IBPS PO Mains Memory Based 2021

Directions (1-5): Read the given information carefully and answer the given questions based on it.:

Seven persons S, E, V, B, A, D and U sit in a row facing north and they all work in a company with different working experience of 15yr, 7yr, 2yr, 23yr, 19yr, 6yr and 12yr. All the information is not necessarily in the same order as given.

The persons with vowel name have experience of even number year and neither sits at the end nor at exactly middle of the row. Three persons sit between S and the one having 23yr experience. One person sits between S and A. The number of persons sits to the right of A is same as the number of persons sits to the left of the one having experience 2.5 times of A. B neither have highest year experience nor sits adjacent to S. The person having least experience sits second to the left of D. U does not have least experience. The neighbors of B have more experience than B.

Q1. What is the experience of V?
(a) 23yr
(b) 19yr
(c) 15yr
(d) 7yr
(e) Either 19yr or 7yr

Q2. Who among the following sits fourth to the left of the one having 7yr experience?
(a) V
(b) A
(c) E
(d) D
(e) None of these

Q3. How many persons sit to the right of the one having 1yr less experience than B?
(a) Five
(b) Three
(c) Four
(d) One
(e) None of these

Q4. Which among the following is correct combination?
(a) E-12
(b) V-19
(c) A-2
(d) U-12
(e) D-23

Q5. Who among the following sit second from left end of the row and with how much experience?
(a) E, 12yr
(b) U, 12yr
(c) B, 7yr
(d) E, 2yr
(e) None of these

Directions (6-7): Read the following information carefully and answer the questions based on it:
A # (12) B means A is 21m east of B
A * (03) B means A is 30m north of B
A % (24) B means A is 42m west of B
A @ (52) B means A is 25m south of B
Conditions: X # (93) Y; T * (42) U; R @ (61)Q; T # (03) S; P % (14) Q; W @ (61) X; Z * (01) Y; W % (45) U; S*(80)R

Q6. What is the shortest distance and direction of S with respect to X?
(a) 16m, north-east
(b) 24m, north-west,
(c) 8m, north
(d) 25m, north-east
(e) None of these

Q7. Name the point which lies in a straight line?
(a) S, R, U
(b) Q, R, W
(c) Y, P, Q
(d) Y, X, R
(e) None of these

Directions (8-12): A number arrangement machine when given an input line of numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement:

Input:84629   57426   76932   27483   49853   62434
Step I:273   84629   57426   76932   49853   62434
Step II: 53   273   84629   57426   76932   62434
Step III:572   53   273   84629   76932   62434
Step IV:23   572   53   273   84629   76932
Step V:732   23   572   53   273   84629
Step VI:2   732   23   572   53   273
Step VI is the last step of the given arrangement. Based on the given logic, rearrange the given input.
Input: 63825   49857   38679   72548   45328   95763

Q8. What is the smallest number in the penultimate step of the given input?
(a) 32
(b) 37
(c) 57
(d) 325
(e) None of these

Q9. What is the sum of all the digits of the number which is 4ᵗʰ smallest in step III?
(a) 10
(b) 26
(c) 35
(d) 24
(e) None of these

Q10. If all the numbers in step VI are arranged in ascending order from left end, then which of the following number will become 3ʳᵈ from right end?
(a) 57
(b) 573
(c) 532
(d) 325
(e) None of these

Q11. Which of the following number is second to the left of fifth number from left end in step IV?
(a) 37
(b) 72548
(c) 532
(d) 325
(e) None of these

Q12. How many steps are required to complete the rearrangement for the given input?
(a) Eight
(b) Seven
(c) Four
(d) Five
(e) Six

Directions (13-17): Study the given information carefully to answer the related questions:
Nine persons work in three departments i.e., operations, finance and marketing of a company. On their meeting day, they wear different color shirts i.e., white, blue, green, orange, red, black, purple, pink and violet. All the information is not necessary in the same order as given.
The persons work in operations do not wear orange and black. T works only with the one wearing green but not in marketing. R wears white and work with G but not in marketing. Only the persons wearing red and black work together in same department. B works with E and none of them wear black. A does not work in operations but wears violet. M neither works in finance nor with the one wearing red. The one wearing purple does not work in finance. G and D do not wear red and orange.
H does not work with E who does not wear blue and orange.

Q13. Which of the given combination is correct?
(a) A- marketing
(b) M- blue
(c) White- operations
(d) T- finance
(e) E-pink

Q14. How many persons work in finance department?
(a) Two
(b) Three
(c) Five
(d) Four
(e) Either three or four

Q15. Name the persons work in marketing department?
(a) D, E
(b) H, D
(c) M, H, E
(d) G, B
(e) None of these

Q16. If M and the one wearing purple interchange their departments with E and G, then name the persons (with their shirt color) who will work in operations department?
(a) G-pink, E-blue
(b) D-green, G-pink
(c) G-blue, E-pink
(d) E-orange, M-red
(e) None of these

Q17. Who among the following wears black shirt?
(a) D
(b) H
(c) E
(d) B
(e) None of these

Directions (18-20): Read the given information carefully and answer the questions below:
1%2 means 2 is neither smaller nor greater than 1
1&2 means 2 is neither greater nor equal to 1
1*2 means 2 is neither smaller nor equal to 1
1$2 means 2 is not greater than 1
1α2 means 2 is not smaller than 1

Q18. Statements:
U$LαK%T; W&P; D*J; W%R$L; M*TαJ
Conclusions:
I. M*W
II. D&K
III. J$P
(a) Both I and III are true
(b) None is true
(c) Only II is true
(d)Only I is true
(e) Both II and III are true

Q19. Statements:
W*RαP; L%M$R&S; W$H%Q
Conclusions:
I. M $H
II. L*Q
III. P&S
(a) Both II and III are true
(b) Only I is true
(c) Either I or II is true
(d) None is true
(e) Only III is true

Q20. Statements:
P*D$C%B$A; H$T&Y%D; K*UαW%P
Conclusions:
I. D&U
II. B*T
III. H&K
(a) Both I and II are true
(b) Only III is true
(c) Both II and III are true
(d) All are true
(e) None of these

Directions (21-22): Each question given below consists of a statement, followed by three or four arguments numbered I, II, III and IV. You have to decide which of the arguments is/are 'strong' argument(s) and which is/are 'weak' argument(s) and accordingly choose your answer from the alternatives given below each question.

Q21. Statements:
Should all the indirect taxes in India be combined into a single tax on all commodities?
Arguments:
I. Yes. This will considerably simplify the tax collection mechanism and the cost of collecting tax will also reduce.
II. Yes. The manufacturers and traders will be benefited by this which in turn will boost tax collection.
III. No. No other country has adopted such system.
(a) None is strong
(b) Only I and III are strong
(c) Only II is strong
(d) Only II and III are strong
(e) None of these

Q22. Statements:
Should trade unions be banned completely?
Arguments:
I. Yes. Workers can concentrate on production.
II. No. This is the only way through which employees can put their demands before the management.
III. Yes. Employees get their illegal demands fulfilled through these unions.
IV. No. Trade unions are not banned in other economically advanced countries.
(a) Only I is strong
(b) Only II is strong
(c) Only I and II are strong
(d) Only I, II and III are strong
(e) None of these

Directions (23-25): Each of the following questions below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and give answer.

Q23. Six persons Q, R, T, W, X and Y go to the market on different consecutive days starts from Thursday. Who among the following goes just after T?
Statement I. Q goes two persons before R who doesn't go last. The number of persons goes before T is same as after Y.
Statement II. Y does not go before W. One person goes between X and W who goes after Sunday.
Statement III. T goes before the one who goes two persons after Q. Y and W goes one after another but not on Thursday.
(a) If the data in statement I is sufficient
(b) If the data in statement II is sufficient
(c) If the data in statement I and statement II are sufficient to answer the question.
(d) If the data in all the statement I, II and III are necessary to answer the question.
(e) If the data in statement III is sufficient

Q24. In a family of three generation there are eight members. How many married couples are there in the family?

Statement I. R is son of P. S is sibling of R and has only one son. V is grandson of Q.

Statement II. U has no siblings. W is daughter in law of U. P is sibling of T.

Statement III. Q is sister-in-law of T has no siblings. U is brother-in-law of R.

(a) If the data in statement I is sufficient

(b) If the data in statement II is sufficient

(c) If the data in statement II and statement III are sufficient to answer the question.

(d) If the data in all the statement I, II and III are necessary to answer the question.

(e) If the data in statement III is sufficient

Q25. Eight persons have different heights and they are standing in a row according to their heights in descending order. Who among the following is the tallest?

Statement I. Two persons stand between H and F. The number of persons stands before A is one more than the number of persons stands after E.

Statement II. E is not the shortest among all the persons. More than three persons are taller than E. C is taller than F.

Statement III. Only two persons are taller than A. A is just taller than D. Two persons stand between E and D. E is not the tallest person. G is taller than D but not just taller than A.

(a) If the data in statement I is sufficient

(b) If the data in statement II is sufficient

(c) If the data in statement II and statement III are sufficient to answer the question.

(d) If the data in all the statement I, II and III are necessary to answer the question.

(e) If the data in statement III is sufficient

Directions (26-30): Read the given information carefully and answer the questions given below:
Sixteen persons i.e. A, B, C, E, N, O, P, Q, R, S, T, U, V, W, X and Y live in two different flats i.e., Flat 1 and Flat 2 of a four-floor building such that the lowermost floor is numbered as 1 and the floor just above it is 2 and so on till the topmost floor is numbered as 4. Flat1 is to the west of flat 2 whereas flat 1 of floor 2 is immediately above flat 1 of floor 1 and flat 2 of floor 2 is immediately above flat 2 of floor 1. There are eight married couples and each married couple live together on the same floor in the same flat. Name of the person starts with vowel are female and live on an even numbered floor. All the information is not necessarily in the same order.

A lives just above P's spouse flat. A's spouse lives in an odd numbered flat. O and Q live on the same floor. T lives to north east of U and he lives below E. Q doesn't live in the same flat as E. B who lives on an even numbered floor lives two floors above N. S lives to the south west of B but she doesn't live below N. R lives to the north of X. R is not married to A. Spouse of X lives to the east of Y. C is spouse of neither Y nor X. V and U lives in the same flat and both have same gender. W's gender is same as Q's gender.

Q26. Who among the following is the wife of T?
(a) U
(b) P
(c) R
(d) S
(e) None of these

Q27. Four of the following five are alike in a certain way and thus form a group. Which among the following does not belong to the group?
(a) V-Y
(b) W-X
(c) B-E
(d) P-S
(e) A-B

Q28. In which of the following flat and floor does S live?
(a) Flat 1, floor 3
(b) Flat 2, floor 3
(c) Flat 1, floor 4
(d) Flat2, floor 2
(e) Flat 1, floor 1

Q29. Which among the following statement is not true?
(a) C lives on an even numbered floor
(b) T is married to R
(c) O and A live in different flat
(d) Q and O live in the same flat
(e) B lives on an even numbered floor

Q30. How many floors are below Q's spouse?
(a) Same as above A
(b) Same as below T
(c)Same as between P and X
(d) More than two
(e) None of these

Directions (31-32): In the following questions, the symbols- &, @, % and $ are used with the following meanings as illustrated below. Study the following information and answer the given questions. In each of the questions given below statements are followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements regarding commonly known facts.
A@B means "All A are B"
A&B means "Only a few A are B"
A$B means "No A is B"
A%B means "Some A is B"

Q31. Statement:
P&R%T$Q@M
Conclusions:
I. Some R being not Q is a possibility
II. All M can be T
III. Some T being not P is a possibility
IV. All P can never be R
(a) Both III and IV
(b) Only I
(c) Both II and III
(d) Only IV
(e) Only III

Q32. Statement:
F%J$G&C@E
Conclusions:
I. All C can never be F
II. Some G is not E
III. All F being G is not a possibility
IV. Some J being E is a possibility
(a) Both III and IV
(b) Only I
(c)Both II and III
(d) Only IV
(e) Only III

Directions (33-34): Read the following information carefully and answer the questions given below:

Two rectangular gardens are there in a society such that the smaller garden is surrounded with the larger garden. Each garden has four gates. Gates of the smaller garden are open towards outside and the gates of the larger garden are open towards inside. All the gates are in the middle of the sides of the garden. Gates of the smaller garden face the gates of the larger garden.
Note: Only gates of different garden are facing each other.
Gate U of smaller park is second to the right of T. The gate which faces T is immediate right of N. The number of gates between U and T is one less than the number of gates between P and M. M is not adjacent to N. O faces the gate which is immediate right of R. R doesn't face N. Gate O is not at the longer side of the garden. One of the gates is S.

Q33. Four of the following five are alike in a certain way and thus form a group. Which among the following does not belong to the group?
(a) M
(b) O
(c) N
(d) R
(e) P

Q34. Which among the following gate faces N?
(a) O
(b) T
(c) S
(d) P
(e) M

Directions (35-39): Read the following information carefully and answer the questions given below:
Twelve buildings are constructed in two parallel rows from top to bottom such that 6 buildings are there in each row. In row 1- A, B, C, D, E, and F are constructed and all face towards the east direction while in row 2-J, K, L, M, N and O are constructed and all face towards the west direction. All buildings in each row are facing each other. Each building has a different number of offices. None of the buildings has more than 28 offices and less than 5 offices.

M is constructed second to the right of the building which has 15 offices. The number of buildings towards the right of M is one less than the number of buildings towards the left of L. L has prime numbered offices. The building which faces M constructed second to the left of the building which is immediate right of D. F which has 22 offices is second from the either ends. The difference between the offices of F and L is 5. The number of buildings between D and F is same as between J and L. K which has 12 offices constructed second to the left of J. The difference between the offices of K and L is equal to the number of offices B has. C is constructed third to the right of B which doesn't face M. C has 16 offices. O has two offices less than N. N has less offices than L. The number of offices in E has a multiple of 11. E is constructed right to the building which has 18 offices. The difference between the offices of O and A is equal to M. The number of offices in J has a perfect square value. J has more offices than D. M has 15offices less than J.

Q35. How many offices does A have?
(a) 23
(b) 20
(c) 18
(d) 5
(e) 13

Q36. Which among the following building is second to the left of C?
(a) B
(b) E
(c) A
(d) D
(e) None of these

Q37. Which among the following combination is correct?
(a) A-13
(b) O-23
(c) D-18
(d) L-19
(e) J-16

Q38. Which among the following statement is true?
(a) M has the least number of offices
(b) A is constructed fourth to the right of E
(c) D faces the building constructed adjacent to L
(d) N has more offices than B
(e) J and K are constructed adjacent to each other

Q39. Which among the following building has the maximum offices?
(a) L
(b) Building adjacent to D
(c) A
(d) The one which is constructed immediate right of F
(e) J

Q40. We have five words given below such that one letter of each word is underlined. Find how many meaningful words can be formed by using the letters (only once) which are underlined in each given word?
I. **P**ractice
II. M**a**sters
III. Consp**i**racy
IV. Theo**r**y
V. Official**s**
(a) One
(b) Two
(c) Three
(d) More than three
(e) None

Directions (41-45): Read the following information carefully and answer the questions given below:
Some students attend the lectures and they all are arranged in three parallel rows such that row1 is north of row2 and row 3 is south of row 2. Each row has 8 seats. All the students face north direction. Some seats are vacant in each row. Twelve students- Allen, Fame, Emma, Alpha, Coco, Nick, Ivory, London, Olive, Unique, Jack and Den who attend the lectures are divided into two classes i.e., class A and class B. The students whose name start with a vowel belongs to class A and the rest belong to class B. The students in class A are sitting in the alternative seats from the second seat of Row 1 when counts from the left end according to the dictionary order followed by class B students who are sitting in reverse alphabetical order. After row 1, students are sitting in row 2 then in row 3 following the same rule. All students are sitting in the alternative seats only. Now the students sit around two circular tables i.e., Table1 and Table2 and all are facing the centre. Students belong to Class A sit in table 1and the rest of them sit in table 2.

Conditions for table 1: Allen sits opposite to the one who sits second from the left end in row 2. The one who sits right of olive in row 2 sits second to the right of Allen. Alpha doesn't sit adjacent to Olive and sit opposite to Emma.

Conditions for table 2: London sits second to the right of the one who sits adjacent to Unique. The one who sits at extreme end sit third to the left of London. Jack sits opposite to Den and doesn't sit adjacent to Nick.

Q41. Who among the following sits fourth to the left of London in rows-based arrangement?
(a) Olive
(b) Unique
(c) Allen
(d) Fame
(e) Coco

Q42. Who among the following sits opposite to Coco in circular arrangement?
(a) Fame
(b)The one who sits adjacent to Nick
(c) The one who sits at extreme end in row 2
(d) Either (a) or (b)
(e) None of these

Q43. The number of persons sit to the right of London in row arrangement is same as the number of persons sits between Allen and ___ in circular arrangement?
(a) Alpha
(b) Olive
(c) Ivory
(d) Emma
(e) Both (a) and (c)

Q44. Four of the following five are alike in a certain way and thus form a group. Who among the following does not belong to the group?
(a) Allen
(b) Alpha
(c) Ivory
(d) Emma
(e) Nick

Q45. Which among the following statement is true?
(a) Fame doesn't sit opposite to Nick.
(b) Allen and Olive sit in the same row
(c) Unique sits second to the right of Olive in row 2
(d) Den sits in row 2
(e) Coco doesn't sit at the extreme end

Q46. Decide the combination of which rows of table I and II are sufficient to answer the question.

If a person sold an article, which

1. costs Rs. _____

2. at _____% profit

3. on a discount percentage of _____

Find the selling price of article.

Column I	Column II
(a)	2) T
	3) T/2
(b)	1) 100
	2) T -1

Column I	Column II
(c)	Profit earned = 8%
(d)	1) 100

(a) a, d

(b) b, d

(c) a, c

(d) b, c

(e) Neither of combination is sufficient

Q47. Solve both equations and form a new equation in variable 'z' (reduce to lowest possible factor) using roots of equation 1 and 2 as per instructions given below.

1. $2 - \frac{11}{x} + \frac{9}{x^2} = 0$

2. $(y-2)^2 = 2\frac{1}{4}$

What will be new equation if roots of this are highest root of equation 1 and lowest root of equation 2.

(a) $8z^2 - 34z - 9 = 0$

(b) $4z^2 - 20z + 9 = 0$

(c) $8z^2 - 20z + 9 = 0$

(d) $4z^2 - 34z - 9 = 0$

(e) None of these

Directions (48-49): Given below are two number series. Series I is a missing series while series II is a wrong number series which follows pattern of series I only.

I. 11, P, 181, 350, 639, 1000

2. 242, 251, 255, 280, 329, 450, 619

Q48. If 2 is added in successive terms of a series starting with the nearest prime of P, then find the 5th term of this new series

1. 67

2. 65

3. 69

4. 63

(a) either 1 or 3
(b) either 2 or 3
(c) either 2 or 4
(d) either 3 or 4
(e) either 1 or 2

Q49. If 'y' is the wrong number of the series II, then find the value of '2y+1'.
(a) 493
(b) 561
(c) 503
(d) 511
(e) 901

Q50. Car 'X' travels for 4 hours to reach from point A to B. Car 'Y' travels at the speed of 70 kmph to reach from point B to C in 3 hours. Distance travelled by car 'X' to cover point A to B is $1/7^{th}$ more than distance travelled by car 'Y'. How much time will car 'X' takes to reach from point A to C?
(a) 9 hours
(b) 7.5 hours
(c) 5 hours
(d) 12 hours
(e) 15 hours

Q51. If a mixture contains milk and water in the ratio of 4: 1. If 20% of mixture is taken out and same amount of milk and water are added into mixture, then difference between milk and water in final mixture becomes 72 liters. Find the initial amount of mixture.
(a) 120 liters
(b) 180 liters
(c) 90 liters
(d) 150 liters
(e) None of these

Directions (52-56): The table given below shows the data about track record of car racing game, where 4 cars P, Q, R and S are competing to reach finishing line which is at a distance of 3000 m from their initial starting point.
1. Drift refers to over starting intentionally done by driver.
2. While calculating average speed, do not consider time taken in drift/crash.
3. Points = 50 × drifts – 20 × crashed

Cars	Drift	Time to reach finishing line (in sec)	Crash
P	5	180	3
Q	7	120	5
R	6	150	4
S	8	100	6

Q52. Which car earned maximum points at the end of the race?
(a) car Q
(b) car R
(c) car P
(d) car S
(e) car P and S

Q53. In order to gain 10 more points than car S, how many total drifts should car P have made, if car P's time and number of crashes remain same.
(a) 5
(b) 3
(c) 10
(d) 8
(e) 7

Q54. Another car named T, makes total number of drifts same as that of car R and it still receives 0 points at the end. How many crashes must car T have suffered?
(a) 15
(b) 18
(c) 21
(d) 12
(e) 20

**Q55. Speed of car S is what percentage more than that of car Q?**
(a) 25%
(b) $33\frac{1}{3}\%$
(c) 50%
(d) 20%
(e) 15%

Q56. How much speed does car R need to gain in order to cover twice the distance in 5/3 of the original time taken?
(a) 16 m/s
(b) 28 m/s
(c) 12 m/s
(d) 24 m/s
(e) 10 m/s

Directions (57-61): The charts given below represents data of number of students of four colleges P, Q, R and S. Based on the information given below, answer the questions that follow:

Note: 1. Number of girls in college Q is 10.

2. Difference between number of boys and girls in college P is 100. (Number of boys is greater than number of girls).

Total number of students = 2500

Total number of boys = 1200
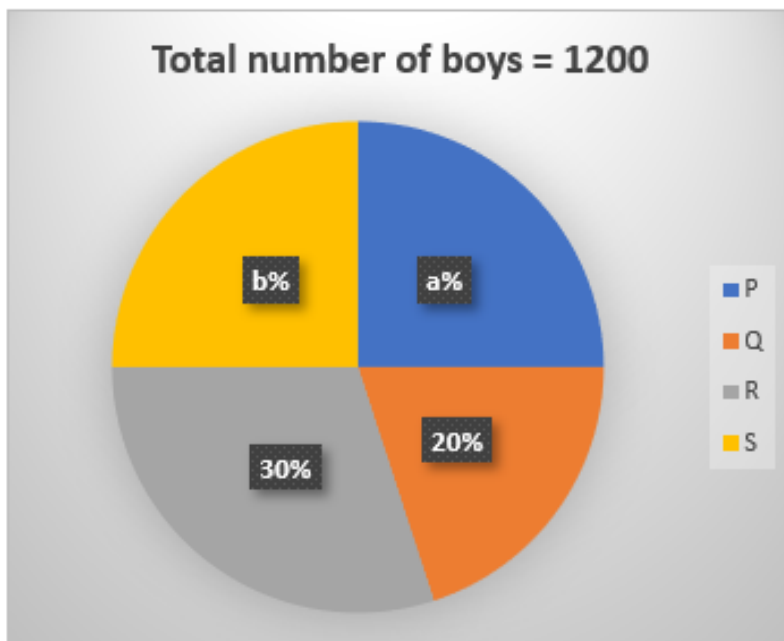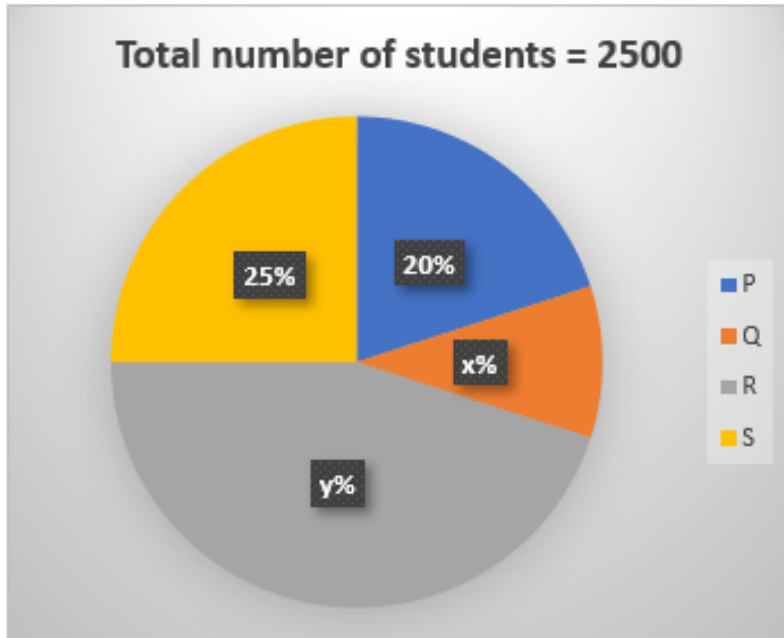
Q57. If 10% of boys from school S scored more than 90% in an exam, then find maximum number of boys who scored less than 90%.

(a) 240

(b) 200

(c) 270

(d) 250

(e) 220

Q58. Total number of boys in college S is what percent of number of total students in college P.
(a) 60%
(b) 40%
(c) 50%
(d) 80%
(e) 20%

Q59. Find the difference between total number of boys in college P and R together and total number girls in college Q and S together.
(a) 375
(b) 425
(c) 225
(d) 325
(e) 350

Q60. Which of the following is true statement?
(a) Total number of students is least in college S
(b) Total boys in college R is 360
(c) Total girls in college P is 300
(d) Difference between total number of boys in college P and that in S is 50
(e) None of these

Q61. Find the ratio of boys in Q & R together and total girls in R & S together?
(a) 60: 117
(b) 60 : 103
(c) 60 : 113
(d) 60 : 107
(e) 60 : 109

Directions (62-67): Read the given below table carefully and answer the following questions.
The data shows volume and height of 4 right circular tanks P, Q, R and S. The given data also depicts time taken to fill or empty the tank by inlet pipe A, B and outlet pipe C.
1. Ratio between time taken by pipe B and that by pipe C is different because pipes were used by the operator in different ways for different tanks.
2. Radius of tank S is 10.5 m.

Tank	Volume	Height	Time taken by pipe A to fill tank (in hours)	Ratio of time taken by pipe B to fill and pipe C to empty the tank
P	38808	28	10	2: 3
Q	--------	10	12	3: 2
R	5390	35	18	1: 3
S	19250	--------	---------	2: 5

Q62. How much volume (approx.) of initially empty tank P was filled in 1 hour, when all 3 pipes were opened simultaneously? (Time taken by pipe C is 30 hours)

(a) $5235 \, m^3$

(b) $4528 \, m^3$

(c) $3876 \, m^3$

(d) $4865 \, m^3$

(e) $5743 \, m^3$

Q63. In tank R, pipe A was opened for 9 hours and then closed. Pipe B and C were the opened together for 3 hours and then both pipes were closed. After a total of 12 hours, approximately what volume of tank remained empty (in cubic meters), if both pipes A and C were opened together, tank will always be empty).

(a) $775 \, m^3$

(b) $840 \, m^3$

(c) $900 \, m^3$

(d) $1020 \, m^3$

(e) $960 \, m^3$

Q64. Pipe B alone can fill the tank Q in 36 hours. When all the three pipes were opened for 1 hour, then volume of tank Q filled was approximately 428 cubic meters. What is the approximate radius of tank Q?

(a) 14 m

(b) 21 m

(c) 12 m

(d) 25 m

(e) 9 m

Q65. When all 3 pipes were opened simultaneously, volume of tank S filled in 1 hour is 3575 cubic meters. Pipe B alone can fill 25% of tank S in 3.5 hours. In how much time can pipe A fill 40% of tank S alone.

(a) 6 hours

(b) 4.8 hours

(c) 5.4 hours

(d) 2.8 hours

(e) 1.6 hours

Q66. Find respective ratio of curved surface area of tank P and total surface area of tank R.

(a) 2: 3

(b) 4: 3

(c) 2: 1

(d) 3: 1

(e) None of these

Q67. Another tank Z has its height as 20% more than that of tank R and radius as 20% more than that of tank P. What is the sum of curved surface area of tank P and Z together (approximately)?

(a) $9375\ m^3$

(b) $11548\ m^3$

(c) $8935\ m^3$

(d) $7365\ m^3$

(e) $10296\ m^3$

Directions (68-70): Avni and Beena started a business by investing Rs. P and Rs.1.2P respectively. After 'x' months, Avni withdrew her entire amount and Chetna entered into business. After end of 9 months, Beena increased her initial investment by 25%. On completion of one year, share of Avni and Beena in entire profit was Rs.14200. If Beena would have increased her investment after 'x' months, then ratio of share of Avni and Beena in entire profit would have been 10: 27 respectively.

Q68. Find the value of 'x'.

(a) 4

(b) 6

(c) 8

(d) 5

(e) 9

Q69. If ratio of their profit shares was 20: 51, then find the difference between profit shares of Avni and Beena,

(a) Rs.4350

(b) Rs.5120

(c) Rs.6200

(d) Rs.7200

(e) Rs.6700

Q70. If a man invested Rs. 1.2P for x years on simple interest at the rate of 2.5x % p.a. and received total interest of Rs. 6480, then find P?

(a) 5400

(b) 8000

(c) 7200

(d) 6000

(e) 12000

Q71. B is 20% more efficient than A. If B was 60% more efficient than A, then B could complete the work in 18 days lesser than number of days taken by A. What fraction of work would be left after 12 days, if A and B work together?

(a) 1/5
(b) 7/20
(c) 11/20
(d) 13/20
(e) 9/20

Q72. A and B entered into a partnership and invested their respective amounts in the ratio of 2: 1. C and D entered into another partnership with initial investment ratio of 2: 1. Total investment of A and B was 25% less than that of C and D. If total profit of all 4 person at the end of year is Rs.10500, then find profit of A.
(a) Rs.2000
(b) Rs.1500
(c) Rs.3000
(d) Rs.4000
(e) Rs.3600

Q73. Teacher distributes 'N' chocolates to '3x' students. Find the value of x.
A. If he distributes 6 chocolates to each student, then teacher left with 24 chocolates.
B. If number of students were $1/3^{rd}$ of original number, then no chocolate was left with teacher.
C. 30 < number of students < 40 and 200 < number of chocolates < 300.
(a) Either A & B together or B & C together
(b) None of the given statements can answer the question
(c) Any two of them
(d) Either A & C or B & C together
(e) Either A & C together or A & B together

Q74. A, B and C entered into a partnership. After eight months, B and C left the business. Find the total profit at the end of year.
A. Annual profit of B is Rs. 400 more than that of A and Rs. 200 more than that of C.
B. Amount invested by C is 50% of total amount invested by A & B together.
C. Ratio of profit share of C and that of A and B together is 3 : 8.
(a) Either A & B together or B & C together
(b) Either A & C or B & C together
(c) Any two of them
(d) None of the given statements can answer the question
(e) Either A & C together or A & B together

Q75. Find the two-digit number.
A. Sum of the squares of the two digits of the two digits number is 26.
B. The ratio between the two-digit number and the sum of the digits of that number is 5:2.
C. The digit in ten's place is 4 less than the digit in unit place.
(a) Any one of them
(b) Only A and B together are sufficient
(c) Either A and C together or B alone
(d) Only B and C together are s
(e) None of these

Directions (76-80): Read the data carefully and answer the questions.
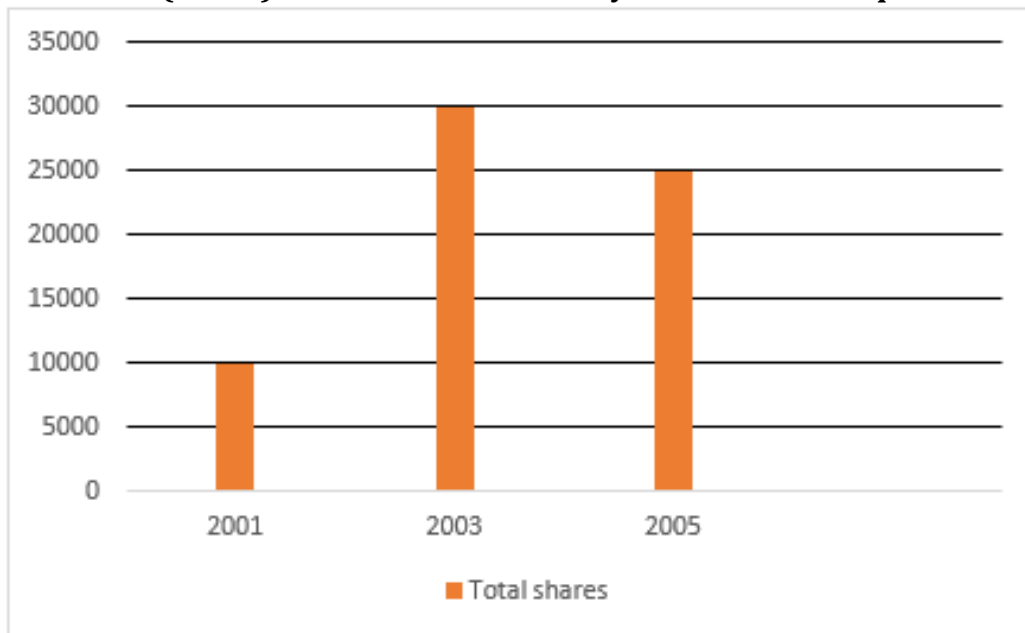
Note: (i) Market value **=** Total number of shares × price of one share

(ii) Number of shares increased by 20% from 2001 to 2002 and price of share decreased by 5% from 2002 to 2003.

(iii) Price of share decreased by 12% from 2005 to 2006 and number of shares decreased by 10% 2005 to 2006.

Q76. In 2002, 70% of total market value received from old shareholders and rest received from new shareholders. Find the total market value received from new shareholders.

(a) 140,000

(b) 350,000

(c) 27000

(d) 270,000

(e) 210,000

Q77. Find the ratio of total market value received in 2005 to that of in 2003.
(a) 171 : 200
(b) 250 : 161
(c) 250 : 171
(d) 171 : 250
(e) 250 : 151

Q78. Find total market value in 2006.
(a) 247,5000
(b) 245,5000
(c) 242,5000
(d) 239,5000
(e) 249,5000

Q79. Find the percentage of increment in total market value in 2003 over 2002?
(a) 117.5%
(b) 132.5%
(c) 125.5%
(d) 137.5%
(e) 127.5%

Q80. If total number shares in 2004 are 1750 more than average number of shares in 2003 and 2006, then find average number of shares from 2001 to 2006.
(a) 20250
(b) 21250
(c) 22250
(d) 23250
(e) 19250

Directions (81-85): Read the following passage and answer the questions given below. Some words are highlighted to help you answer some of the questions.

We are now living among history's very first "AI" generation. From the Alexas they converse with, to their robot playmates, to the YouTube wormholes they disappear into, the children and adolescents of today are born into a world increasingly powered by virtual reality and artificial intelligence (AI). AI is not only **(I) revamping** what humans can do, it is shaping our behaviors, our preferences, our perceptions of the world and of ourselves. Older people still remember life before AI and the digital world - our references, anchors and pole stars pre-date the fourth Industrial Revolution. Not so for the millions of children and adolescents who were born into it. One of the most **pressing** concerns is that not everyone can tap into the opportunities offered by this transformation. According to UNICEF and the International Telecommunication Union (ITU), as many as two-thirds of the world's children do not have access to the Internet at home.

In the old-fashioned physical world, we evolved norms and standards to protect children. For instance, there are policies and protocols for a child traveling alone as an unaccompanied minor. Parents are understandably _____**(II)**_____ to let their children be photographed by the media, and in many countries, news outlets blur children's faces to protect them. While video gaming and chat forums offer an online space for children to socialize with their friends, multiple reports identify such virtual playgrounds as a source of child predators. Short of banning screen time entirely, parents are hard-pressed to keep tabs on just what their children are doing online, and with whom. With online homework, this has become even more difficult. Even if this is an **ancillary** consequence of the underlying business model, the damage is done - children, from a tender age through adolescence, are becoming digitally addicted.

Similarly, right when children and youth are forming their initial views of the world, they are being sucked into virtual deep space, including the universe of fake news and conspiracy theories. **(III)** Many AI toys now come pre-programmed with their own **(A) amusing** and voice, and they may provide youngsters with **(B) personality** and creative options, with some even **(C) cognitive** improved reading, social skills, and **(D) fostering** development. All this is thrown at our children just when they are starting to try to make sense of who they are and the world they live in; right when it is so important to help them understand and appreciate different perspectives, preferences, beliefs and customs, to build bridges of understanding and empathy and goodwill.

Q81. The highlighted word in part (I) of the first paragraph may or may not have been used correctly. Choose the most important word from the given options which can be used to replace the highlighted word. If no replacement is required, then choose option (E) as your answer choice.
(a) slumping
(b) tumbling
(c) worsening
(d) inflaming
(e) No replacement required

Q82. Choose the most appropriate antonym of the word **'PRESSING'**, as highlighted in the given passage.
(a) pivotal
(b) drastic
(c) trivial
(d) critical
(e) None of these

Q83. Choose the most appropriate word from the following options to fill in the blank (II), as highlighted in the given passage.
(a) wishing
(b) earnest
(c) reluctant
(d) craving
(e) esurient

Q84. Choose the most appropriate synonym of the word **'ANCILLARY'**, as highlighted in the given passage.
(a) subsidiary
(b) auxiliary
(c) adjuvant
(d) accessory
(e) All of these

Q85. In sentence (III) of the last paragraph, a few words have been highlighted and jumbled. You are required to choose the correct sequence of the highlighted words from the options given below.
(a) CADB
(b) BADC
(c) DBAC
(d) ABDC
(e) CBAD

Directions (86-90): Read the following passage and answer the questions given below. Some words are highlighted to help you answer some of the questions.

Tropical deforestation is one of the great challenges facing humanity. If we don't slow it down soon, the chances of avoiding disastrous climate change, species loss and the disruption of indigenous and traditional people's cultures grow slimmer. And this rapid deceleration will be possible only if the governments, farm sectors, rural communities, businesses and civil societies of tropical forest regions devise and implement effective strategies. In the long term, the goal of taming deforestation must be embedded in public policies, programs, business transactions and culture. To put it bluntly, political leaders who **embrace** the goal of taming deforestation must be electable. The jurisdictional approach can help to translate unilateral corporate deforestation pledges into collaborative agreements with local governments and farm sectors, building the political case for slowing deforestation.

In a jurisdictional approach, the unit of performance is a landscape with policy-relevant boundaries – political geographies such as a state, province, district or an entire nation. This is the unit of performance that can effectively bring together multi-stakeholders on the appropriate pathway to sustainable development. In Brazil – a shining example of a successful jurisdictional approach to slow tropical deforestation – progress has been possible because political forces were pushing in the right direction. The approach was jurisdictional because success was defined as a decline in deforestation for the entire Brazilian Amazon region and for all types of land use. The Government used command-and-control measures to slow deforestation, but it also broadened its political base by paving its all-weather motorways providing access to Pacific markets. It also attracted new low-carbon industries to set up shop through innovative incentive systems.

The stage is also set to attract private financial investments into new low-carbon industries and farmer support programs as the risks associated with rampant deforestation, illegal land-use practices and labor infractions are diminished. In many ways, a political case for slowing Amazon deforestation was handed to President Lula on a silver platter. He came into office in 2003 with a mandate to deepen Brazil's international credibility just as Amazon deforestation was skyrocketing, triggering

international **outrage** and a diplomatic headache for the new president. It was in this favorable political context that Lula empowered his environment minister to draw on the most powerful branches of the government – including the army and central bank – to crack down on illegal deforestation and logging in the Amazon. These formal designations further weakened the land-grabbing schemes that were driving deforestation.

Q86. What consequence did the use of command-and-control mechanisms by the government have?
(a) It resulted in environmental protection by halting deforestation.
(b) It contributed to the establishment of new low-carbon industries.
(c) It successfully brought individuals together on the correct course.
(d) Only (a) and (b)
(e) Only (b) and (c)

Q87. Choose the most appropriate antonym of the word **'EMBRACE'**, as highlighted in the given passage.
(a) enclasp
(b) repudiate
(c) espouse
(d) underpin
(e) stimulate

Q88. What will be the repercussions if tropical deforestation continues unabated?
(a) Unrestrained deforestation will eventually result in the extinction of species.
(b) Climate change will have a high probability of being catastrophic.
(c) There will be a breakdown in traditional cultures and people.
(d) Only (a) and (c)
(e) All of these

Q89. Choose the most appropriate synonym of the word **'OUTRAGE'**, as highlighted in the given passage.
(a) reconcile
(b) indignation
(c) propitiate
(d) appease
(e) conciliate

Q90. What role will private financial investments in innovative low-carbon industries play in maintaining the ecological balance?
(a) It aids in reducing the dangers associated with massive deforestation.
(b) It facilitates the reduction of unlawful land-use operations.
(c) It contributes to the reduction of international indignation.
(d) Only (a) and (b)
(e) Only (a) and (c)

Directions (91-94): In each of the following questions, a sentence with four highlighted words has been given. One of these highlighted words may or may not have been used unnecessarily in the given sentences. You are required to choose the word that is redundant and gives a superfluous meaning. If all of the highlighted words are essential for the contextual meaning of the sentence, then choose option (E) as your answer choice.

Q91. Water-conservation and water-harvesting **methods (A)** that do not require the **construction (B)** of a dam are fallacious **approaches (C)** that have not been **adequately (D)** examined in the management of water resources.
(a) A
(b) B
(c) C
(d) D
(e) None of these

Q92. Regional **hospitals (A)** at the secondary level within the government sector are **essential (B)** in urban facilities to **ensure (C)** the needs of the population during **critical (D)** situations.
(a) A
(b) B
(c) C
(d) D
(e) None of these

Q93. The central government has re-issued an **ordinance (A)** forming an air quality **control (B)** commission, which worries **concern (C)** about the procedure of re-issuing ordinances without getting them **ratified (D)** by the Parliament.
(a) A
(b) B
(c) C
(d) D
(e) None of these

Q94. The world appears to have **gleaned (A)** little from the first wave, which **culminated (B)** last year and **decimated (C)** the country, while a more **ferocious (C)** second wave is ravaging the country.
(a) A
(b) B
(c) C
(d) D
(e) None of these

Directions (95-98): In each of the following questions, a contextually meaningful sentence has been given. Three paragraphs have been placed next to each sentence, which may or may not be relevant to the context of the given sentence. You are required to select the most appropriate combination of paragraphs from which the given sentence can be inferred.

Q95. The reasonable path is to enable both economic output and rapid health response, as evidenced by the rate of infection spread.

(i) His address to the nation, delivered amid a roaring storm of viral outbreaks, was intended to reinforce the message about the commitment of the government to reversing economic decline and expanding healthcare services.

(ii) To be clear, the fact that this was formerly the case does not imply that government control of educational institutions must presently be maintained. However, the circumstances that existed at the time the government passed its first endowment statute have not changed significantly.

(iii) Regulatory reform proponents often point to the state's attitude to other activities. However, an examination of the associated laws reveals that the government also has significant supervisory responsibility for the management of educational properties.

(a) Only (i)
(b) Only (i) and (iii)
(c) Only (iii)
(d) Only (i) and (ii)
(e) Only (ii) and (iii)

Q96. There have been no further guidelines created to describe these concepts or specify their constituents in order to assist the appointments.

(i) Various qualifications and constitutional provisions for the freedom of conscience and the right to freely proclaim and disseminate religious practice according to public order were established with these objectives in mind.

(ii) Recruiting agencies are required by the Court and the Model Police Act to shortlist candidates based on length of service, range of experience, and a performance evaluation of the candidates over the previous ten years.

(iii) Reforms in this area must include two elements. The first is that the government's selection and dismissal powers should be delegated to an independent oversight body, of which the government is a component.

(a) Only (iii)
(b) Only (i) and (iii)
(c) Only (ii)
(d) Only (i) and (ii)
(e) Only (ii) and (iii)

Q97. Following a supply outage, oxygen levels in numerous hospitals in the city fell to dangerously low levels. After a massive intervention, supplies were restored by late evening.

(i) According to the Indian Council of Medical Research, only a small percentage of those who were vaccinated tested positive. These outbreaks of illness did not, however, call into question the efficacy of immunization as the vaccines clearly protect against disease.

(ii) Hospitals in the city may soon face oxygen shortages as well. The Centre has a control team that will settle disagreements between states over oxygen delivery. To enable the smooth passing of oxygen trucks, green corridors have been established.

(iii) After a leak in a medical oxygen tank disrupted the availability at a hospital, several patients on life support suffocated. According to the State Health Minister, the leak was caused by a valve malfunction, and a high-level investigation has been ordered.
(a) Only (iii)
(b) Only (i) and (iii)
(c) Only (i) and (ii)
(d) Only (ii)
(e) Only (ii) and (iii)

Q98. It has been brought to our attention that, despite the summer break, several private schools continue to use the regular online learning approach.
(i) Farmers in Punjab and Haryana have begun receiving the minimum support price payment directly in their bank accounts for the first time under the Direct Benefit Transfer Scheme, with wheat harvesting in full swing.
(ii) The World Press Freedom Index has placed India in 142nd place out of 180 countries. This is despite the fact that an index monitoring cell worked for a year under the guidance of the Cabinet Secretary to enhance the ranks.
(iii) Considering many private schools are continuing online classes despite the decree declaring summer break, the Directorate issued a circular stating that all online learning activities must be discontinued during the summer vacation.
(a) Only (iii)
(b) Only (i) and (iii)
(c) Only (i) and (ii)
(d) Only (ii) and (iii)
(e) (c) Only (ii)

Directions (99-100): In the following question, two separate sentences with a few highlighted words have been given. Answer the questions, based on the given sentences.
(A) The first wave of the pandemic **attempts (A)** the world **revealed (B)** the vulnerabilities in the **global (C)** healthcare system.
(B) Hospitals have been **replenish (D)** for nearly a year, and no **throughout (E)** have been made to **swamped (F)** medical oxygen supplies.

Q99. The highlighted words in the given sentences may or may not have been used in the correct sequence. You are required to choose the correct sequence of words to form meaningful sentences.
(a) BCEFDA
(b) FBECAD
(c) EFBDAC
(d) EBCFAD
(e) CFEDBA

Q100. You are required to choose the most appropriate connector from the given options which can be used to connect both sentences to form a coherent paragraph.
(a) even
(b) yet
(c) since
(d) then
(e) for

Directions (101-102): In the following question, two separate sentences with a few highlighted words have been given. Answer the questions, based on the given sentences.
(A) There has been a **achieving (A)** of headlines this week in the build-up **structured (B)** by the US regarding whether India should **sector (C)** a net-zero emissions target.
(B) Decarbonizing the power **declare (D)**, which is India's single largest source of greenhouse gas **emissions (E)**, is a critical step towards **rush (F)** net-zero emissions.

Q101. The highlighted words in the given sentences may or may not have been used in the correct sequence. You are required to choose the correct sequence of words to form meaningful sentences.
(a) FBDCEA
(b) BDFEAC
(c) DBFACE
(d) CBFEAD
(e) FDBECA

Q102. You are required to choose the most appropriate connector from the given options which can be used to connect both sentences to form a coherent paragraph.
(a) despite
(b) although
(c) however
(d) consequently
(e) moreover

Directions (103-107): In the following paragraph, a few phrases have been highlighted, each of which has been numbered. These highlighted phrases may or may not have been used correctly in terms of contextual meaning and grammatical accuracy. Select the most appropriate phrase from the given options to replace the incorrect one. Choose option (E) as your answer choice if the highlighted phrases are grammatically correct and don't need to be replaced.

Q103. Enhancing the efficiency of electricity use **are an important complement (103)** to decarbonizing the electricity supply. Growing urbanization and uptake of electricity services **offer a good opportunity to (104)** shape energy consumption within buildings through proactive measures. Cooling needs are expected **to increase rapid with rising (105)** incomes and temperatures. Air conditioners, fans and refrigerators together consume about 60% of the electricity in households. Today, the average fan sold in the **market consumes more than twice (106)** what an efficient fan does, and an average refrigerator is about 35% more. India can leverage this **transition to as an opportunity too (107)** become a global leader in the production of clean appliances.

(a) is an important complement
(b) are the important complement
(c) is the importance complement
(d) are an important complements
(e) No replacement required

Q104. Enhancing the efficiency of electricity use **are an important complement (103)** to decarbonizing the electricity supply. Growing urbanization and uptake of electricity services **offer a good opportunity to (104)** shape energy consumption within buildings through proactive measures. Cooling needs are expected **to increase rapid with rising (105)** incomes and temperatures. Air conditioners, fans and refrigerators together consume about 60% of the electricity in households. Today, the average fan sold in the **market consumes more than twice (106)** what an efficient fan does, and an average refrigerator is about 35% more. India can leverage this **transition to as an opportunity too (107)** become a global leader in the production of clean appliances.
(a) offers a good opportunity to
(b) offering good opportunity to
(c) offers good opportunity for
(d) offered good opportunity to
(e) No replacement required

Q105. Enhancing the efficiency of electricity use **are an important complement (103)** to decarbonizing the electricity supply. Growing urbanization and uptake of electricity services **offer a good opportunity to (104)** shape energy consumption within buildings through proactive measures. Cooling needs are expected **to increase rapid with rising (105)** incomes and temperatures. Air conditioners, fans and refrigerators together consume about 60% of the electricity in households. Today, the average fan sold in the **market consumes more than twice (106)** what an efficient fan does, and an average refrigerator is about 35% more. India can leverage this **transition to as an opportunity too (107)** become a global leader in the production of clean appliances.
(a) for increase rapidly with rising
(b) to increased rapid with rising
(c) to increase rapidly with rising
(d) to increase rapidly with risen
(e) No replacement required

Q106. Enhancing the efficiency of electricity use **are an important complement (103)** to decarbonizing the electricity supply. Growing urbanization and uptake of electricity services **offer a good opportunity to (104)** shape energy consumption within buildings through proactive measures. Cooling needs are expected **to increase rapid with rising (105)** incomes and temperatures. Air conditioners, fans and refrigerators together consume about 60% of the electricity in households. Today, the average fan sold in the **market consumes more than twice (106)** what an efficient fan does, and an average refrigerator is about 35% more. India can leverage this **transition to as an opportunity too (107)** become a global leader in the production of clean appliances.
(a) market consume more than twice
(b) market consumes much than twice
(c) market consumed more than twice
(d) market consume even than twice
(e) No replacement required

Q107. Enhancing the efficiency of electricity use **are an important complement (103)** to decarbonizing the electricity supply. Growing urbanization and uptake of electricity services **offer a good opportunity to (104)** shape energy consumption within buildings through proactive measures. Cooling needs are expected **to increase rapid with rising (105)** incomes and temperatures. Air conditioners, fans and refrigerators together consume about 60% of the electricity in households. Today, the average fan sold in the **market consumes more than twice (106)** what an efficient fan does, and an average refrigerator is about 35% more. India can leverage this **transition to as an opportunity too (107)** become a global leader in the production of clean appliances.
(a) transition to as an opportunity for
(b) transition too as an opportunity to
(c) transition to be an opportunity into
(d) transition too as an opportunity of
(e) No replacement required

Directions (108-112): A grammatically correct and contextually meaningful statement has been given in each of the following questions. Five similar sentences have been placed next to each statement, one of which is contextually similar in meaning to the one given in the question. Choose the most appropriate sentence that conveys the same meaning as the given statement.

Q108. Decision-makers must settle down to give the vaccination campaign wings by ensuring maximal industrial production in order to attain optimum distribution.
(a) In order to achieve minimal dispersion, decision-makers must prolong the vaccination campaign's wings by promoting industrial production.
(b) Decision-makers must stimulate steel production to broaden the wings of the vaccination campaign in order to achieve maximum diffusion.
(c) In order to accomplish optimal vaccination coverage, decision-makers must encourage the manufacturing of medical equipment.
(d) In order to obtain optimum dispersion, decision-makers must settle down to give the inoculation project wings by ensuring optimal industrial output.
(e) Decision-makers must calm down to give the infection operation wings by delivering exceptional factory production in addition to enhancing diffusion.

Q109. Long before the Constitution was enacted, the competence to regulate the functioning of religious bodies was perceived as an instance of sovereignty.
(a) The failure to regulate the functioning of religious organizations was seen as an illustration of sovereignty long before the Constitution was enacted.
(b) Long before the Constitution was repealed, the power to govern the operations of religious organizations was overlooked as an example of sovereignty.
(c) Long before the Constitution was enacted, the ability to govern the functioning of religious organizations was seen as a symbol of sovereignty.
(d) Long before the Constitution was ratified, the reluctance to control the running of religious organizations was considered an example of autonomy.
(e) The power to regulate the functioning of religious organizations was hampered long before the Constitution was abrogated as an example of sovereignty.

Q110. Recent events that led to the dismissal of an officer have brought the process of appointing and replacing state officials back into the forefront.
(a) The procedure of dismissing and replacing state officials has resurfaced as a result of recent events that resulted in the removal of an officer.
(b) Recent events involving the induction of a state officer have reintroduced the procedure of dismissing and replacing state officials.
(c) Recent incidents surrounding the accession of a state officer have reintroduced the procedure of substituting and discharging state officials.
(d) As a result of recent occurrences that resulted in the expulsion of an officer, the system for terminating and removing state officials has resurfaced.
(e) The procedure of appointing and transferring state officials has resurfaced as a result of recent events that resulted in the firing of an officer.

Q111. The idea of governments monitoring the operations of religious institutions appears to be repugnant to a democratic republic on the surface.
(a) On the surface, the idea of governments overseeing religious institutions appears to be appealing to a democratic republic.
(b) On the surface, the idea of governments supervising religious institutions appears to be incompatible with a democratic republic.
(c) On the surface, the idea of governments overseeing religious institutions looks to be enticing to an autocratic nation.
(d) The idea of governments supervising religious institutions looks to be tempting to a constitutional democracy on the surface.
(e) On the surface, the idea of governments monitoring religious institutions appears to be intriguing to a constitutional democracy.

Q112. According to publicly available data, India falls short of the global average of prescriptions administered per one lakh population.
(a) According to publicly available data, India surpasses the global average of prescriptions dispensed per one lakh population.
(b) India eclipses the global average of pharmaceuticals provided per one lakh people, according to privately available data.
(c) According to publicly available data, India misses the mark of the global average of prescriptions provided per one lakh population.
(d) According to commercially existing evidence, India beats the global average of medications delivered per one lakh inhabitants.
(e) According to generally available information, India outperforms the global average of medications provided per one lakh population.

Directions (113-115): In the following questions, two columns are given containing three sentences/phrases each. In the first column, sentences/phrases are A, B and C and in the second column, the sentences/phrases are D, E and F. A sentence/phrase from the first column may or may not connect with another sentence/phrase from the second column. Each question has five options, four of which display the sequence(s) in which the sentences/phrases can be joined to form a grammatically and contextually correct sentence. Choose the appropriate option. If none of the given options forms a correct sentence after combination, mark (E), i.e. "None of these" as your answer.

Q113. COLUMN I
(A) Such a sector-by-sector approach, which can be developed for other sectors
(B) They can demonstrate concrete, yet ambitious, domestic action that sets
(C) This approach allows India to gracefully adapt its sectoral transition plans
COLUMN II
(D) and also to allow it to heighten its vows as required by the Paris Agreement.
(E) India must take internal measures to get on the road to net-zero emissions.
(F) while closing concrete actions that are less dependent on uncertain balances.
(a) Only A-E and B-D
(b) Only B-F
(c) Only A-F and B-E
(d) Only C-E
(e) None of these

Q114. COLUMN I
(A) India may even consider committing to submit plausible pathways and
(B) The European game has been thrown into turmoil by the decision taken
(C) Most of the clubs considered themselves to be public-spirited entities in
COLUMN II
(D) by authorities to disclose a confidential plan to launch The Super League.
(E) timelines to achieving net-zero emissions as part of its future pledges.
(F) this excessive use of a football team as a mere for-profit business is the crux.
(a) Only A-E and B-D
(b) Only C-E
(c) Only A-F and B-E
(d) Only B-F
(e) None of these

Q115. COLUMN I
(A) Meaningful competition among them was seen as a meritocratic exercise
(B) With leagues increasingly awash with hedge fund money and handouts of
(C) The nation hoped that the central government would take corrective action
COLUMN II
(D) outfits are answerable more to investors and owners than actual supporters.
(E) workforce longevity is vital from the perspective of the company's credibility.
(F) after watching and experiencing the repercussions of a medical supply crisis.
(a) Only A-D and B-F
(b) Only C-F
(c) Only A-E and B-D
(d) Only B-E
(e) None of these

Solutions

S1. Ans.(a)
Sol.

V	E	A	D	S	U	B
23	2	6	19	15	12	7

S2. Ans.(b)
Sol.

V	E	A	D	S	U	B
23	2	6	19	15	12	7

S3. Ans.(c)
Sol.

V	E	A	D	S	U	B
23	2	6	19	15	12	7

S4. Ans.(d)
Sol.

V	E	A	D	S	U	B
23	2	6	19	15	12	7

S5. Ans.(d)
Sol.

V	E	A	D	S	U	B
23	2	6	19	15	12	7
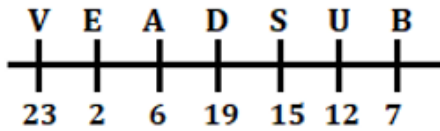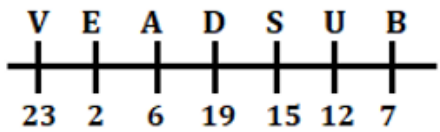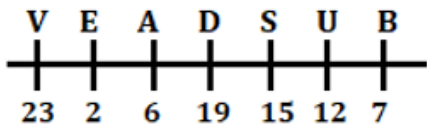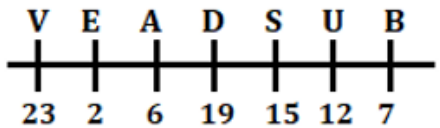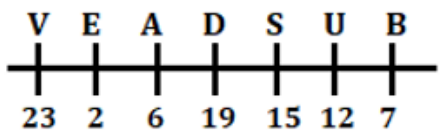
S6. Ans.(e)
Sol.
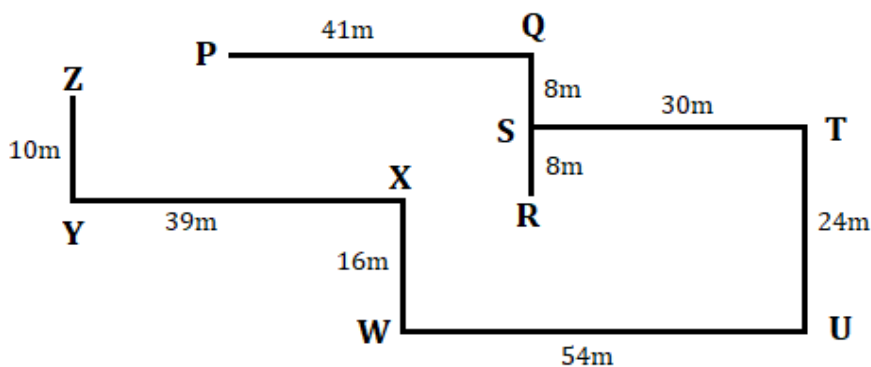
S7. Ans.(d)
Sol.
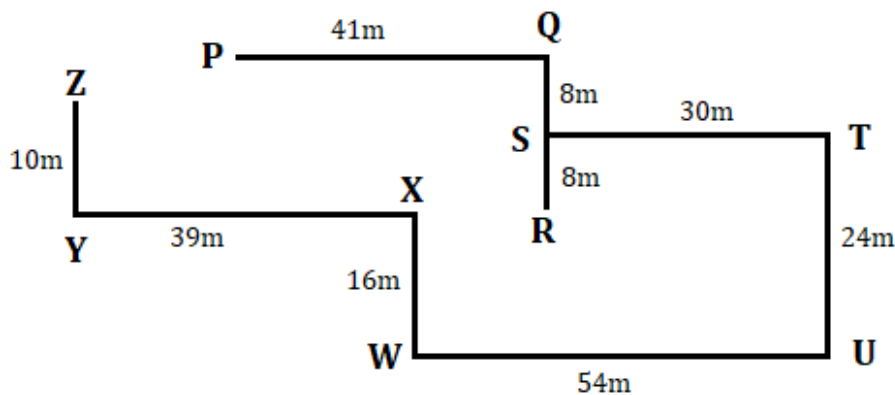
S8. Ans.(b)
Sol. All the numbers given in input are arranged in each step (in ascending order from left) after removing non-prime digits from it. One number is arranged in each step and every new number is placed at the left end after shifting previous numbers one place towards right.
Input: 63825   49857   38679   72548   45328   95763
Step I: 37   63825   49857   72548   45328   95763
Step II. 532   37   63825   49857   72548   95763
Step III. 57   532   37   63825   72548   95763
Step IV. 325   57   532   37   72548   95763
Step V. 725   325   57   532   37   95763
Step VI. 573   725   325   57   532   37

S9. Ans.(d)
Sol. All the numbers given in input are arranged in each step (in ascending order from left) after removing non-prime digits from it. One number is arranged in each step and every new number is placed at the left end after shifting previous numbers one place towards right.
Input: 63825   49857   38679   72548   45328   95763
Step I: 37   63825   49857   72548   45328   95763
Step II. 532   37   63825   49857   72548   95763
Step III. 57   532   37   63825   72548   95763
Step IV. 325   57   532   37   72548   95763
Step V. 725   325   57   532   37   95763
Step VI. 573   725   325   57   532   37

S10. Ans.(c)
Sol. All the numbers given in input are arranged in each step (in ascending order from left) after removing non-prime digits from it. One number is arranged in each step and every new number is placed at the left end after shifting previous numbers one place towards right.
Input: 63825   49857   38679   72548   45328   95763
Step I: 37   63825   49857   72548   45328   95763
Step II. 532   37   63825   49857   72548   95763
Step III. 57   532   37   63825   72548   95763

Step IV. 325   57   532   37   72548   95763
Step V. 725   325   57   532   37   95763
Step VI. 573   725   325   57   532   37

S11. Ans.(c)
Sol. All the numbers given in input are arranged in each step (in ascending order from left) after removing non-prime digits from it. One number is arranged in each step and every new number is placed at the left end after shifting previous numbers one place towards right.
Input: 63825   49857   38679   72548   45328   95763
Step I: 37   63825   49857   72548   45328   95763
Step II. 532   37   63825   49857   72548   95763
Step III. 57   532   37   63825   72548   95763
Step IV. 325   57   532   37   72548   95763
Step V. 725   325   57   532   37   95763
Step VI. 573   725   325   57   532   37

S12. Ans.(e)
Sol. All the numbers given in input are arranged in each step (in ascending order from left) after removing non-prime digits from it. One number is arranged in each step and every new number is placed at the left end after shifting previous numbers one place towards right.
Input: 63825   49857   38679   72548   45328   95763
Step I: 37   63825   49857   72548   45328   95763
Step II. 532   37   63825   49857   72548   95763
Step III. 57   532   37   63825   72548   95763
Step IV. 325   57   532   37   72548   95763
Step V. 725   325   57   532   37   95763
Step VI. 573   725   325   57   532   37

S13. Ans.(e)
Sol.

Finance	Operations	Marketing
R- white	T- purple	H- red
G- blue	M- green	D- black
B- orange		
E- pink		
A- violet		

S14. Ans.(c)
Sol.

Finance	Operations	Marketing
R- white	T- purple	H- red
G- blue	M- green	D- black
B- orange		
E- pink		
A- violet		

S15. Ans.(b)
Sol.

Finance	Operations	Marketing
R- white	T- purple	H- red
G- blue	M- green	D- black
B- orange		
E- pink		
A- violet		

S16. Ans.(c)
Sol.

Finance	Operations	Marketing
R- white	T- purple	H- red
G- blue	M- green	D- black
B- orange		
E- pink		
A- violet		

S17. Ans.(a)
Sol.

Finance	Operations	Marketing
R- white	T- purple	H- red
G- blue	M- green	D- black
B- orange		
E- pink		
A- violet		

S18. Ans.(b)
Sol.
I. M*W (false)
II. D&K (false)
III. J$P (false)

S19. Ans.(e)
Sol.
I. M $H (false)
II. L*Q (false)
III. P&S (true)

S20. Ans.(d)
Sol.
I. D&U (true)
II. B*T (true)
III. H&K (true)

S21. Ans.(e)
Sol. Only I and II are strong. Clearly, Both I and II hold strong, as they provide very convincing reasons, for a single tax system would help get rid of multifarious taxes on a product. Besides, the idea of imitation of other countries in the implementation of a certain policy holds no relevance. So, argument III does not hold strong.

S22. Ans.(b)
Sol. Clearly, trade unions provide a common platform for the workers to voice their demands and protests and thus ensure that they are not subdued or exploited. So, argument II holds strong, while I and III do not. Besides, the idea of imitation of other countries in the implementation of a certain policy, holds no relevance. So, argument IV also not hold strong.

Directions (23-25):

S23. Ans.(c)
Sol. Data in statement I and statement II are sufficient to answer the question.

Days	Persons
Thursday	T
Friday	Q
Saturday	X
Sunday	R
Monday	W
Tuesday	Y

S24. Ans.(d)
Sol. Data in all the statement I, II and III are necessary to answer the question.

T—(+)P══Q(-)
        |
(+)R—S(-)══U(+)
        |
   V(+)══W(-)
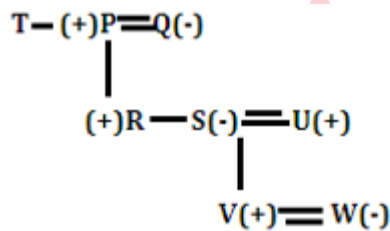
S25. Ans.(e)
Sol. Data in statement III is sufficient.

G   A D   E
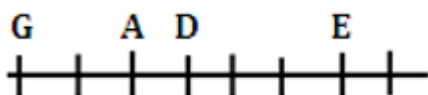
S26. Ans.(c)
Sol.

Floors	Flat-1	Flat-2
4	A, C	B, E
3	P, S	R, T
2	Q, U	O, N
1	V, Y	X, W

A(-)══C(+)

E(-)══B(+)

U(-)══Q(+)

O(-)══N(+)

S(-)══P(+)

R(-)══T(+)

V(-)══Y(+)

X(-)══W(+)

S27. Ans.(e)
Sol.

Floors	Flat-1	Flat-2
4	A, C	B, E
3	P, S	R, T
2	Q, U	O, N
1	V, Y	X, W

A(-)══C(+)

E(-)══B(+)

U(-)══Q(+)

O(-)══N(+)

S(-)══P(+)

R(-)══T(+)

V(-)══Y(+)

X(-)══W(+)

S28. Ans.(a)
Sol.

Floors	Flat-1	Flat-2
4	A, C	B, E
3	P, S	R, T
2	Q, U	O, N
1	V, Y	X, W

A(-)══C(+)

E(-)══B(+)

U(-)══Q(+)

O(-)══N(+)

S(-)══P(+)

R(-)══T(+)

V(-)══Y(+)

X(-)══W(+)

S29. Ans.(d)
Sol.

Floors	Flat-1	Flat-2
4	A, C	B, E
3	P, S	R, T
2	Q, U	O, N
1	V, Y	X, W

A(-)══C(+)

E(-)══B(+)

U(-)══Q(+)

O(-)══N(+)

S(-)══P(+)

R(-)══T(+)

V(-)══Y(+)

X(-)══W(+)

S30. Ans.(c)
Sol.

Floors	Flat-1	Flat-2
4	A, C	B, E
3	P, S	R, T
2	Q, U	O, N
1	V, Y	X, W

A(-)═══C(+)

E(-)═══B(+)

U(-)═Q(+)

O(-)═══N(+)

S(-)══ P(+)

R(-)═T(+)

V(-)══Y(+)

X(-)═ W(+)

S31. Ans.(a)
Sol.
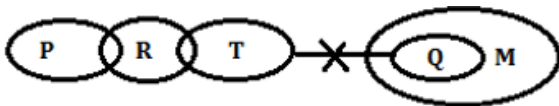
S32. Ans.(a)
Sol.
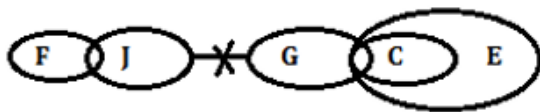
S33. Ans.(d)
Sol.

S34. Ans.(c)
Sol.

S35. Ans.(a)
Sol.

```
23, A  ──→    ←──┐ M,10
18,D   ──→    ←── J, 25
5, B   ──→    ←── N,15
11,E   ──→    ←── K,12
22,F   ──→    ←── L,17
16,C   ──→    ←── O,13
```

S36. Ans.(b)
Sol.

```
23, A  ──→    ←──┐ M,10
18,D   ──→    ←── J, 25
5, B   ──→    ←── N,15
11,E   ──→    ←── K,12
22,F   ──→    ←── L,17
16,C   ──→    ←── O,13
```

S37. Ans.(c)
Sol.

```
23, A  ──→    ←──┐ M,10
18,D   ──→    ←── J, 25
5, B   ──→    ←── N,15
11,E   ──→    ←── K,12
22,F   ──→    ←── L,17
16,C   ──→    ←── O,13
```

S38. Ans.(d)
Sol.

23, A →	← M,10
18,D →	← J, 25
5, B →	← N,15
11,E →	← K,12
22,F →	← L,17
16,C →	← O,13

S39. Ans.(e)
Sol.

23, A →	← M,10
18,D →	← J, 25
5, B →	← N,15
11,E →	← K,12
22,F →	← L,17
16,C →	← O,13
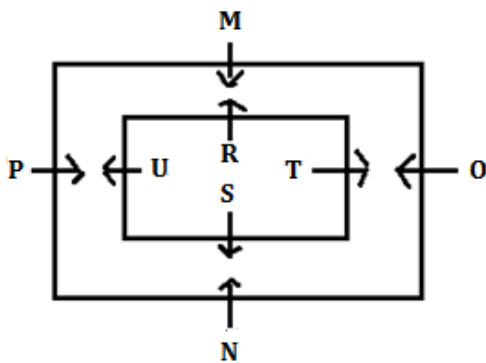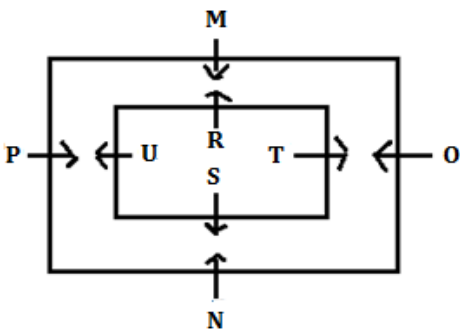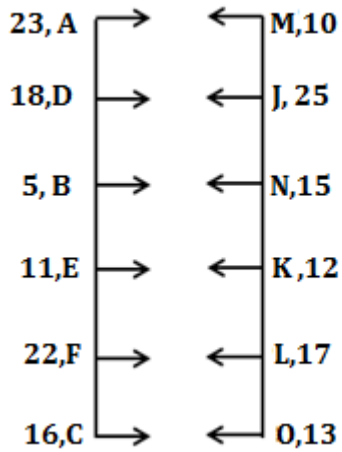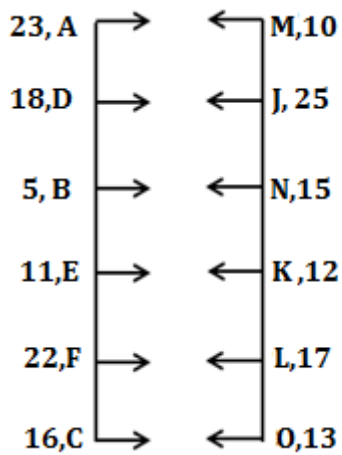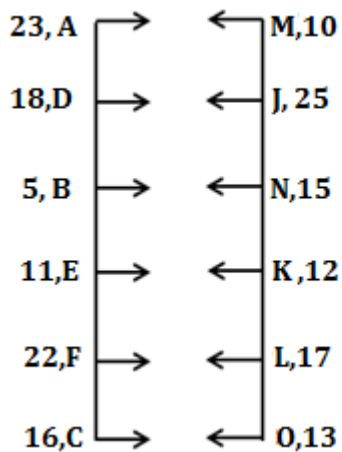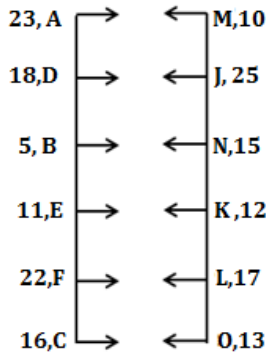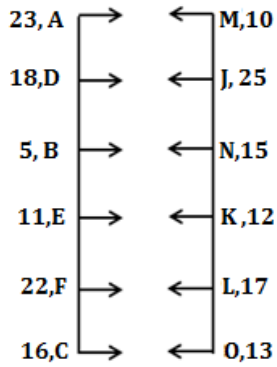
S40. Ans.(b)
Sol. Meaningful words formed are PAIRS, PARIS

S41. Ans.(b)
Sol.
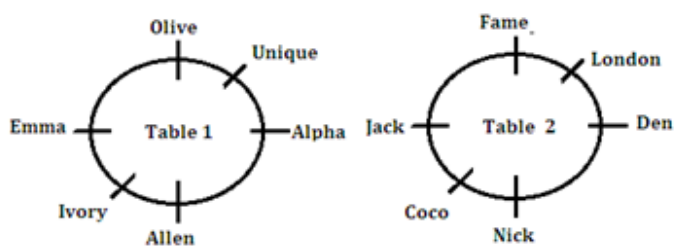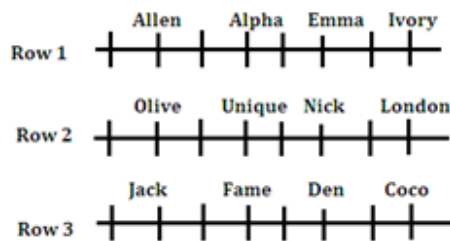
S42. Ans.(c)
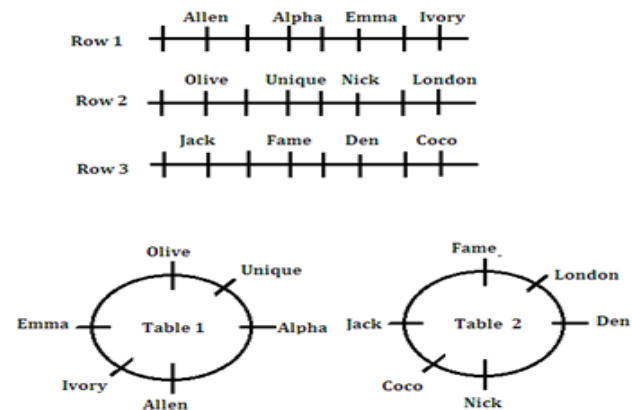**Sol.**
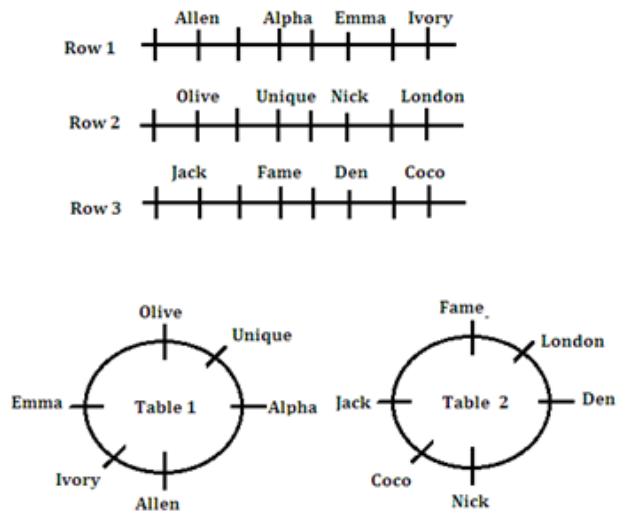
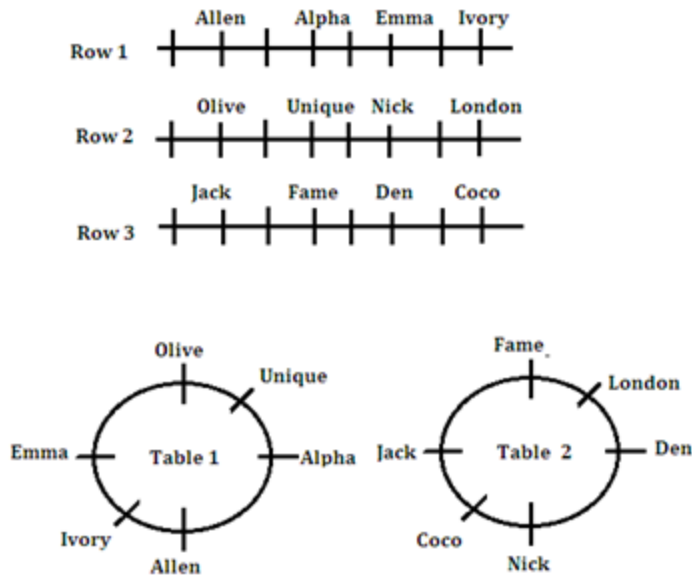
S43. Ans.(e)
Sol.
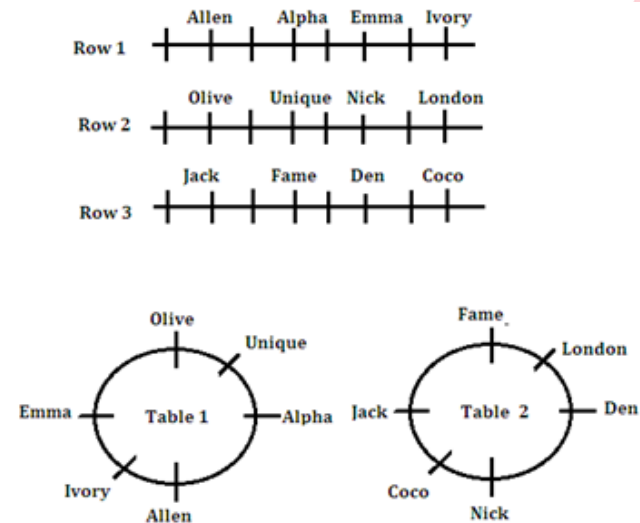
S44. Ans.(e)
Sol.

S45. Ans.(c)
Sol.

S46. Ans.(d)
Sol.

Only from (b) and (c), selling price of article can solve.
Cost price of article = Rs.100
Profit % = 8%
So, selling price = $Rs. 108$

S47. Ans.(b)
Sol.

From 1.

$2 - \dfrac{11}{x} + \dfrac{9}{x^2} = 0$

$2x^2 - 11x + 9 = 0$

$2x^2 - 2x - 9x + 9 = 0$

$2x(x - 1) - 9(x - 1) = 0$

$(2x - 9)(x - 1) = 0$

$x = 1, \dfrac{9}{2}$

From 2.

$(y - 2)^2 = 2\dfrac{1}{4}$

$y - 2 = \pm\dfrac{3}{2}$

$y = \dfrac{1}{2}, \dfrac{7}{2}$

New eq. $= z^2 - sz + p = 0$

s = sum of root, p= product of root

So, highest root of equation 1 and lowest root
of equation 2 is 9/2 and ½ respectively.

Required equation $= z^2 - -5z + \dfrac{9}{4} = 0$

$4z^2 - 20z + 9 = 0$

S48. Ans.(a)
Sol.

The pattern of the series I is:
$11 + 7^2 = 60 = P$
$60 + 11^2 = 181$
$181 + 13^2 = 350$
$350 + 17^2 = 639$
$639 + 19^2 = 1000$
Prime number near P = 59/61
So, 5th term of the new series = $59 + 2 + 2 + 2 + 2 = 67$
Or
$61 + 2 + 2 + 2 + 2 = 69$

S49. Ans.(c)
Sol.

Pattern of the series II:
$242 + 2^2 = 246$
$246 + 3^2 = 255$
$255 + 5^2 = 280$
$280 + 7^2 = 329$
$329 + 11^2 = 450$
$450 + 13^2 = 619$
So, wrong no. is 251.
So, required value = $251 \times 2 + 1 = 503$

S50. Ans.(b)
Sol.

Distance travelled by car Y (Distance between point B and C) = $70 \times 3 = 210 \, km$
Distance travelled by car X (distance between point A and B) = $210 \times \frac{8}{7} = 240 \, km$
Speed of car X = $\frac{240}{4} = 60 \, kmph$
Required time = $\frac{210+240}{60} = \frac{450}{60}$
= $7.5 \, hours$

S51. Ans.(d)
Sol.

Let total quantity of mixture be 25y
Quantity of milk = 20y
Quantity of water = 5y
20% mixture taken out
So, quantity of milk after 20% mixture taken out = 16y
Quantity of water after 20% mixture taken out = 4y
Let quantity of milk and water added be 'x'

ATQ.

$(16y + x) - (4y + x) = 72$

$16y + x - 4y - x = 72$

$12y = 72$

$y = 6$

Initial amount of mixture = $6 \times 25 = 150$ *liter*

Or

Let amount of milk and water in the mixture be 4a and a respectively.

ATQ

$\left(4a - \frac{4a}{5} + a\right) - \left(a - \frac{a}{5} + a\right) = 72$

$\frac{21a}{5} - \frac{9a}{5} = 72$

$a = 30$

So, initial amount of mixture = $5a = 150$ *liter*

S52. Ans.(d)

Sol.

Points of car P = $50 \times 5 - 20 \times 3 = 190$

Points of car Q = $50 \times 7 - 20 \times 5 = 250$

Points of car R = $50 \times 6 - 20 \times 4 = 220$

Point of car S = $50 \times 8 - 20 \times 6 = 280$

So, max point earned by car S.

S53. Ans.(e)

Sol.

Points earned by car S = $50 \times 8 - 20 \times 6 = 280$

Let no. of drifts made by car P be N.

ATQ

Points earned by car P = $50 \times N - 20 \times 3 = 280 + 10$

$50N = 350$

$N = 7$

S54. Ans.(a)

Sol.

Let number of crashes suffered by car T be N.

ATQ

$50 \times 6 - 20 \times N = 0$

$N = 15$

S55. Ans.(d)

Sol.

Speed of car S = $\frac{3000}{100} = 30$ m/s

Speed of car Q = $\frac{3000}{120} = 25$ m/s

So, required percentage = $\frac{30-25}{25} \times 100$

$= 20\%$

S56. Ans.(d)
Sol.

Original speed of the car R = $\frac{3000}{150}$ = 20 m/s

New speed = $\frac{2 \times 3000}{\frac{5}{3} \times 150}$ = 24 m/s

S57. Ans.(c)
Sol.

Number of students in college Q = $\frac{x}{100} \times 2500 = 25x$

Number of boys in college Q = $\frac{20}{100} \times 1200 = 240$

Number of girls in college Q = $25x - 240 = 10$

$x = 10$

Total number of students in all the colleges together

$= 20\% + 10\% + y\% + 25\% = 100\%$

$y\% = 45$

Number of students in college P = $\frac{20}{100} \times 2500 = 500$

Number of boys in college P = $\frac{a}{100} \times 1200 = 12a$

Difference between no. of boys and girls in college P = $12a - (500 - 12a) = 100$

$24a = 600$

$a = 25$

Total number of boys in all the given colleges together = $25\% + 20\% + 30\% + b\% = 100\%$

$b\% = 100\% - 75\%$

$b\% = 25$

Number of boys in college P = $\frac{25}{100} \times 1200 = 300$

Number of girls in college P = $500 - 300 = 200$

Similarly,

College	Total Students	No. of Boys	No. of Girls
P	500	300	200
Q	250	240	10
R	1125	360	765
S	625	300	325

No. of boys who scored more than 90% = $\frac{10}{100} \times 300 = 30$

So, maximum number of boys who scored less than 90% = $300 - 30 = 270$

S58. Ans.(a)
Sol.

Number of students in college Q = $\frac{x}{100} \times 2500 = 25x$

Number of boys in college Q = $\frac{20}{100} \times 1200 = 240$

Number of girls in college Q = $25x - 240 = 10$

$x = 10$

Total number of students in all the colleges together
= 20% + 10% + y% + 25% = 100%
y% = 45

Number of students in college P = $\frac{20}{100}$ × 2500 = 500

Number of boys in college P = $\frac{a}{100}$ × 1200 = 12a

Difference between no. of boys and girls in college P = 12a − (500 − 12a) = 100
24a = 600
a = 25

Total number of boys in all the given colleges together = 25% + 20% + 30% + b% = 100%
b% = 100% − 75%
b% = 25

Number of boys in college P = $\frac{25}{100}$ × 1200 = 300

Number of girls in college P = 500 − 300 = 200

Similarly,

College	Total Students	No. of Boys	No. of Girls
P	500	300	200
Q	250	240	10
R	1125	360	765
S	625	300	325

Required percentage = $\frac{300}{500}$ × 100

= 60%

S59. Ans.(d)
Sol.

Number of students in college Q = $\frac{x}{100}$ × 2500 = 25x

Number of boys in college Q = $\frac{20}{100}$ × 1200 = 240

Number of girls in college Q = 25x − 240 = 10
x = 10

Total number of students in all the colleges together
= 20% + 10% + y% + 25% = 100%
y% = 45

Number of students in college P = $\frac{20}{100}$ × 2500 = 500

Number of boys in college P = $\frac{a}{100}$ × 1200 = 12a

Difference between no. of boys and girls in college P = 12a − (500 − 12a) = 100
24a = 600
a = 25

Total number of boys in all the given colleges together = 25% + 20% + 30% + b% = 100%
b% = 100% − 75%
b% = 25

Number of boys in college P = $\frac{25}{100}$ × 1200 = 300

Number of girls in college P = 500 − 300 = 200

Similarly,

College	Total Students	No. of Boys	No. of Girls
P	500	300	200
Q	250	240	10
R	1125	360	765
S	625	300	325

Required difference $= (300 + 360) - (10 + 325)$
$= 660 - 335$
$= 325$

S60. Ans.(b)
Sol.

Number of students in college Q $= \frac{x}{100} \times 2500 = 25x$

Number of boys in college Q $= \frac{20}{100} \times 1200 = 240$

Number of girls in college Q $= 25x - 240 = 10$

$x = 10$

Total number of students in all the colleges together

$= 20\% + 10\% + y\% + 25\% = 100\%$

$y\% = 45$

Number of students in college P $= \frac{20}{100} \times 2500 = 500$

Number of boys in college P $= \frac{a}{100} \times 1200 = 12a$

Difference between no. of boys and girls in college P $= 12a - (500 - 12a) = 100$

$24a = 600$

$a = 25$

Total number of boys in all the given colleges together $= 25\% + 20\% + 30\% + b\% = 100\%$

$b\% = 100\% - 75\%$

$b\% = 25$

Number of boys in college P $= \frac{25}{100} \times 1200 = 300$

Number of girls in college P $= 500 - 300 = 200$

Similarly,

College	Total Students	No. of Boys	No. of Girls
P	500	300	200
Q	250	240	10
R	1125	360	765
S	625	300	325

From above table, only statement (b) is correct.

S61. Ans.(e)
Sol.

Number of students in college Q $= \frac{x}{100} \times 2500 = 25x$

Number of boys in college Q $= \frac{20}{100} \times 1200 = 240$

Number of girls in college Q $= 25x - 240 = 10$

$x = 10$

Total number of students in all the colleges together

$= 20\% + 10\% + y\% + 25\% = 100\%$

$y\% = 45$

Number of students in college P $= \frac{20}{100} \times 2500 = 500$

Number of boys in college P $= \frac{a}{100} \times 1200 = 12a$

Difference between no. of boys and girls in college P $= 12a - (500 - 12a) = 100$

$24a = 600$

$a = 25$

Total number of boys in all the given colleges together $= 25\% + 20\% + 30\% + b\% = 100\%$

$b\% = 100\% - 75\%$

$b\% = 25$

Number of boys in college P $= \frac{25}{100} \times 1200 = 300$

Number of girls in college P $= 500 - 300 = 200$

Similarly,

College	Total Students	No. of Boys	No. of Girls
P	500	300	200
Q	250	240	10
R	1125	360	765
S	625	300	325

Required ratio $= (240 + 360) : (765 + 325)$

$= 600 : 1090 = 60 : 109$

S62. Ans.(b)
Sol.

Time taken by pipe B to fill the tank alone $= 30 \times \frac{2}{3} = 20 \ hours$

Let total capacity of tank be 60 units.

So, efficiency of pipe A, pipe B and pipe C is 6, 3 and 2 units/hr respectively.

So, required volume $= \frac{6+3-2}{60} \times 38808 = 4527.6 \approx 4528 \ m^3$

S63. Ans.(c)

Sol.

When both pipes A and C were opened together, tank will always be empty. So, efficiency of pipe A and pipe C is same.

Time taken by pipe C to empty tank R alone = 18 hours

Time taken by pipe B to fill tank R alone $= \frac{18}{3} = 6 \ hours$

Let capacity of tank R be 18 units.

So, efficiency of pipe A, B and C be 1, 3 and 1 units/hr respectively.

Tank filled $= 9 \times 1 + (3 - 1) \times 3 = 15 \ units$

Remained tank $= \frac{18-15}{18} \times 5390$

$= 898.33 \approx 900 \ m^3$

S64. Ans.(a)

Sol.

Time taken by pipe B to fill tank Q $= 36 \times \frac{2}{3} = 24 \ hours$

Let capacity of tank Q $= 72 \ units$

So, efficiency of pipe A, B and C is 6, 2 and 3 units/hr respectively.

Tank filled by all the pipes in 1 hour $= (6 + 2 - 3) = 428 \ cubic \ meter$

$1 \ unit = \frac{428}{5} \ cubic \ meter$

So, total capacity of tank Q $= \frac{428}{5} \times 72 \ cubic \ meter$

So, required radius $= \sqrt{\frac{428}{5} \times 72 \times \frac{7}{22} \times \frac{1}{10}}$

$\approx 14 \ m$

S65. Ans.(d)

Sol.

Time taken by pipe B alone to fill the tank S $= 3.5 \times 4 = 14 \ hours$

Time taken by pipe C to empty the tank S alone $= \frac{14}{2} \times 5 = 35 \ hours$

Let time taken by pipe A to fill the tank S alone be T hours.

ATQ

$\frac{1}{T} + \frac{1}{14} - \frac{1}{35} = \frac{3575}{19250}$

$T = 7 \ hours$

So, required time $= 7 \times \frac{40}{100} = 2.8 \ hours$

S66. Ans.(c)

Sol.

Radius of tank P $= \sqrt{38808 \times \frac{7}{22} \times \frac{1}{28}} = 21 \ m$

Radius of tank R $= \sqrt{5390 \times \frac{7}{22} \times \frac{1}{35}} = 7 \ m$

So, required ratio $= \frac{2\pi \times 21 \times 28}{2\pi \times 7 \times (7+35)}$

$= 2 : 1$

S67. Ans.(e)
Sol.

Height of tank Z $= 35 \times \frac{120}{100} = 42\ m$

Radius of tank P $= \sqrt{38808 \times \frac{7}{22} \times \frac{1}{28}} = 21\ m$

Radius of tank Z $= 21 \times \frac{6}{5} \approx 25\ m$

Required sum $= 2 \times \frac{22}{7} \times 21 \times 28 + 2 \times \frac{22}{7} \times 25 \times 42$

$= 10296\ m^3$

S68. Ans.(b)
Sol.

Let investment of Chetna be Rs.Y.
Ratio of share of profit of Avni, Beena and Chetna =
$= P \times x : 1.2P \times 9 + 1.5P \times 3 : Y \times (12 - x)$
If Beena increase her investment after x months, then
$\frac{P \times x}{1.2P \times x + 1.5P \times (12 - x)} = \frac{10}{27}$
$27x = 12x + 180 - 15x$
$x = 6$

Value of x = 6

S69. Ans.(c)
Sol.

Let investment of Chetna be Rs.Y.
Ratio of share of profit of Avni, Beena and Chetna =
$= P \times x : 1.2P \times 9 + 1.5P \times 3 : Y \times (12 - x)$
If Beena increase her investment after x months, then
$\frac{P \times x}{1.2P \times x + 1.5P \times (12 - x)} = \frac{10}{27}$
$27x = 12x + 180 - 15x$
$x = 6$

Let profit share of Avni and Beena be 20a and 51a respectively.
So, $20a + 51a = 14200$
$a = 200$
So, required difference $= 51a - 20a = 31 \times 200$
$= Rs.\,6200$

S70. Ans.(d)
Sol.

Let investment of Chetna be Rs.Y.
Ratio of share of profit of Avni, Beena and Chetna =
$= P \times x : 1.2P \times 9 + 1.5P \times 3 : Y \times (12 - x)$
If Beena increase her investment after x months, then
$\frac{P \times x}{1.2P \times x + 1.5P \times (12 - x)} = \frac{10}{27}$
$27x = 12x + 180 - 15x$
$x = 6$

ATQ –

$1.2P \times 6 \times \frac{2.5 \times 6}{100} = 6480$

$P = 6000$

S71. Ans.(e)
Sol.

Let time taken by A to complete work alone be 24x days.

So, time taken by B to complete the work alone = 20x days

Time taken by B to complete the work alone (when B 60% more efficient than A) = 15x

So, $24x - 15x = 18$

$x = 2$

So, time taken by A and B (original efficiency) to complete the work alone is 48 and 40 days respectively.

Let total work be 240 units.

Efficiency of A and B is 5 units/day and 6 units/day respectively.

Work done in 12 days $= 12 \times (5 + 6) = 132\ units$

Fraction of work left $= \frac{240 - 132}{240} = \frac{9}{20}$

S72. Ans.(c)
Sol.

Let investment of A and B be 2a and a respectively.

Investment of C and D be 2b and b respectively.

ATQ

$(2a + a) = \frac{75}{100} \times (2b + b)$

$\frac{a}{b} = \frac{3}{4}$

Let a = 3x and b = 4x

So, investment of A, B, C and D is 6x, 3x, 8x and 4x respectively.

So, profit share of A $= \frac{6x}{21x} \times 10500$

$= Rs.\ 3000$

S73. Ans.(b)
Sol.

From A.

$6 \times 3x + 24 = N$

$18x + 24 = N$

From B.

If no chocolate were left so, N is perfectly divisible by x.

From A & B.

$6x = N$

So, $12x = -24$

$x = -2$

So, 1 & 2 together we can't find

From B & C.

So, $30 < 3x < 40$

$10 < x < \frac{40}{3}$

So, x can we 11, 12 & 13

But we get multiple value of 11, 12 & 13 between (200 – 300) range

So, from 2 & 3 we can't find

From A & C.

$18x + 24 = N$

$30 < 3x < 40$

Now, $180 < 18x < 240$

Given $200 < N < 300$

So, value of x can be between 10 – 13

But we can not find an exact value of X

So, none of the given statements can answer the question

S74. Ans.(d)

Sol.

Ratio of time for A, B and C invested respectively = 12 : 8 : 8 = 3 : 2 : 2

From A.

Let profit of A = x

So, profit of B = x + 400

And profit of C = x + 200

From B.

Let amount invested by A & B together = 2P

So, amount invested by C = 3P

From C.

Ratio of profit share of C and that of A and B together is 3 : 8.

There are two variables, so none of the given statements can answer the question

S75. Ans.(c)

Sol.

Let the required number be $(10x + y)$ where x is the ten's digit and y is the unit's digit

From A: $x^2 + y^2 = 26$

From B: $(10x + y):(x + y) = 5 : 2$

From C: $x = y - 4$

$y - x = 4$

So, either A and C together or B alone

S76. Ans.(d)

Sol.

Total shares in 2002 = $10000 \times \frac{120}{100} = 12000$

Total market value received from new shareholders = $12000 \times 75 \times \frac{30}{100} = 270,000$

S77. Ans.(c)
Sol.

Price of per share in 2005 = $110 \times \frac{100}{88} = 125$ Rs.

Price of per share in 2003 = $75 \times \frac{95}{100} = \frac{285}{4}$ Rs.

Required ratio = $(25000 \times 125) : (30000 \times \frac{285}{4})$

$$= 250 : 171$$

S78. Ans.(a)
Sol.

Total number of shares in 2006 = $25000 \times \frac{90}{100} = 22500$

Total market value in 2006 = $22500 \times 110 = 2475000$

S79. Ans.(d)
Sol.

Total shares in 2002 = $10000 \times \frac{120}{100} = 12000$

Total market value in 2002 = $12000 \times 75 = 900000$ Rs.

Price of per share in 2003 = $75 \times \frac{95}{100} = \frac{285}{4}$ Rs.

Total market value in 2003 = $\frac{285}{4} \times 30000 = 2137500$

Required percentage = $\frac{2137500 - 900000}{900000} \times 100 = 137.5\%$

S80. Ans.(b)
Sol.

Total shares in 2006 = $25000 \times \frac{90}{100} = 22500$

Total number of shares in 2004 = $\frac{22500 + 30000}{2} + 1750 = 28000$

Required average = $\frac{10000 + 12000 + 30000 + 28000 + 25000 + 22500}{6} = = 21250$

S81. Ans.(e)
Sol. The concerned sentence states that AI is changing not simply what people can do, but also how we behave, our preferences, and how we see the world and ourselves. Thus, the word "revamping" which means "to give a new and improved form" has been used in the most appropriate manner. Thus, no replacement is required. Also, the words given in the options are incoherent with reference to the context of the concerned sentence.

(a) slumping- to undergo a sudden severe or prolonged fall in price, value, or amount.

(b) tumbling- to fall suddenly, clumsily, or headlong.

(c) worsening- to make or become worse.

(d) inflaming- to provoke or intensify (strong feelings, especially anger) in someone.

S82. Ans.(c)
Sol. Here, "pressing" means requiring quick or immediate action or attention.
(a) pivotal- of crucial importance in relation to the development or success of something else.
(b) drastic- likely to have a strong or far-reaching effect; radical and extreme.
(c) trivial- of little value or importance.
(d) critical- having decisive or crucial importance in the success, failure, or existence of something.

S83. Ans.(c)
Sol. The concerned sentence states that parents are understandably hesitant to allow their children to be photographed by the media, and news organizations in many countries blur children's faces to protect them. Thus, we can infer that "reluctant" is the most appropriate word to fill in the given blank.
(a) wishing- to express a strong desire for something that probably will not happen.
(b) earnest- resulting from or showing sincere and intense conviction.
(c) reluctant- unwilling and hesitant; disinclined.
(d) craving- a powerful desire for something.
(e) esurient- hungry or greedy.

S84. Ans.(e)
Sol. Here, "ancillary" means in addition to something else, but not as important.
(a) subsidiary- less important than but related or supplementary to something.
(b) auxiliary- providing supplementary or additional help and support.
(c) adjuvant- one that enhances and modifies the activity of the main substance.
(d) accessory- aiding an activity or process in a minor way; subsidiary or supplementary.

S85. Ans.(b)
Sol. Here, "amusing" should be interchanged with "personality" and "cognitive" should be replaced with "fostering" to make the given sentence contextually correct. Thus, the correct sequence of the highlighted words will be BADC.

S86. Ans.(d)
Sol. Among the given options, only (a) and (b) are correct with reference to the context of the given question. While statement (c) is completely incoherent. Refer to the last lines of the second paragraph, "The Government used command-and-control measures to slow deforestation, but it also broadened its political base by paving its all-weather motorways providing access to Pacific markets. It also attracted new low-carbon industries to set up shop through innovative incentive systems."

S87. Ans.(b)
Sol. Here, "embrace" means an act of accepting something willingly or enthusiastically.
(a) enclasp- hold tightly in one's arms.
(b) repudiate- refuse to accept; reject.
(c) espouse- adopt or support (a cause, belief, or way of life).
(d) underpin- support, justify, or form the basis for something.
(e) stimulate- encourage or arouse interest or enthusiasm.

S88. Ans.(e)

Sol. By referring to the starting lines of the first paragraph, we can deduce that all of the given statements are correct with reference to the context of the given question. Refer to the starting lines of the first paragraph, "Tropical deforestation is one of the great challenges facing humanity. If we don't slow it down soon, the chances of avoiding disastrous climate change, species loss and the disruption of indigenous and traditional people's cultures grow slimmer."

S89. Ans.(b)

Sol. Here, "outrage" means an extremely strong reaction of anger, shock, or indignation.

(a) reconcile- restore friendly relations between.

(b) indignation- anger or annoyance provoked by what is perceived as unfair treatment.

(c) propitiate- win or regain the favor of a person by doing something that pleases them.

(d) appease- pacify or placate (someone) by acceding to their demands.

(e) conciliate- stop (someone) being angry or discontented; placate.

S90. Ans.(d)

Sol. Among the given options, only (a) and (b) are correct with reference to the context of the given question. While statement (c) is completely incoherent. Refer to the starting lines of the third paragraph, "The stage is also set to attract private financial investments into new low-carbon industries and farmer support programs as the risks associated with rampant deforestation, illegal land-use practices and labor infractions are diminished."

S91. Ans.(d)

Sol. The adjective "adequately," which means "to a satisfactory or acceptable amount," appears to have been chosen to give a redundant meaning among the highlighted terms. There will be no contextual fault in the given statement if we eliminate this term, and it will still make sense. Other words are required to construct a complete sentence.

S92. Ans.(e)

Sol. All of the highlighted words are necessary to make a coherent sentence. Thus, there is no redundant word used in the given sentence.

S93. Ans.(c)

Sol. Among the highlighted terms, the verb "concern," which means "to make someone apprehensive or worried," appears to have been added for no apparent reason, as the word "worries," which comes before it, already denotes "the state of being anxious over possible issues." As a result, if we remove this term from the statement, there will be no contextual error and it will still sound right. Other words are required to construct a complete sentence.

S94. Ans.(e)

Sol. All of the highlighted words are correct in context and are required to compose a coherent sentence. As a result, the given statement contains no superfluous words.

S95. Ans.(a)
Sol. The given sentence discusses virus transmission, economic production, and speedy health response; similarly, we can deduce that only paragraph (i) is relevant to the context of the given sentence as it also addresses economic decline and expanding healthcare services. The other paragraphs, on the other hand, are incoherent in relation to the context of the given sentence.

S96. Ans.(e)
Sol. After making an analysis of the given paragraphs, we can deduce that only paragraphs (ii) and (iii) are relevant to the context of the given sentence because they also discuss recruiting, shortlisting, selection, and dismissal, all of which are directly or indirectly related to the appointments. The other paragraph, on the other hand, is incoherent in relation to the context of the given sentence.

S97. Ans.(e)
Sol. Following a comprehensive review of the given paragraphs, we can infer that only paragraphs (ii) and (iii) are relevant to the context of the given sentence, as they also concern medical oxygen shortages, which are all specifically related to the context of the given sentence. The other paragraph, on the other hand, is incoherent in light of the context of the given sentence.

S98. Ans.(a)
Sol. The given sentence concerns the continuation of regular online classes despite the summer break; similarly, only paragraph (iii) is relevant to the context of the given sentence because it likewise covers continuing online classes despite the summer break order. The other paragraphs, on the other hand, are illogical in relation to the context of the given sentence because they cover different topics.

S99. Ans.(d)
Sol. The correct sequence of the highlighted words to form meaningful sentences would be EBCFAD. The sentences thus formed would be:
(A) The first wave of the pandemic throughout the world revealed the vulnerabilities in the global healthcare system.
(B) Hospitals have been swamped for nearly a year, and no attempts have been made to replenish medical oxygen supplies.

S100. Ans.(b)
Sol. Among the given options, "yet" is the most appropriate connector which can be used to connect both sentences to form a coherent paragraph. The sentence thus formed would be "The first wave of the pandemic throughout the world revealed the vulnerabilities in the global healthcare system, yet hospitals have been swamped for nearly a year, and no attempts have been made to replenish medical oxygen supplies."
(a) even- used to emphasize something surprising or extreme.
(b) yet- in spite of that; nevertheless.
(c) since- for the reason that; because.
(d) then- after that; next; afterward.
(e) for- specify a period of time.

S101. Ans.(a)
Sol. The correct sequence of the highlighted words to form meaningful sentences would be FBDCEA. The sentences thus formed would be:
(A) There has been a rush of headlines this week in the build-up structured by the US regarding whether India should declare a net-zero emissions target.
(B) Decarbonizing the power sector, which is India's single largest source of greenhouse gas emissions, is a critical step towards achieving net-zero emissions.

S102. Ans.(d)
Sol. Among the given options, "consequently" is the most appropriate connector which can be used to connect both sentences to form a coherent paragraph. The sentence thus formed would be "There has been a rush of headlines this week in the build-up structured by the US regarding whether India should declare a net-zero emissions target, consequently, decarbonizing the power sector, which is India's single largest source of greenhouse gas emissions, is a critical step towards achieving net-zero emissions."
(a) despite- without being affected by; in spite of.
(b) although- in spite of the fact that; even though.
(c) however- in whatever way; regardless of how.
(d) consequently- as a result.
(e) moreover- as a further matter; besides.

S103. Ans.(a)
Sol. Among the given options, only the phrase given in option (a) is correct to replace the highlighted one. The concerned sentence starts with the term "enhancing" which is a gerund and always considered a singular noun, thus, it will be followed by "is" instead of "are".

S104. Ans.(e)
Sol. The phrase highlighted in the given sentence is grammatically and contextually correct. Thus, no replacement is required.

S105. Ans.(c)
Sol. Among the given options, only the phrase given in option (c) is correct to replace the highlighted one. The highlighted phrase uses the term "rapid" which is incorrect and should be replaced with the correct form of adverb which is "rapidly".

S106. Ans.(e)
Sol. The phrase highlighted in the given sentence is grammatically and contextually correct. Thus, no replacement is required.

S107. Ans.(b)
Sol. Among the given options, only the phrase given in option (b) is correct to replace the highlighted one. Here, the adverb "too" should come first and the preposition "to" should come after to form a grammatically correct sentence.

S108. Ans.(d)

Sol. Among the given options, only sentence (d) conveys the same meaning as the given statement. While the rest of the sentences are incoherent with reference to the context of the given statement.

S109. Ans.(c)

Sol. Only sentence (c) conveys the same meaning as the given statement among the alternatives. The rest of the sentences are incoherent in view of the context of the given statement.

S110. Ans.(e)

Sol. Among the given options, only sentence (e) conveys the same meaning as the given statement. While the rest of the sentences are incoherent with reference to the context of the given statement.

S111. Ans.(b)

Sol. Only sentence (d) conveys the same meaning as the given statement among the alternatives. The rest of the sentences are incoherent in view of the context of the given statement.

S112. Ans.(c)

Sol. Among the given options, only sentence (c) conveys the same meaning as the given statement. While the rest of the sentences are incoherent with reference to the context of the given statement.

S113. Ans.(e)

Sol. None of the given sentences can be combined to form a correct statement after combination.

S114. Ans.(a)

Sol. Among the given options, only A-E and B-D can be combined together to form grammatically correct and contextually meaningful sentences. The sentences thus formed would be:
(i) India may even consider committing to submit plausible pathways and timelines to achieving net-zero emissions as part of its future pledges.
(ii) The European game has been thrown into turmoil by the decision taken by authorities to disclose a confidential plan to launch The Super League.

S115. Ans.(b)

Sol. Among the given options, only C-F can be combined together to form a grammatically correct and contextually meaningful sentence. The sentence thus formed would be, "The nation hoped that the central government would take corrective action after watching and experiencing the repercussions of a medical supply crisis."