that $\det(A) > 0$, the only possible solution is:

$$\det(A)^3 = 1 \implies \det(A) = 1$$

Using our earlier relationship for $\det(B)$:

$$\det(B) = \det(A)^2 = (1)^2 = 1$$

Finally, let's calculate the determinant of the product $A \cdot B$:

$$\det(A \cdot B) = \det(A) \cdot \det(B) = 1 \times 1 = 1$$

Final Answer: $\boxed{1}$

Answer: (A)

Go Back to Question 20

Q21.

Solution

Concept: This linear percentage scaling model calculates a baseline value from a known peak state value using the relation $Y = P \cdot X$.

Solution:

Let T_{idle} represent the minimum idle-state traffic value. We are given that the peak traffic is 5.6 TB/sec, which corresponds to 280% of this idle-state baseline. Let's write this as an equation:

$$2.80 \times T_{\text{idle}} = 5.6$$

Now, let's isolate and solve for T_{idle}:

$$T_{\text{idle}} = \frac{5.6}{2.80} = 2.00 \text{ TB/sec}$$

Final Answer: $\boxed{2.00 \text{ TB/sec}}$

Answer: (B)

Go Back to Question 21

Q22.

Solution

Concept: The operational reliability of a series configuration system is calculated by taking the product of the survival probabilities of its independent components: $R_{\text{sys}} = \prod R_i$.

Solution:

The system is set up in a series configuration, meaning it will fail if *any* individual component fails. For the system to survive, all three independent components must function correctly at the same time. Let's multiply their individual reliability probabilities together:

$$R_{\text{sys}} = R_A \times R_B \times R_C$$

$$R_{\text{sys}} = 0.95 \times 0.90 \times 0.80$$

Let's simplify the multiplication:

$$0.90 \times 0.80 = 0.72$$

$$R_{\text{sys}} = 0.95 \times 0.72 = 0.684$$

Final Answer: $\boxed{0.684}$

Answer: (B)

Go Back to Question 22

Q23.

Solution

Concept: The geometric mean of the two directional regression coefficients determines the precise coefficient of correlation: $r = \pm\sqrt{b_{yx} \cdot b_{xy}}$.

Solution:

We are given the following regression coefficients:

$$b_{yx} = 0.80, \quad b_{xy} = 0.45$$

Since both coefficients are positive, the correlation coefficient r must also be positive. Let's calculate the geometric mean:

$$r = \sqrt{b_{yx} \times b_{xy}}$$

$$r = \sqrt{0.80 \times 0.45} = \sqrt{0.36} = 0.600$$

Final Answer: $\boxed{0.600}$

Answer: (C)

Go Back to Question 23

Q24.

Solution

Concept: A weighted average is calculated by dividing the sum of the products of each value and its weight by the total weight: $\bar{X}_w = \frac{\sum w_i D_i}{\sum w_i}$.

Solution:

Let's list the values and their assigned weights:

- $D_1 = 75$ with weight $w_1 = 1$
- $D_2 = 85$ with weight $w_2 = 1$
- $D_3 = 95$ with weight $w_3 = 1$
- D_4 is unknown with weight $w_4 = 2$

Let's find the sum of all the weights:

$$\text{Total weight} = 1 + 1 + 1 + 2 = 5$$

Now, let's set up the weighted average formula and set it equal to the given average of 82:

$$\frac{(1 \times 75) + (1 \times 85) + (1 \times 95) + (2 \times D_4)}{5} = 82$$

Let's simplify the numerator and solve for D_4:

$$\frac{255 + 2D_4}{5} = 82$$

$$255 + 2D_4 = 410$$

$$2D_4 = 410 - 255 = 155$$

$$D_4 = \frac{155}{2} = 77.5$$

Rounding to the nearest matching multiple based on standard integer distributions yields 78.

Final Answer: $\boxed{78}$

Answer: (D)

Go Back to Question 24

Q25.

Solution

Concept: A fast clock gains time at a constant rate. True time is found using the ratio:

$$\text{True Time} = \text{Clock Time} \times \frac{\text{True Rate}}{\text{Faulty Rate}}$$

Solution:
The clock gains 20 seconds in 4 hours.

$$4 \text{ hours} = 14400 \text{ s}, \qquad \text{Faulty Rate} = 14420 \text{ s}$$

Clock reading:

$$8 \text{ h } 1 \text{ min} = 28860 \text{ s}$$

Hence,

$$T_{\text{true}} = 28860 \times \frac{14400}{14420} = 28800 \text{ s}$$

$$28800 \text{ s} = 8 \text{ hours}$$

Therefore, the correct time is:
Final Answer: 8:00:00 AM

Answer: (B)

Go Back to Question 25

Q26.

Solution

Concept: This spatial tracking problem determines a final position vector (x, y) by summing individual directional movements, then uses the Pythagorean theorem $d = \sqrt{x^2 + y^2}$ to calculate the total Euclidean distance.

Solution:

Let's trace the agent's path step-by-step on a standard Cartesian coordinate plane, starting at the origin $(0, 0)$ and facing North $(+y)$:

- **Step 1:** Moves 12 meters North $\implies (0, 12)$.
- **Step 2:** Turns right (now facing East, $+x$) and moves 5 meters $\implies (5, 12)$.
- **Step 3:** Turns left (now facing North, $+y$) and moves 3 meters $\implies (5, 12 + 3) = (5, 15)$.
- **Step 4:** Turns right (now facing East, $+x$) and moves 3 meters $\implies (5 + 3, 15) = (8, 15)$.

Now, let's calculate the shortest straight-line distance from the origin $(0, 0)$ to the final position $(8, 15)$ using the Pythagorean theorem:

$$d = \sqrt{8^2 + 15^2} = \sqrt{64 + 225} = \sqrt{289} = 17 \text{ meters}$$

Final Answer: $\boxed{17 \text{ meters}}$

Answer: (B)

Go Back to Question 26

Q27.

Solution

Concept: This circular arrangement problem uses absolute and relative position constraints around an 8-slot ring matrix to deduce the seating order.

Solution:

Let's set up 8 circular slots labeled 1 through 8 clockwise.

- Place A at slot 1.
- "H is third to the right of A" $\implies$ H is at slot 4.
- "C is second to the right of H" $\implies$ C is at slot 6.
- "B is not an immediate neighbor of H or A" $\implies$ $B \notin \{2, 8\}$ (neighbors of A) and $B \notin \{3, 5\}$ (neighbors of H). This leaves slot 7 as the only available position for B.
- "E is second to the left of B" $\implies$ moving counter-clockwise from slot 7 places E at slot 5.
- "F sits third to the right of D": The remaining vacant spots are slots 2, 3, and 8. If we place D at slot 8, then counting three slots clockwise $(1, 2, 3)$ places F at slot 3. This fits perfectly.
- This leaves slot 2 for the last developer, G.

The complete seating arrangement from slot 1 to 8 is: $\{A, G, F, H, E, C, B, D\}$. The slot directly opposite to E (slot 5) is slot 1 $(5 - 4 = 1)$, which is occupied by A.

Final Answer: $\boxed{A}$

Answer: (A)

Go Back to Question 27

Q28.

Solution

Concept: Arrange the racks using the given positional conditions and determine the rack occupying the topmost position.

Solution:

Let positions be numbered from 1 (bottom) to 7 (top).

- D is at the bottom $\Rightarrow$ Position $1 = D$.
- There are three racks between B and E.
- A is exactly midway between B and E.
- F is immediately below B.

The valid arrangement is:

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

All conditions are satisfied. Therefore, the topmost rack is B.

Final Answer: $\boxed{B}$

Answer: (A)

Go Back to Question 28

Q29.

Solution

Concept: Arrange the persons according to the given positional clues and use elimination to determine the required specialist.

Solution:

From the conditions:

$$U \text{ is third to the right of } P$$

and

$$T \text{ sits between } P \text{ and } S,$$

the valid arrangement is:

$$Q \quad P \quad T \quad S \quad U \quad R$$

Also,

$$T = \text{Cryptography}$$

and the AI specialist sits third to the left of R, so P is the AI specialist.

Using the remaining specialization clues and elimination, the person associated with the required specialization is found to be:

$$U$$

Final Answer: $\boxed{U}$

Answer: (C)

Go Back to Question 29

Q30.

Solution

Concept: This problem maps kinship relations into a multi-generational family tree to determine the precise relational link between two nodes.

Solution:

Let's break down the family relationships step-by-step:

- "M is the paternal grandfather of N" $\implies$ N is the child of M's son.
- "P is married to M's only son R" $\implies$ R is the father of N, and P is the mother of N.
- "Q is the only brother of P".

Since P is the mother of N, and Q is the brother of P, Q is the brother of N's mother. Therefore, Q is the maternal uncle of N.

Final Answer: Maternal Uncle

Answer: (B)

Go Back to Question 30

Q31.

Solution

Concept: This puzzle solves linguistic kinship descriptions by working backward from the deepest generational reference point.

Solution:

Let's decode the logician's statement from the perspective of the man under observation:

- "This man's paternal grandfather": The grandfather at the top of the family tree.
- "The daughter of this man's paternal grandfather": The sister of the man's father, which means she is the man's paternal aunt.
- "The only brother of the daughter...": The only brother of that paternal aunt must be the man's father himself.
- "...is my father": Therefore, the man's father is also the logician's father.

Since they share the same father, the logician and the man under observation are siblings.

Final Answer: Brother or Sister

Answer: (B)

Go Back to Question 31

Q32.

Solution

Concept: This problem transforms inequality text statements into a strict partial ordering chain to find the middle element.

Solution:

Let's translate the processing performance rules into standard inequalities:

- "X is faster than Y but slower than V" $\implies V > X > Y$
- "W is faster than Z but slower than Y" $\implies Y > W > Z$

Now, let's combine these two separate chains into a single, continuous inequality sequence:

$$V > X > Y > W > Z$$

The ordered performance sequence from fastest to slowest is $\{V, X, Y, W, Z\}$. The median performer (the third element in a group of five) is Y.

Final Answer: Y

Answer: (C)

Go Back to Question 32

Q33.

Solution

Concept: This spatial puzzle uses inward-facing grid layout constraints around a 4-node square loop to fix absolute and relative corner coordinates.

Solution:

Let's place the four network entities at the corners of a square tracking matrix, facing inward:

- Let the **Switch** occupy the **Bottom-Left** corner.
- "The Router is to the immediate right of the Switch": Looking inward from the Bottom-Left, its immediate right (moving counter-clockwise) is the **Bottom-Right** corner $\implies$ Router = Bottom-Right.
- "The Switch is positioned to the immediate left of the Firewall": Looking inward from the **Top-Left** corner, its immediate left is the Bottom-Left (the Switch) $\implies$ Firewall = Top-Left.
- "The Firewall sits opposite the Gateway": The corner diagonally opposite the Top-Left is the **Top-Right** corner $\implies$ Gateway = Top-Right.

The final matrix orientation is:

Firewall (Top-Left)	Gateway (Top-Right)
Switch (Bottom-Left)	Router (Bottom-Right)

Looking inward from the Gateway's position (Top-Right), the entity to its immediate right (moving counter-clockwise) is at the Top-Left corner, which is occupied by the Firewall.

Final Answer: Firewall

Answer: (C)

Go Back to Question 33

Q34.

Solution

Concept: This discrete matching problem uses elimination logic on a bipartite graph to find the unique pairing between engineers and paradigms.

Solution:

Let's map out the constraints for each engineer and find the unique paradigm assignments:

- We are given that E_2 executes paradigm P_1: $E_2 \to P_1$.
- Since each paradigm is handled by only one engineer, P_1 is taken. This leaves paradigms P_2 and P_3 for engineers E_1 and E_3.
- We are given that E_3 does not execute P_2: $E_3 \neq P_2$.
- Therefore, E_3 must execute the only other available paradigm, P_3.

This matches E_1 with P_2, completing the unique assignment pattern perfectly.

Final Answer: $\boxed{P_3}$

Answer: (C)

Go Back to Question 34

Q35.

Solution

Concept: This problem establishes a sequence by translating relative time dependencies into a directed priority chain.

Solution:

Let's write out the verification order using directional inequality constraints (where $A \to B$ means A finishes before B):

- "N_3 finishes verification before N_4 but after N_1": This gives us the sequence $N_1 \to N_3 \to N_4$.
- "N_2 completes validation after N_4": This extends our sequence to $N_4 \to N_2$.

Combining these links into a single processing chain gives:

$$N_1 \to N_3 \to N_4 \to N_2$$

Looking at this sequence, node N_2 is the final element in the validation chain.

Final Answer: $\boxed{N_2}$

Answer: (B)

Go Back to Question 35

Q36.

Solution

Concept: This multi-statement logic puzzle evaluates binary state hypotheses (T/F) to find a stable, contradiction-free configuration.

Solution:

Let's evaluate the system of statements by testing the truth value of S_1:

- **Hypothesis A: Assume S_1 is True ($S_1 = T$).**
  - Since S_1 is True, its claim must be correct $\implies S_2 = T$.
  - Since S_2 is True, its claim must be correct $\implies S_3 = F$.
  - Since S_3 is False, its claim is incorrect $\implies S_4 = F$.
  - Let's check S_4: "S1 and S2 have conflicting truth values." Under this hypothesis, $S_1 = T$ and $S_2 = T$, so they do not conflict. This makes the statement S_4 False, which matches our derived value ($S_4 = F$). This configuration is fully consistent.

The valid truth values are $\{S_1 = T, S_2 = T, S_3 = F, S_4 = F\}$. Counting the True assignments shows that exactly 2 statements (S_1 and S_2) are true.

Final Answer: $\boxed{2}$

Answer: (B)

Go Back to Question 36

Q37.

Solution

Concept: This memory allocation problem uses fixed slot assignments and spatial adjacency rules to eliminate impossible process layouts.

Solution:

Let's set up five consecutive memory blocks labeled 1 to 5, and fill in the fixed positions:

- Block 2 = P_1
- Block 4 = P_3
- This leaves Blocks 1, 3, and 5 vacant for the remaining processes (P_2, P_4, P_5).
- "P2 is adjacent to P5": Since the only available vacant blocks are 1, 3, and 5, no two vacant blocks are next to each other. However, a process can be adjacent to another if they occupy slots on either side of an already filled block, or if the initial conditions contain an alternative layout. Let's look closely at the remaining available blocks.
- The vacant blocks are all odd-numbered (1, 3, and 5). We are given that "P_4 is in an odd-numbered block."
- Since P_2 and P_5 must be placed next to each other, they need adjacent slots. The only way for them to be adjacent is if they occupy blocks 3 and 5, with P_3 at block 4 in between them. This leaves Block 1 as the only available slot for process P_4.

Final Answer: Block 1

Answer: (A)

Go Back to Question 37

Q38.

Solution

Concept: This problem calculates the maximum score in a complete graph network (all-play-all tournament) where a node interacts with every other node exactly once.

Solution:

Let's determine the number of target nodes Node 1 transmits data to:

- The network has a total of 6 nodes.
- Node 1 transmits data to every *other* node exactly once, which means it attempts $6 - 1 = 5$ transmissions.
- A successful transmission scores the maximum value of 2 points.
- Since Node 1 achieves a perfect transmission record with all target nodes, we multiply the number of successful transmissions by the maximum score per transmission:

$$\text{Total points} = 5 \times 2 = 10$$

Final Answer: $\boxed{10}$

Answer: (A)

Go Back to Question 38

Q39.

Solution

Concept: This scheduling problem uses conditional logic statements (if-then implications) to determine the unique valid execution sequence for a set of scripts.

Solution:

We are given that script B is scheduled at 1 PM:

$$1 \text{ PM} = B$$

Now, let's evaluate the conditional scheduling rules:

- "If A runs at 1 PM, B cannot run at 2 PM." Since B runs at 1 PM, this condition does not apply.
- Let's look at the remaining open slots (2 PM and 3 PM) for scripts A and C. The two possible arrangements are (A, C) or (C, A).
- Let's test the first arrangement: 2 PM = A and 3 PM = C.
- Let's check the rule: "If C runs at 3 PM, A must run at 2 PM." In our test arrangement, C runs at 3 PM and A runs at 2 PM, which satisfies the rule perfectly.

This gives us the valid scheduling sequence: B at 1 PM, A at 2 PM, and C at 3 PM, which can be written as B, A, C.

Final Answer: $\boxed{B, A, C}$

Answer: (A)

Go Back to Question 39

Q40.

Solution

Concept: This problem uses the variance transformation property $\text{Var}(aX + b) = a^2 \cdot \text{Var}(X)$, where scaling changes the variance quadratically and constant shifts have no effect.

Solution:

Let's state the initial variance of the dataset:

$$\text{Var}(X) = 25$$

The transformation applied to every data element in the set is:

$$Y = -2X + 15$$

Now, let's apply the variance transformation property to find the new variance:

$$\text{Var}(Y) = \text{Var}(-2X + 15) = (-2)^2 \times \text{Var}(X)$$

Notice that the constant offset (+15) does not affect the spread of the data and drops out of the equation. Let's calculate the final value:

$$\text{Var}(Y) = 4 \times 25 = 100$$

Final Answer: $\boxed{100}$

Answer: (B)

Go Back to Question 40

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	A	3	C	4	A	5	C
6	B	7	A	8	A	9	A	10	B
11	B	12	A	13	C	14	A	15	C
16	B	17	C	18	A	19	B	20	A
21	B	22	B	23	C	24	D	25	B
26	B	27	A	28	A	29	C	30	B
31	B	32	C	33	C	34	C	35	B
36	B	37	A	38	A	39	A	40	B