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Rajnish Bhatnagar

SBI PO Pre

Solution

SPP-911604128-E



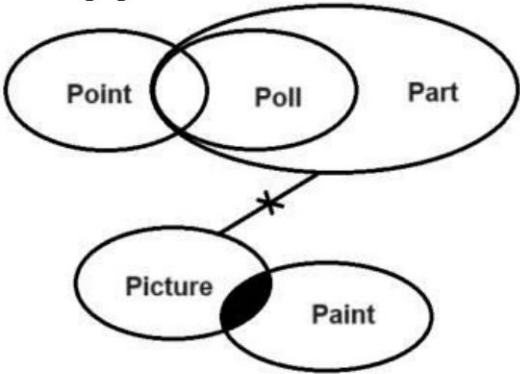
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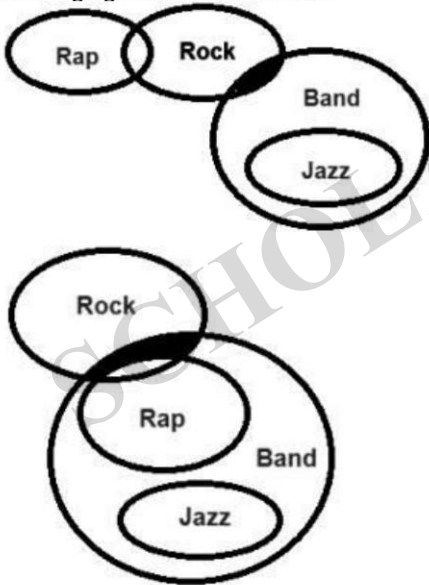
Reasoning Aptitude

1. **Solution: B**
Following figures can be formed:



Conclusions:
I. Some Poll being Picture is a possibility. This definitely doesn't follow as all Poll is Part and no Part is Picture, so, no Poll can be Picture.
II. Some Point is Picture. This definitely doesn't follow as there is no direct relation between Point and Picture, so, it could or couldn't be a possibility.
III. Some Picture is not Paint. This definitely follows as only a few Picture is Paint.
From the above figures, only conclusions I and II definitely doesn't follow.
Hence, option b.

2. **Solution: A**
Following figures can be formed:



Conclusions:
I. All Band being Rock is a possibility: This definitely doesn't follow as Only Band is Jazz, so all Jazz, which are Band can never be Rock.
II. Some Rap is not Band: This definitely doesn't follow as some Rap being Band is a possibility.
III. All Rap being Band is a possibility: This definitely follows as shown in the figure.
So, only conclusion III follows.
Hence, option a.

3. **Solution: D**
Given Expression: O _ M _ R _ U _ N _ P _ T

Replacing the signs of option 'a' in the given expression, $O > M = R = U > N = P \leq T$, it doesn't satisfy the given condition.
Replacing the signs of option 'b' in the given expression, $O = M > R \geq U = N \leq P = T$, it doesn't satisfy the given condition.
Replacing the signs of option 'c' in the given expression, $O = M \geq R = U = N > P = T$, it doesn't satisfy the given condition.
Replacing the signs of option 'd' in the given expression, $O \geq M = R = U \geq N = P > T$, it doesn't satisfy the given condition.
Hence, option d.

4. **Solution: C**
Given word: 'EXHIBITION'.
1st, 2nd, 5th, 7th and 9th of the word are 'E', 'X', 'B', 'T' and 'O'.
So, there is no five-letter meaningful word.
Hence, option c.

5. **Solution: C**
From Statement I, A is the Vice-Principal. G and E are senior to A. F is three designation junior to E. B is immediate senior to D but he is not Assistant Teacher (AT), we get:

Designation	Case 1	Case 2
Director	E	G
Principal	G	E
Vice-Principal (VP)	A	A
Head Teacher (HT)	F	C
Assistant Teacher (AT)	C	F
Librarian	B	B
Clerk	D	D

From statement I alone, we get B is the Librarian.
From Statement II, B is junior to the Assistant Teacher (AT). Only three persons are designated between B and E. G is immediate senior to E. F is senior to D but junior to C and A, we get:

Designation	Case 1	Case 2
Director	G	A/C
Principal	E	G
Vice-Principal (VP)	A/C	E
Head Teacher (HT)	C/A	C/A
Assistant Teacher (AT)	F	F
Librarian	B	D
Clerk	D	B

From Statement II alone, we get either B or D is the Librarian.
Therefore, data given in statement I alone is sufficient to answer the question.
Hence, option c.

6. **Solution: D**
Starting Point: Start with P and N to form the least possible cases.
Clues:
1) The total work experience of P is a prime number.
2) Only one person is joined between P and N.
3) T joined three years after O.
4) T has more experience than N.
Inferences:
From clue 1, we get P joined in 2007.
From clue 2, we have two cases. First, when N joined in 2012. Second, when N joined in 2004.
From clues 3 and 4, in case 1, T joined either in 2003 or in 2006 and O joined either in 2000 or in 2003.
In case 2, O joined in 2000 and T joined in 2003.
Case 1: When N joined in 2012.

Case 1.a: When T joined in 2003.

Year	Experience	Person
1999	25	
2000	24	O
2003	21	T
2004	20	
2006	18	
2007	17	P
2010	14	
2012	12	N

Case 1.b: When T joined in 2006.

Year	Experience	Person
1999	25	
2000	24	
2003	21	O
2004	20	
2006	18	T
2007	17	P
2010	14	
2012	12	N

Case 2: When N joined in 2004.

Year	Experience	Person
1999	25	
2000	24	O
2003	21	T
2004	20	N
2006	18	
2007	17	P
2010	14	
2012	12	

Clues:

- 1) The difference between the work experience of R and M is 4 years.
- 2) The difference between the work experience of P and M is half of the difference between the work experience of R and S.
- 3) The difference between work experience of M and S is not more than 5 years.

Inferences:

From clue 1, in case 1.a, either R or M joined in 2006.
In case 1.b, either R or M joined in 2000.
In case 2, either R or M joined in 2006.
From clue 2, case 1.a and 1.b, gets eliminated as we can't place S in the arrangement. In case 2, S joined in 2012.
From clue 3, R joined in 2006 and M joined in 2010.
Therefore, the final arrangement is as follow:

Year	Experience	Person
1999	25	Q
2000	24	O
2003	21	T
2004	20	N
2006	18	R
2007	17	P
2010	14	M
2012	12	S

R joined in 2006.

Hence, option d.

7. **Solution: B**

The difference between the work experience of T and N is same as the difference between Q and O.
Hence, option b.

8. **Solution: C**

N has 20 years of experience.
Hence, option c.

9. **Solution: D**

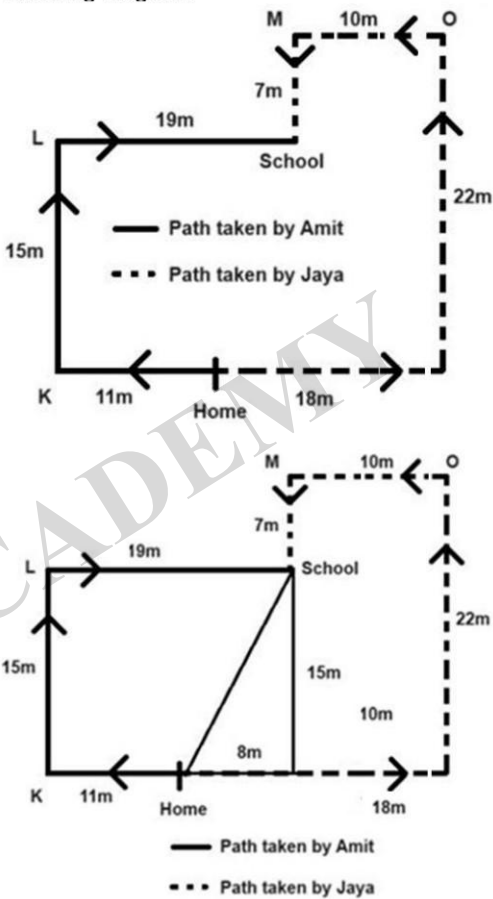
S joined in 2012.
So, all of the above persons joined before S.
Hence, option d.

10. **Solution: D**

Q joined 5 years before N.
Hence, option d.

11. **Solution: B**

From the information given in the question, we get the following diagram:



The shortest distance between home and the school is:

$$\begin{aligned} &\sqrt{(15^2 + 8^2)} \text{ m} \\ &= \sqrt{289} \text{ m} \\ &= 17 \text{ m} \end{aligned}$$

So, the shortest distance between home and the school is 17m.
Hence, option b.

12. **Solution: A**

The distance from point M to the home via two paths are:

$$\text{Path 1 (M, School, L, K, Home)} : (7 + 19 + 15 + 11) \text{ m} = 52 \text{ m}$$

$$\text{Path 2 (M, O, N, Home)} : (10 + 22 + 18) \text{ m} = 50 \text{ m}$$

So, path 2 is the shortest path. Thus, the person needs to cover 50m to reach Amit's home from point M via the shortest path.
Hence, option a.

13. **Solution: A**

Among the given points only point O is towards the northeast of the school.
Hence, option a.

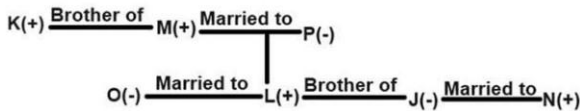
14. **Solution: D**

Clues:

- 1) P is the mother-in-law of N.
- 2) L is the son of M.
- 3) L is not married to N.
- 4) J is the niece of K, who is the brother-in-law of P.
- 5) K is unmarried.
- 6) O is married but not to N.

Inferences:

From clue 1, P is the mother of N's spouse.
From clue 2, M is in the 1st generation.
From clue 3, L is brother of N's spouse.
From clues 4 and 5, K is the brother of M and J is the daughter of P. J is married to N.
From clues 5 and 6, O is married to L.
From the above information, we make the following family tree:



M is the brother of K and O is the daughter-in-law of M.

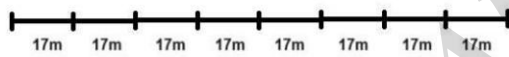
Hence, option d.

15. Solution: D

In option 'A', O is sister-in-law of J: True
In option 'B', L is the son of P: True
In option 'C', N is the son of M: False (N is the son-in-law of M)
So, both option 'A' and 'B' are true.
Hence, option d.

16. Solution: A

Starting Point: As, nine persons sit in a linear row, the distance between two adjacent persons is same and distance between the persons, who sit at two extreme ends is 136m, so, the distance between two adjacent persons is 17m.



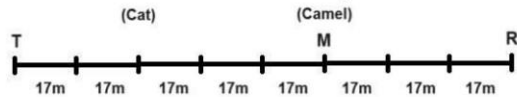
Clues:

- 1) T sits fifth to the left of M, who has Camel.
- 2) Distance between M and R is 51m.
- 3) Distance between R and the one, who has Cat is 102m.

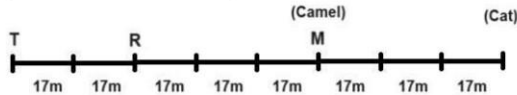
Inferences:

From Clue 1, we get M sits 5th to the right of T.
From Clue 2, we get R sits 3rd to the right of M or 3rd to the left of M.
From Clue 3, we get the one, who has Cat, sits 3rd to the left of M or 3rd to the right of M. T sits at the extreme left end.

Case 1: When R sits 3rd to the right of M.



Case 2: When R sits 3rd to the left of M.

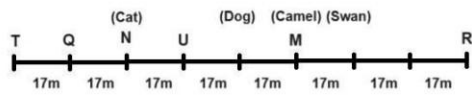


Clues:

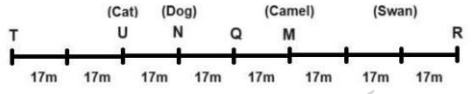
- 1) The distance between N and the one, who has Swan is 68m.
- 2) N sits adjacent to both Q and U. Q doesn't have Cat.
- 3) U sits immediate left of the one, who has Dog.

Inferences:

From Clue 1, we get the one, who has Swan sits 4th to the right or 4th to the left of N.
From Clue 2 and 3, case 2 is eliminated as N sits 2nd to the right of M and thus U sits immediate right of N, however there is no place for the one, who has Dog. In case 1, we get N sits 3rd to the left of M or 2nd to the left of M. U sits either immediate right of N or immediate left of N. Q sits either immediate left of N or immediate right of N.
Case 1: When R sits 3rd to the right of M.
Case 1.a: When U sits immediate right of N.



Case 1.b: When U sits immediate left of N.

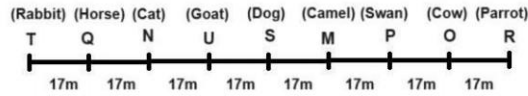


Clues:

- 1) O, who has Cow, sits immediate left of the one, who has Parrot.
- 2) S sits adjacent to the one, who has Goat.
- 3) Q doesn't have Rabbit.

Inferences:

From Clue 1, we eliminate Case 1.b. O sits immediate left of R. R has Parrot.
From Clue 2, U has Goat. S sits immediate right of U.
P sits immediate right of M.
From Clue 3, we get Q has Horse and T has Rabbit.
Therefore, the final arrangement is:



N sits third to the left of the one, who sits immediate right of the one, who has Dog.
Hence, option a.

17. Solution: A

The distance between U and the one, who has Cow is 68m.
Hence, option a.

18. Solution: C

The number of persons, who sit to the left of N is same as the number of persons, who sit between R and the one, who has Camel.
Hence, option c.

19. Solution: D

The distance between N and the one, who has Rabbit is 34m.
Hence, option d.

20. Solution: C

Among the given pairs, the maximum distance is in between N and R.
Hence, option c.

21. Solution: B

Starting Point: Start with I and the one, who works in Apple, to form the least possible cases.

Clues:

- 1) I, who doesn't work in TATA lives on an even numbered floor.
- 2) The one, who works in Apple lives two floors above I.
- 3) M, who works in Infosys lives below I.

4) The one, who works in TATA lives two floors above M.

Inferences:

From clue 1, we have I lives on one of the floors among the 2nd, 4th or 6th floor.

From clue 2, we have two cases. First, when I lives on the 2nd floor. Second, when I lives on the 4th floor.

From clues 3 and 4, in case 1, M lives on the 1st floor and the one, who works in TATA lives on the 3rd floor. In case 2, M lives either on the 1st or the 3rd floor and the one, who works in TATA lives either on the 3rd or the 5th floor.

Case 1: When I lives on the 2nd floor.

Table with 3 columns: Floor, Person, Company. Rows: 6, 5, 4 (Apple), 3 (TATA), 2 (I), 1 (M, Infosys).

Case 2: When I lives on the 4th floor.

Case 2.a: When M lives on the 1st floor.

Table with 3 columns: Floor, Person, Company. Rows: 6, 5, 4 (I), 3 (TATA), 2, 1 (M, Infosys).

Case 2.b: When M lives on the 3rd floor.

Table with 3 columns: Floor, Person, Company. Rows: 6, 5, 4, 3 (I, M, Infosys), 2, 1.

Clues:

1) The one, who works in Accenture lives one floor below L.

2) Only two persons live between the one, who works in Accenture and the one, who works in META.

3) N lives two floors above the one, who works in META.

Inferences:

From clues 1 and 2, in case 1, L lives on the 6th or the 3rd floor. In case 2.a and 2.b, L lives on one of the floors among the 5th, the 3rd or the 2nd floor.

From clue 3, case 2.a can be rejected as there is no floor available for N. In case 1, N lives on the 4th floor and the one, who works in META lives on the 2nd floor. In case 2.b, N lives on the 6th floor and the one, who works in META lives on 4th floor.

Case 1: When I lives on the 2nd floor.

Table with 3 columns: Floor, Person, Company. Rows: 6 (L, IBM), 5 (Accenture), 4 (N, Apple), 3 (TATA), 2 (I, META), 1 (M, Infosys).

Case 2: When I lives on the 4th floor.

Case 2.b: When M lives on the 3rd floor.

Table with 3 columns: Floor, Person, Company. Rows: 6 (N, Apple), 5, 4, 3, 2, 1.

Table with 3 columns: Floor, Person, Company. Rows: 5 (TATA), 4 (I, META), 3 (M, Infosys), 2 (L, IBM), 1 (Accenture).

Clues:

1) The one, who works in IBM doesn't live on the 2nd floor.

2) J does not work in TATA.

Inferences:

From clue 1, case 2.b, gets eliminated.

From clue 2, J works in Accenture and K works in TATA.

Therefore, the final arrangement is as follow:

Table with 3 columns: Floor, Person, Company. Rows: 6 (L, IBM), 5 (J, Accenture), 4 (N, Apple), 3 (K, TATA), 2 (I, META), 1 (M, Infosys).

K lives two floors below the one, who works in Accenture.

Hence, option b.

22.

Solution: B

K works in TATA and lives on the 3rd floor.

Hence, option b.

23.

Solution: C

Only four persons live below the one, who works in Accenture.

Hence, option c.

24.

Solution: C

N lives on an even numbered floor below the one, who works in IBM.

Hence, option c.

25.

Solution: C

I works in META.

Hence, option c.

26.

Solution: D

Starting Point: Start with placing Q, S and M in order to create minimum number of cases initially.

Clues:

1) Q's seat is third to the right of S's seat.

2) Q sits adjacent to a vacant seat.

3) M and Q sit on adjacent seats.

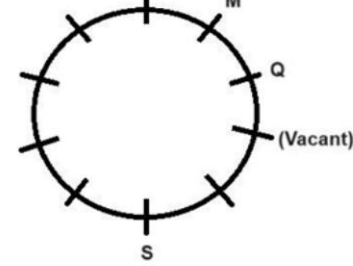
Inferences:

From clue 1, we get Q's seat is 3rd to the right of S's seat.

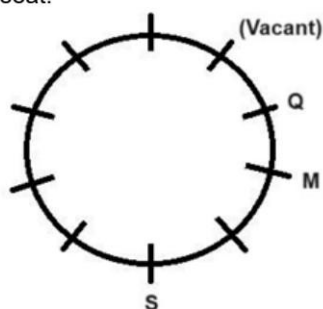
From Clue 2, we get a vacant seat is either immediate left or immediate right of Q's seat.

From Clue 3, we get M's seat is immediate right or immediate left of Q's seat.

Case 1: When a vacant seat is immediate left of Q's seat.



Case 2: When a vacant seat is immediate right of Q's seat.



Clues:

- 1) T sits third to the right of M.
- 2) No vacant seat is adjacent to T's seat.
- 3) R sits immediate left of P.
- 4) There are only three seats between R and N, when counted from the right of R.

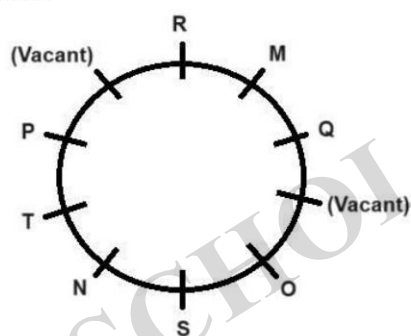
Inferences:

From Clue 1, we get T's seat is 3rd to the right of M's seat or 4th to the right of M's seat.

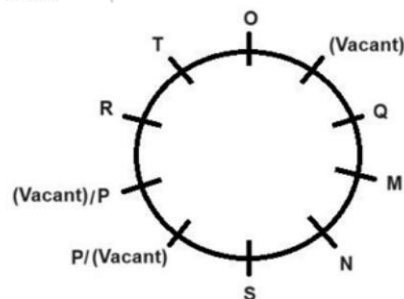
From Clue 2, we get both the seats adjacent to T's seat is not vacant.

From Clue 3 and 4, we get T's seat is 4th to the right of M's seat. R's seat is immediate right of M's seat or 5th to the right of M's seat. N's seat is immediate left of S's seat or immediate right of S's seat. P's seat is 2nd to the right of R's seat or immediate right of R's seat. O's seat is immediate right of S's seat or immediate left of T's seat.

Case 1: When a vacant seat is immediate left of Q's seat.



Case 2: When a vacant seat is immediate right of Q's seat.

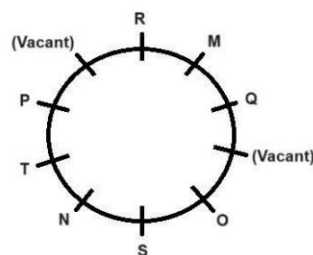


Clue:

- 1) Only three persons sit between O and P, when counted from the left of P.

Inference:

From Clue 1, we eliminate Case 2.
Therefore, the final arrangement is:



O sits on the seat which is third to the right of T's seat.

Hence, option d.

27.

Solution: A

Only five persons sit between R and Q, when counted from the left of Q.

Hence, option a.

28.

Solution: B

All of the given persons, except 'Q', sit adjacent to a non-vacant seat.

Hence, option b.

29.

Solution: C

Both M and P sit between T and Q, when counted from the right of Q.

Hence, option c.

30.

Solution: C

N sits immediate left of S.

Hence, option c.

Quantitative Aptitude

31.

Solution: B

Volume of cuboid = length × breadth × height

Quantity of water in cuboidal tank = $0.4 \times 32 \times 22 \times 28 = 7884.8 \text{ m}^3$

Let the required height of cylindrical tank be 'h' metres.

Volume of cylinder = $\pi \times \text{radius}^2 \times \text{height}$

So, $(22/7) \times 14^2 \times h = 7884.8$

Or, $616 \times h = 7884.8$

So, 'h' = 12.8 metres

Hence, option b.

32.

Solution: D

Let the present month incomes of Somesh and Ramesh be '7x' and '5x', respectively.

So, previous month income of Somesh = $(7x/14) \times 13 = ₹6.5x'$

And, previous month income of Ramesh = $(5x/5) \times 4 = ₹4x'$

ATQ,

$6.5x = 65,000$

So, 'x' = 10,000

Therefore, required income = '4x' = $4 \times 10,000$

= ₹40,000

Hence, option d.

33.

Solution: B

Let the usual time taken by the man be 'T' hours.

So, 'D' = $25 \times \{T + (45/60)\}$ ----- (I)

And, 'D' = $40 \times \{T + (15/60)\}$ ----- (II)

Form equation (I) and (II), we have;

$25 \times \{T + (45/60)\} = 40 \times \{T + (15/60)\}$

Or, $25T + (75/4) = 40T + 10$

Or, $15T = (75/4) - 10$

Or, $15T = (35/4)$

Or, 'T' = $(35/60)$

On putting 'T' = $(35/60)$ in equation (I), we have;

'D' = $25 \times \{(35/60) + (45/60)\}$

Or, 'D' = $25 \times (80/60)$
 Or, 'D' = $(2,000/60) = (100/3)$ km
 Therefore, required time = $(100/3) \div 50$
 = $(100/3) \times (1/50)$
 = $(2/3)$ hours = $(2/3) \times 60 = 40$ minutes
 Hence, option b.

34. **Solution: D**

$2^{2x+y} = 1024$
 $2^{2x+y} = 2^{10}$
 So, $2x + y = 10$ ----- (I)
 Now, $3^{2x-3y} = 9$
 Or, $3^{2x-3y} = 3^2$
 Or, $2x - 3y = 2$ ----- (II)
 On subtracting equation (I) from (II), we have:
 $(2x + y) - (2x - 3y) = 10 - 2$
 Or, $4y = 8$
 Or, 'y' = 2
 On putting 'y' = 2 in equation (I), we have:
 $2x + 2 = 10$
 Or, $2x = 8$
 Or, 'x' = 4
 Quantity I:
 $(x + y) = 4 + 2 = 6$
 So, Quantity I = 6
 Quantity II:
 $3y = 3 \times 2 = 6$
 So, Quantity II = 6
 Therefore, Quantity-I = Quantity-II
 Hence, option d.

35. **Solution: D**

From I:
 $x^2 + x - (12^2 + 2) = 0$
 Or, $x^2 + x - 72 = 0$
 Or, $x^2 + 9x - 8x - 72 = 0$
 Or, $x(x + 9) - 8(x + 9) = 0$
 Or, $(x + 9)(x - 8) = 0$
 So, 'x' = -9, or 'x' = 8
 From II:
 $y^2 - (12 + 7)y + 88 = 0$
 $y^2 - 19y + 88 = 0$
 Or, $y^2 - 11y - 8y + 88 = 0$
 Or, $y(y - 11) - 8(y - 11) = 0$
 Or, $(y - 11)(y - 8) = 0$
 So, 'y' = 11, or 'y' = 8

'x'	Relationship	'y'
-	<	11
9		
-	<	8
9		
8	<	11
8	=	8

Therefore, $x \leq y$
 Hence, option d.

36. **Solution: A**

From I:
 $5x^2 - 22x + 21 = 0$
 Or, $5x^2 - 15x - 7x + 21 = 0$
 Or, $5x(x - 3) - 7x(x - 3) = 0$
 So, 'x' = 3, or 'x' = $(7/5)$
 From II:
 $4y^2 + 55y + 184 = 0$
 Or, $4y^2 + 23y + 32y + 184 = 0$
 Or, $y(4y + 23) + 8(4y + 23) = 0$
 Or, $(y + 8)(4y + 23) = 0$
 So, 'y' = $-(23/4)$, or 'y' = -8

'x'	Relationship	'y'
3	>	$-(23/4)$

3	>	-8
$(7/5)$	>	$-(23/4)$
$(7/5)$	>	-8

Therefore, $x > y$.
 Hence, option a.

37. **Solution: B**

Let the present ages of 'A', 'B', 'C', and 'D' be '3x', '5x', '4x', and '7x' years, respectively.
 ATQ,
 $3x + 5 + 5x + 5 + 4x + 5 + 7x + 5 = 96$
 Or, $19x + 20 = 96$
 Or, $19x = 76$
 So, 'x' = $(76/19) = 4$
 Therefore, required ratio = $(3 \times 4 + 20) + (7 \times 4 + 20)$
 $:(5 \times 4 - 8) + (4 \times 4 - 8)$
 $= 80:20 = 4:1$
 Hence, option b.

38. **Solution: A**

Statement I:
 ATQ:
 $\{P + 50\} \div \{(P + 50) + (2P + 90) + (P + 60)\} = (1/4)$
 Or, $(P + 50) \div (4P + 200) = (1/4)$
 Or, $(P + 50) \div \{4(P + 50)\} = (1/4)$
 So, $(P + 50) = (P + 50)$
 We cannot find the value of 'P' in the above equation.
 So, data in statement I alone is not sufficient to answer the question.
 Statement II:
 $(P + 50) + (P + 60) = (P + 490)$
 Or, $2P + 110 = P + 490$
 So, 'P' = 380
 Investment of 'A' = $380 + 50 = ₹430$
 So, data in statement II alone is sufficient to answer the question.
 Therefore, data in statement II alone are sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
 Hence, option a.

39. **Solution: D**

Let the expenditure of Vimal be ₹'8x'.
 So, income of Vimal = $(15/8) \times 8x = ₹15x'$
 Also, saving of Vimal = $15x - 8x = ₹7x'$
 So, saving of Kamal = $(3/7) \times 7x = ₹3x'$
 Also, expenditure of Kamal = $3x \times (60/40) = ₹4.5x'$
 ATQ,
 $3x + 4.5x = 81000$
 So, 'x' = $(81000/7.5) = 10,800$
 Therefore, required sum of expenditure = $8x + 4.5x = 12.5x = 12.5 \times 10,800 = ₹1,35,000$
 Hence, option d.

40. **Solution: A**

Total cost price of bicycle = $(P + 1000 + 1500 + 500)$
 $= ₹(P + 3000)$
 ATQ,
 $(P + 3000) \times (15/14) = 7500$
 Or, $(P + 3000) = 7000$
 So, 'P' = 4000
 Therefore, required value = $(5P + 500) = (5 \times 4000) + 500 = 20,500$
 Hence, option a.

41. **Solution: A**

Difference between degree distributions of number of accounts opened under PMJDY in SBI and HDFC = $86.4 - 57.6 = 28.8^\circ$
 Let total number of accounts opened under PMJDY in given five banks be '360y'.
 So, $28.8 \times (360y/360) = 4,320$

Or, 'y' = 150

For SBI:

Number of accounts opened under PMJDY = $86.4 \times (360/360) = 86.4 \times 150 = 12,960$

Similarly,

Bank	Number of accounts opened under PMJDY
SBI	12,960
AXIS	10,800
HDFC	8,640
BOB	16,200
PNB	5,400

Number of males who opened their account under PMJDY in SBI = $(4/9) \times 12,960 = 5,760$

Therefore, required difference = $5,760 - 5,400 = 360$

Hence, option a.

42. **Solution: D**

Required average = $(10,800 + 8,640 + 16,200) \div 3 = 11,880$

Hence, option d.

43. **Solution: B**

Required number of accounts = $0.4 \times 10,800 + 0.6 \times 8,640 = 4,320 + 5,184 = 9,504$

Hence, option b.

44. **Solution: D**

Required number of accounts = $16,200 \times (0.6/0.4) = 24,300$

Hence, option d.

45. **Solution: C**

$100 + 72 = 172$

172 - 80 = 92

$92 + 72 = 164$

$164 - 80 = 84$

$84 + 72 = 156$

Therefore, 92 should come in place of 94.

Hence, option c.

46. **Solution: A**

Pattern: Next number of series is calculated by adding the sum of digits to number itself.

$34 + (3 + 4) = 41$

$41 + (4 + 1) = 46$

$46 + (4 + 6) = 56$

$56 + (5 + 6) = 67$

$67 + (6 + 7) = 80$

Therefore, 80 should come in place of 81.

Hence, option a.

47. **Solution: D**

$112 + (11 \times 2) = 134$

$134 + (11 \times 4) = 178$

$178 + (11 \times 6) = 244$

$244 + (11 \times 8) = 332$

$332 + (11 \times 10) = 442$

Therefore, 332 should come in place of 334.

Hence, option d.

48. **Solution: D**

In garden 'A' in year 2019:

Total number of flowers = 400

Number of red flowers = $(5/8) \times 400 = 250$

Number of yellow flowers = $(3/8) \times 400 = 150$

In garden 'B' in year 2019:

Total number of flowers = 500

Number of red flowers = $(4/5) \times 500 = 400$

Number of yellow flowers = $(1/5) \times 500 = 100$

Similarly:

Year	Number of red flowers in garden 'A'	Number of yellow flowers in garden 'A'	Number of red flowers in garden 'B'	Number of yellow flowers in garden 'B'
2019	250	150	400	100
2020	140	120	280	360
2021	180	360	270	180
2022	280	80	280	40
2023	200	280	310	310
2024	216	84	140	100

Required number of flowers in garden 'X' in 2023:

$= 1.25 \times (100 + 40) = 175$

Hence, option d.

49. **Solution: D**

Required ratio = $84:140 = 3:5$

Hence, option d.

50. **Solution: D**

Total number of flowers in garden 'A':

$= 400 + 260 + 540 + 360 + 480 + 300 = 2,340$

Total number of flowers in garden 'B':

$= 500 + 640 + 450 + 320 + 620 + 240 = 2,770$

Therefore, required difference = $2,770 - 2,340 = 430$

Hence, option d.

51. **Solution: D**

Required percentage = $\frac{180}{120} \times 100 = 150\%$

Hence, option d.

52. **Solution: A**

Required difference = $(310 + 200 - 100) = 410$

Hence, option a.

53. **Solution: C**

Required sum = $(280 + 280) = 560$

Hence, option c.

54. **Solution: D**

Compound interest for 1.5 years when compounded annually,

$= 25000 \left[1 + \left(\frac{4}{100} \right) \right] \times \left[1 + \left(\frac{1}{2} \times \frac{4}{100} \right) \right] - 25000$

$= 25000 \times (26/25) \times (51/50) - 25000$

$= 26,520 - 25000 = ₹1520$

Compound interest when compounded half yearly, terms get doubled and rate gets halved.

Time = 1.5 years = 3 terms, rate = $(4/2) = 2\%$

Compound interest = $25000 \times \left(1 + \frac{2}{100} \right)^3 - 25000$

$= 25000 \times (51/50) \times (51/50) \times (51/50) - 25000 = ₹1530.20$

Therefore, required difference = $1530.20 - 1520 = ₹10.20$

Hence, option d.

55. **Solution: A**

Using, $(\text{men} \times \text{days} \times \text{hours}) \div \text{work} = \text{constant}$

Let total work be 'W' units

ATQ,

$\frac{30 \times 10}{\frac{W}{4}} = \frac{[(n+30) \times 10]}{\frac{3W}{4}}$

'n' = $90 - 30$

'n' = 60

$(n/2) = 30$

Prime numbers which are less than or equal to 30 = 2, 3, 5, 7, 11, 13, 17, 19, 23 and 29

Therefore, there are total of 10 prime numbers which are less than and equal to 30.

56. Hence, option a.
Solution: C
- Fraction of alcohol in vessel 'P' $(\frac{3}{8})$
- Fraction of alcohol in vessel 'Q' $(\frac{9}{11})$
- Fraction of alcohol in resultant mixture $(\frac{8}{11})$
- $(\frac{9}{11}) - (\frac{8}{11}) : (\frac{8}{11}) - (\frac{3}{8})$
 $= (\frac{1}{11}) : (\frac{31}{88})$
- Required ratio = $(\frac{1}{11}) : (\frac{31}{88}) = 8:31$
Hence, option c.
57. **Solution: D**
Let the speed of boat in still water be 'x' km/h, respectively.
ATQ,
 $D = (x + 15) \times 1.2 = 1.2x + 18$ (i)
Also, $D = (x - 15) \times 3 = 3x - 45$ (ii)
Solving equations (i) and (ii), we get,
 $1.2x + 18 = 3x - 45$
Or, $1.8x = 63$
So, 'x' = $(63/1.8) = 35$
Therefore, required time = $236.5 \div (0.8 \times 35 + 15)$
 $= (236.5/43) = 5.5$ hour = $5.5 \times 60 = 330$ minutes
Hence, option d.
58. **Solution: D**
 $(9.82 + 7.45 + 6.99 + 10.78) \div (2.07 + 3.15 + 2.15) = ? \div 18.86$
 $(10 + 7 + 7 + 11) \div (2 + 3 + 2) \sim ? \div 19$
 $(35 \div 7) \sim ? \div 19$
 $? \sim 5 \times 19$
 $? \sim 95$
Hence, option d.
59. **Solution: B**
 $1587.9 + 9650.98 + 10612.8 = ?^3 - 2536.67$
 $1588 + 9651 + 10613 + 2537 \sim ?^3$
 $?^3 \sim 24389$
 $? \sim 29$
Hence, option b.
60. **Solution: D**
 $\sqrt{1025} - 30.21\% \text{ of } 449.89 = ? - 22.01 \times 5.99$
 $\sqrt{1024} - 30\% \text{ of } 450 \sim ? - 22 \times 6$
 $32 - 0.30 \times 450 \sim ? - 132$
 $32 - 135 \sim ? - 132$
 $? \sim 164 - 135$
 $? \sim 29$
Hence, option d.

English Language

61. **Solution: C**
Custody is the correct choice as it refers to legal control over someone or something, which fits the context of the Sri Lankan authorities holding the fishermen and boats.
Capture suggests a forceful or military action, which is not appropriate here.
Detention implies temporary holding but does not include the legal aspect of custody.

62. Seizure applies more to objects than to people.
Solution: B
Convictions is the best choice because it refers to formal legal judgments declaring someone guilty of an offense.
Penalties refers to punishments or fines but does not specifically indicate a legal ruling.
Sanctions generally refers to economic or political restrictions rather than legal outcomes.
Punishments is too broad and informal in legal contexts.
63. **Solution: B**
Condemn is the best fit as it means strongly disapproving of something, which aligns with Sri Lankan fishermen opposing destructive bottom trawling.
Support has the opposite meaning.
Approve also means acceptance, which contradicts the context.
Tolerate means to allow something despite disliking it, which does not convey strong opposition.
64. **Solution: A**
Hesitant is the best choice as it indicates reluctance or unwillingness to engage in negotiations.
Willing suggests a readiness to negotiate, which contradicts the passage.
Determined implies strong intent, which does not fit the context of reluctance.
Eager means keen to do something, which is the opposite of the intended meaning.
65. **Solution: C**
Deadlock is the best word because it refers to a situation where progress is stalled due to disagreement, which fits the context of the fisheries dispute.
Conflict suggests a broader or more intense struggle.
Negotiation is incorrect since it implies an active process, whereas the passage describes stagnation.
Argument refers to a verbal disagreement rather than a political or diplomatic stalemate.
66. **Solution: C**
Destruct is incorrect because it is not used as a verb in English. The correct word here is destroy, which means to cause the complete ruin of something.
Disrupt means to interfere with, which is not strong enough in this context.
Dismantle means to take apart systematically rather than completely ruin.
Weaken means to make less strong, which does not convey the intended level of damage.
67. **Solution: B**
Downfall is incorrect in this context because it refers to a complete collapse or ruin rather than a sequence of events. The sentence needs a word that implies a sequence of negative effects, making series the best choice.
Cascade suggests a flow but is more commonly used for water or continuous falling effects.
Chain is close in meaning but implies a direct link between events rather than a broader sequence.
Wave suggests a temporary surge rather than a structured sequence.
68. **Solution: D**
The phrase should be in the passive voice because the USAID website cannot perform the action of declaring; rather, the announcement was made about it.

Declared is in the past tense but does not correct the passive error.

Stated and announced are active verbs and do not correct the sentence structure.

69. **Solution: A**

Sluggish means slow-moving, which contradicts the sentence's intent to complete repatriation within 30 days. Rapid correctly conveys the urgency of the order.

Immediate is too strong, implying instant action.

Expeditious is correct but less commonly used in this context.

Urgent describes necessity rather than speed.

70. **Solution: D**

Anarchy refers to a state of complete lawlessness or absence of government, which is too extreme for the context of humanitarian programs. Crisis better captures the disruption in funding without suggesting total chaos.

Instability and uncertainty are related but do not emphasize the severity of the funding issue.

Disorder suggests confusion but lacks the sense of an urgent funding issue.

71. **Solution: B**

We need to interchange the noun SURFACE with the adverb INITIALLY, as we need the adverb INITIALLY to modify the verb FLOATS and we need the noun SURFACE after the definite article THE. The sentence seeks to convey that, in the same way as a boat, a seaglider floats at the beginning, then, as it develops speed, it foils, then it glides over the top of the water using hydrofoils. Thus, B is the right answer.

The correct sentence is: Just like a boat, a seaglider initially floats, then as it picks up speed it foils - gliding over the surface of the water using wing-like structures called hydrofoils.

72. **Solution: D**

EXTENDED (lasting longer than is usual or expected) can replace the highlighted phrase as the sentence talks about how the person and her husband were working for much more time than what was usual to buy their dream house.

Thus, option D is the correct answer.

Impractical - not sensible or realistic. Extensive - covering a large area. Intense - very great or very strong.

73. **Solution: C**

The sentence talks about how the value of the dollar has surged (increased) against a number of (many) foreign currencies, together with the Japanese Yen, and this has happened because of the high interest rates offered (provided) by the Federal Reserve. The use of INTRODUCING (making something available for use) is inappropriate in this context and should be replaced with INCLUDING (together with). Thus, C is the correct answer.

74. **Solution: B**

The sentence seeks to convey that although (in spite of the fact that) North Korea has long distanced itself from the rest (remaining) of the world, it has frequently (very often) participated in international sporting competitions. We need to use ISOLATED (distanced) instead of IMMersed (absorbed) to contextually fit in the sentence. Thus, B is the right answer.

75. **Solution: B**

BDAC is the correct sequence. B begins the sentence by introducing us to the subject- The Ruby Glow pineapple. DA tell us that it is bred for its appearance and sweetness and thereby costs \$395.99 at Melissa's Produce. C provides information about Melissa's Produce. Thus, B is the right answer.

76. **Solution: A**

We need an adjective to modify the noun ATTRACTION. SPECTACULAR (impressive or eye-catching) will fit here, as the sentence tells us how, with so many statues in the place, China's Yungang Buddhist Grottoes is definitely an impressive and eye-catching place.

Thus, A is the right answer.

Marvel (noun) - a wonderful or astonishing person or thing. Miracle (noun) - an excellent achievement in a particular area of activity. Prudent - wise. Rancid - having an unpleasant smell or taste.

77. **Solution: B**

We need a present participle tense after IS to fit in the present continuous tense structure (IS + VERB + ING). ACCEPTING (agreeing to receive or receiving) will fit here contextually as the sentence seeks to convey that Elon Musk's startup named Neuralink is receiving applications for a second human trial participant to test its device. Thus, B is the right answer.

Possessing - owning. Locking - making or becoming rigidly fixed. Settling - reaching an agreement about an argument or problem. Building - constructing.

78. **Solution: D**

We need a noun to be modified by the definite article THE. The sentence seeks to convey that the conversations between the two companies are reportedly making progress and that they are working on finalising the agreement terms. DISCUSSIONS (conversations) will fit here. Thus, D is the right answer.

The other options are contextually incorrect:

Penalty - punishment. Adherence - compliance; observance. Appreciation - recognition. Awareness - acknowledgement; information.

79. **Solution: D**

In D, replace the base form of the verb WIN with its past participle form WON to fit in the present perfect tense structure (HAS/ HAVE + VERB). Thus, D is the right answer.

80. **Solution: D**

In D, replace the past tense form verb TOOK with the past participle form TAKEN so that it is of the same form as the other verb KIDNAPPED. Both verbs are joined with AND and are part of the passive voice construction WAS + VERB. Therefore, both have to be in their past participle forms. Thus, D is the right answer.

81. **Solution: A**

The error lies in A. We need an adverb to modify the verb SPEAK. Replace the adjective EXCLUSIVE with the adverb EXCLUSIVELY (particularly) to make the sentence correct. Thus, A is the right answer.

82. **Solution: D**

We need a noun to be modified by the adjective FINANCIAL. The sentence seeks to convey that the company faced a time of financial difficulty when its major investors withdrew their investments unexpectedly. CRISIS and HARDSHIP denote

periods of intense difficulty or danger and will fit here. Thus, D is the right answer.

Immunity - protection or exemption from something.

83. **Solution: B**

The word RESILENT is incorrectly spelled. The correct spelling of the word is RESILIENT. The sentence tells us how the economy has stayed remarkably (exceptionally) resilient (strong) , even after an aggressive (determined and forceful) battle against inflation that brought (moved) rates to their highest level in decades. Thus, B is the right answer.

84. **Solution: D**

The word DISRAPTING is incorrectly spelled. The correct spelling of the word is DISRUPTING. The sentence tells us how several areas of the city remained (stayed) under water after heavy rain lashed (hit) the city, causing widespread (extensive) damage and disrupting (disturbing) normal life. Thus, D is the right answer.

85. **Solution: B**

The sentence tells us how Chad is a landlocked (entirely surrounded by land) , arid country of 18 million people in Central Africa and despite its abundance of natural resources (supplies) , it is one of the world's poorest (lacking sufficient money to live) nations. DEARTH means an inadequate supply and will not be contextually apt. WEALTH (abundance) will be more apt here, as the sentence shows a contrast between the presence of natural resources and the poverty that exists despite this. Thus, B is the right answer.

86. **Solution: E**

The sentence is grammatically and contextually correct. Thus, E is the right answer.

87. **Solution: C**

In C, replace the noun INJURY with its plural form INJURIES, as the adjective MULTIPLE is used to refer to more than one person or things. Thus, C is the right answer.

88. **Solution: D**

The correct sequence of the sentences in the paragraph is QTSRP. QT is a mandatory pair. Q begins the paragraph by talking about the useful characteristics of plastic - versatility and durability, which have made it indispensable in almost every area of modern life, and T follows with a contradiction. It presents a negative aspect of plastic by highlighting how the characteristics mentioned in Q are also responsible for a growing environmental disaster. S follows T as it talks about biological solutions being developed to solve the plastic pollution crisis. RP is another mandatory pair, and it follows S. R talks about one of such solutions: filters developed from natural ingredients to capture various forms of plastic, and P follows and concludes the paragraph by talking about the functioning and usefulness of these filters. Thus, D is the right answer.

89. **Solution: A**

90. **Solution: B**

91. **Solution: D**

92. **Solution: C**

93. **Solution: C**

The given sentence seeks to convey that the number of iPhones sold worldwide constitutes 17% of the global smartphone market, but the revenue generated by the sale of these smartphones constitutes nearly

43% of the total global smartphone revenues. Thus, C is the right answer.

A is incorrect as it is neither mentioned nor implied in the passage that Apple dominates the global smartphone market or generates the maximum revenue. Only the data related to its shares in both markets is provided.

B is incorrect because the relationship between the income generated by selling an iPhone and its manufacturing cost is not provided.

D is incorrect because no information about the shares of other smartphone companies is provided in the passage.

E is incorrect because no information related to the share of Huawei Mate in global smartphone revenues is provided.

94. **Solution: B**

Refer to the line, "Early focus has been on what Apple is planning on doing with artificial intelligence. Some rumours suggest that Apple is partnering with OpenAI, which might be an unusual move in a number of respects - running counter to the company's preferences to keep its most vital technologies in house, while feeling at best like a catch-up move rather than a revolutionary breakthrough." Thus, B is the right answer.

The above quoted lines make options A, C, and E incorrect. The lines suggest that the potential partnership between Apple and OpenAI seems like a move by Apple to catch-up with the latest advancements rather than a revolutionary breakthrough. Furthermore, this potential partnership contradicts the fact that Apple is not interested in partnering with other tech companies any longer.

D is neither mentioned nor implied in the passage.

95. **Solution: A**

Refer to the line, "And Apple's services business, mostly defined by sales of apps and content, continues to thrive, and is projected to make up a quarter of the company's total revenues by 2025." Thus, A is the right answer.

The remaining options are incorrect, as per the passage.

96. **Solution: C**

All except C are TRUE. Refer to the line, "After tumbling earlier in the year, the company's stock now stands just short of its all-time high, bringing its valuation back to about \$3 trillion dollars (just six years after it became the world's first trillion-dollar company) ." Thus, C is the right answer.

Thus, C is the right answer.

For A, refer to the line, "Naturally, Apple has locked down the details of the revelations it plans on releasing."

For B, refer to the line, "Of course, by most measures, the gadget maker is still a massive global success."

For D, refer to the line, "A tech company's success is not just measured by the products it has on the market in the present however, but its ability to innovate and stay ahead of the curve."

For E, refer to the line, "Apple's Worldwide Developer Conference (WWDC) is just days away, and as usual, the technorati are buzzing about what might be unveiled at the company's annual technology event: An updated iPhone operating system with a heavy AI focus? New Mac hardware? A "One More Thing" wildcard?"

97. **Solution: D**
All three challenges were faced by the company, which threatens its future growth prospects.
For A, refer to the line, "The company's sales in China dropped dramatically earlier this year, as the iPhone was met with strong competition from local offerings like the Huawei Mate, forcing Apple to offer aggressive discounts there."
For B, refer to the line, "In 2023, the International Trade Commission ruled that Apple stepped on medical equipment manufacturer Masimo's existing patents in building a pulse oximeter into its newest Apple Watches, leading the company to halt sales of those versions of its wearable in December, until the feature could be temporarily removed, pending appeal of the decision."
For C, refer to the line, "And in March, the Justice Department filed a lawsuit against Apple, alleging that the company engages in a broad range of anticompetitive practices related to its dominance in the US smartphone market - litigation that threatens the very core of the company's business. Although, Apple denied the allegations."
Thus, D is the right answer.

98. **Solution: D**
All except D are mentioned in the passage. Refer to the line, "Others have pointed to Apple's recent release of OpenELM, a set of four scaled-down open-source language models, as an indicator of the company going in a different direction: delivering efficient AI features "on handset" without the need to call on servers in the cloud." Thus, D is the right answer.

99. **Solution: D**
THRIVE means to grow or flourish vigorously. Thus, D is the right answer.
Hustle - to proceed or work rapidly or energetically.
Pursue - to follow or chase someone or something.
Dominate - to have power and influence over.
Establish - to set up on a firm or permanent basis.

100. **Solution: D**
HALT means to bring or come to stop. START (to begin or initiate) is opposite in meaning to the given word. Thus, D is the right answer.
Increase - to become or make greater in size, amount or degree.
Undo - to reverse an action or its effects.
Spoil - to destroy the value or quality of something.
Encourage - to promote.

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