Directions (1-5):
The machines arranges the given input in such a way that, Odd numbers are arranged in descending order in each step. After which even numbers also arranged in descending order. If 1st letter of word is vowel then it is arranged in alphabetical order in each step. In the next step, if the 1st letter of word is consonant, it is also arranged in alphabetical order.

**Input: Toy 37 rat 88 65 orange itlay van 8**

Step I: 65 Toy 37 rat 88 orange itlay van 8
Step II: 65 37 Toy rat 88 orange itlay van 8
Step III: 65 37 88 Toy rat orange itlay van 8
Step IV: 65 37 88 8 Toy rat orange itlay van
Step V: 65 37 88 8 itlay Toy rat orange van
Step VI: 65 37 88 8 itlay orange Toy rat van
Step VII: 65 37 88 8 itlay orange rat Toy van

1. Ans.(c)
2. Ans.(c)
3. Ans.(d)
4. Ans.(c)
5. Ans.(d)

**Direction (6-10)**

6. (e) Neither conclusion 1 nor 2 follow
   Explanation :
   A >= B <= C = D >= E (we can’t say relate A and C and D is greater than and equal to B)
7. (b) Only conclusion 2 follow
   Explanation :
   A < B <= C >= D = E (C>A directly follows)
8. (e) Neither conclusion 1 nor 2 follow
   Explanation :
   A = B >= C < D > E (Directly C>=A and no relation between B and E)
9. (a) Only conclusion 1 follows
   Explanation :
   M >= N = O = A > B (M>N and N= A so second conclusion doesn't follow)
10. (b) Only conclusion 2 follows
    Explanation :
    A < B = C > D = E (no relation A and E and B>=D directly follows)

**Directions (11-15):**
Directions (16-20):

<table>
<thead>
<tr>
<th>Person</th>
<th>Post</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>CEO</td>
<td>Patna</td>
</tr>
<tr>
<td>Q</td>
<td>ED</td>
<td>Bhopal</td>
</tr>
<tr>
<td>R</td>
<td>CGM</td>
<td>Mumbai</td>
</tr>
<tr>
<td>T</td>
<td>GM</td>
<td>Jaipur</td>
</tr>
<tr>
<td>V</td>
<td>DGM</td>
<td>Ranchi</td>
</tr>
<tr>
<td>S</td>
<td>MG</td>
<td>Chandigarh</td>
</tr>
<tr>
<td>U</td>
<td>AM</td>
<td>Agra</td>
</tr>
</tbody>
</table>

16. Ans. (b)
17. Ans. (d)
18. Ans. (a)
19. Ans. (d)
20. Ans. (d)

Directions (21-25):

<table>
<thead>
<tr>
<th>Place</th>
<th>Box</th>
<th>Balls</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>D</td>
<td>18</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>A</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>G</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>E</td>
<td>10</td>
</tr>
</tbody>
</table>
1  |  C  |  8

21. C  
22. B  
23. E  
24. C  
25. D  
26. E  
27. D  
28. B  

Directions (29-33):  
29. Ans.(d)  

We can’t determine since Ankita’s gender is not define in any case.  
30. Ans.(e)  

After using both statements together, the number of children between A and B can be found as the total number of children in the row is 21.  
31. Ans.(d)  

From both statements, we can’t define exact the code of ‘Laptop’.  
32. Ans.(e)  

By using I and II statement we can find the code of run.  
run ‘pud’  
33. Ans.(d)  

From I:  B ≥ C, E ≤ A  
From II:  E ≤ D > B  
From Both I and II:  A ≥ E ≤ D > B ≥ C  
Hence both are not sufficient to answer the question.  
34. B  
35. B  

Direction (36-40):  

As, we know that the length of the line PQ = 130 m and distance between 2 adjacent persons increases from left to right, in consecutive integral multiples of 12. Also, the distance between extreme ends of the line PQ and person nearest to these ends is 5 m.
\[ (5 + A + A + 12 + A + 24 + A + 36 + 5) \times m = 130 \ m \]

\[ A = 12 \ m \]

At this point we can fix the position of A, B and D as shown

Here, we can fix the position of E second to the right of B as it is given that E is not an immediate neighbor of B.

Six persons – J, K, L, M, N and O are sitting in line VW facing north and distance between 2 adjacent persons increases from left to right, in consecutive integral multiples of 5.

J sits 10 m away from point V. No one sits to left of J. Three people sit between K and M. N sits second to right of O. O and M are not immediate neighbours. Distance between person sitting 3rd from right end of line VW and the end W is 60 m. As, we know that the length of the line VW = 115 m and distance between 2 adjacent persons increases from left to right, in consecutive integral multiples of 5.

36. D
37. B
38. B
39. C
40. D
41. Ans.(e)

If repo rate goes down, loan rates will go down. In turn, the value of rupee will strengthen against other currencies. Consumer Price Index (CPI) measures changes in the price level of a market basket of consumer goods and services purchased by households; hence it should be jumped from its previous rates. Reduction in global crude prices also plays an important role for the rate cuts by RBI. So, none of the options negates the above steps taken by the RBI.

42. Ans.(d)
Change in leadership structure may be a part of the aggressive strategy. Rest of the options does not follow because the decision is expected to have been after a proper assessment of the problem.

43. Ans. (c)
Note that we are talking about Smart Cities Mission. Thus anything related to rural areas is beyond the scope. Whereas, in option (c), we focus only on urban development. Hence, option (c) will be an effect of the statement.

Directions (44-45):

44. Ans. (d)
The issue discussed in the statement is nowhere related to increase in unemployment, as the number of vacancies filled in will remain the same. Also, in a working place, it is the performance of the individual that matters and that makes him more or less wanted, and not his educational qualifications. So, neither I nor II holds strong. Besides, the needs of a job are laid down in the desired qualifications for the job. So, recruitment of more qualified people cannot augment productivity. Thus, IV also does not hold strong. However, it is the right of an individual to get the post for which he fulfills the eligibility criteria, whatever be his extra merits. Hence, argument III holds strong.

45. Ans. (e)
Clearly, illiterate people lack in power and maturity in thoughts. They may easily be misled into false convictions or lured into temptations to vote for a particular group. So, argument II holds. However, a person is literate does not mean that he is conscious of all political movements, which requires practical awareness of everyday events. Thus, I also holds strong. Besides, Constitution has extended the right to vote equally to all its citizens. Hence, III also holds.

Direction: (46-50)

46. C
47. b
48. c
49. d
50. c

51. Ans. (a)
Let total income in 2010 and 2013 is \(5x\) and \(7x\)

Saving of B in 2010 = \(\frac{20}{100} \times \frac{5x}{100} \times 6 = \frac{6x}{100}\)

Income of E in 2013 = \(\frac{4}{3} \times \frac{5x}{100} \times 21 = \frac{7x}{5}\)
Saving of E in 2013 = \( \frac{2}{5} \times \frac{7x}{5} = \frac{14x}{25} \)

Required % = \( \frac{\frac{6x}{25}}{\frac{14x}{25}} \times 100 = \frac{75}{7} \% \)

52. Ans.(c)

Total income of all firm in 2010 = \( \frac{5}{2} D \)

Total income of all firm in 2013 = \( \frac{7}{2} D \)

Average of income of firm A, B and E in 2010 = \( \frac{5D \times 37}{2 \times 100 \times 3} \)

Average of income of firm B, C and D together in 2013 = \( \frac{7D \times 18}{2 \times 100 \times 3} \)

Required ratio = 185 : 126

53. Ans.(c)

Income of firm E in 2013 = \( \frac{4}{7} \times \frac{5x}{100} \times 21 = \frac{3x}{5} \)

% income of E in 2013 = \( \frac{\frac{2x}{7x}}{100} = \frac{60}{5} \% \)

% income of firm F and G together = \( \left[ 100 - \left( 11 + 4 + 8 + 6 + \frac{60}{7} \right) \right] = \frac{437}{7} \% \)

% income of firm F in 2013 = \( \frac{\frac{437}{7}}{\frac{11}{19}} \times \frac{11}{19} \)

257/3%

54. Ans.(a)

Income of A, B and E together in 2010 = \( 37 \times \frac{5x}{100} \times 10 \)

Income of E in 2013 = \( \frac{3}{2} \times \frac{5x}{100} \times 10 \)

\( = \frac{3}{4} x \)

Income of C, D and E together in 2013 = \( \frac{7x}{100} \times 14 + \frac{3}{4} x \)

\( = \frac{173}{100} x \)

Required % = \( \frac{\frac{189}{100} - \frac{173}{100} x}{\frac{173}{100} x} \times 100 \)

\( \approx 7\% \)

55. Ans (e)

Income of firm A and B in 2013 = \( \frac{7x}{100} \times 15 \)

\( = \frac{105}{100} x \)

Income of firm A and B in 2012 = \( \frac{105}{100} \times \frac{100}{120} x \)

\( = \frac{7x}{8} \)

Income of firm A and B in 2010 = \( \frac{5x}{100} \times 16 \)
required \% = \frac{7 - 4}{7} \times 100 = 75 \% \text{ decrease}

56. Ans.(b)
Total number of professors = \frac{1}{9} \times \frac{9}{25} \times 375 = 15

57. Ans.(c)
Number of male students in MDU from city A = \frac{13}{25} \times 500 = 260

Required percentage = \frac{300 - 260}{300} \times 100
= \frac{40}{3} \\%
= 13\frac{1}{3} \%

58. Ans.(a)
20\% \text{ students from KUK in city E} = \frac{20}{100} \times 450 = 90

Total students of KUK in city C = 250 + 90 = 340

Required ratio = \frac{34}{1110}
= \frac{34}{111}

59. Ans.(e)
Total students in DU of all cities = 350 + 375 + 375 + 450 + 325 = 1875

Total students in KUK from all cities = 275 + 300 + 250 + 500 + 450 = 1775

Required percentage = \frac{375 - 355}{355} \times 100
= 5.6\%
\sim 6\% \text{ more}

60. Ans.(a)
Total students in city D and E together in 2017 who are enrolled
= 1300 \times \frac{80}{100} + 1200 \times \frac{75}{100} + 400

61. Ans.(e)
AB = 60 km
Ram’s speed = x \text{ kmph}
Shyam’s speed = y \text{ kmph}
\frac{60}{x} - \frac{60}{y} = 1 \quad \text{.........(i)}
\frac{60}{y} - \frac{60}{2x} = \frac{1}{2} \quad \text{.........(ii)}

From (i) and (ii)
x = 20 \text{ kmph}
62. Ans.(a)  
A : B = 5 : 3 = 10 : 6  
B : C = 2 : 3 = 6 : 9  
A : B : C = 10 : 6 : 9  
Ratio for 1 month = (10x \times 12) : (6x \times 12) : (9x \times 6)  
= 20 : 12 : 9  
Required difference = \frac{12-9}{41} \times 12300  
= 900 \text{ Rs.}

63. Ans.(e)  
Present age of Vartika = x years  
Present age of Abhinav = y years  
Now, according to question = \frac{x+3}{y-3} = \frac{10}{9}  
10y - 9x = 57 ..........(i)  
and \frac{x-3}{y+3} = \frac{17}{21}  
21x - 17y = 114 ..............(ii)  
\therefore \text{From eqn. (i) and (ii)}  
x = 37 and y = 39  
\therefore \text{Vatika’s present age} = 37 \text{ years}

64. Ans.(a)  
Let the no. be a, b & c, where c is the highest  
\frac{a + b + c}{3} = c - 8  
a + b + c = 9c - 72 ..........(i)  
Again, \ a + b = 16  
16 + c = 9c - 72  
c = 11

65. Ans.(c)  
Dinesh = \frac{32}{6} \text{ pages/hr}  
= \frac{16}{3} \text{ pages/hr}  
Rakesh = \frac{40}{5} = 8 \text{ pages per hour}  
Dinesh + Rakesh = \frac{16}{3} + 8  
= \frac{40}{3} \text{ pages/hr}  
\therefore \text{Required time} = \frac{110}{40} \times 3  
= 8 \frac{1}{4} \text{ hr}
= 8 hrs. 15 min.

66. Ans.(c)  
Students placed in at most 2 companies = 40% = 320  
∴ Total number of students in KITM = \( \frac{320}{40} \times 100 = 800 \)

Students placed in at least 5 companies in HCTM = 320 + 136 = 456 which is equal to 38%  
∴ Total students in HCTM = \( \frac{456}{38} \times 100 = 1200 \)
∴ Required ratio = \( \frac{800}{1200} = 2 : 3 \)

67. Ans.(d)  
Students placed in at most 4 companies = \( \frac{60}{100} \times 850 = 510 \)
Students placed in at least 3 companies = \( \frac{72}{100} \times 850 = 612 \)
∴ Required difference = 102

68. Ans.(a)  
Students placed in at least 4 companies in KITM = 38%  
GITM = 41%  
MMU = 58%  
LPU = 60%  
HCTM = 53%  
∴ Required answer is LPU

69. Ans.(c)  
Students placed in 5 companies in HCTM = \( \frac{135}{18} \times 24 = 216 \)
∴ Total students in KITM = \( \frac{216}{8} \times 100 = 2700 \)

70. Ans.(a)  
Required average = \( \frac{1}{2} (28 + 28) \times \frac{1600}{100} = 448 \)

71. Ans.(b)  
16 men and 16 women together in 12 days did the work = \( \frac{1}{16} \times 12 = \frac{3}{4} \) work

Remaining work = \( 1 - \frac{3}{4} = \frac{1}{4} \)

16 men and 16 women in two days will do the work = \( \frac{1}{16} \times 2 = \frac{1}{8} \) work

Men needed to do remaining work = \( \frac{1}{4} - \frac{1}{8} = \frac{1}{8} \) work

Required men = \( \frac{24 \times 16}{2 \times 8} = 24 \).

72. Ans.(c)  
Let C.P. cow be \( x \) and C.P. of ox be \( y \).  
∴ \( x \times \frac{120}{100} + y \times \frac{125}{100} = 800 \)
\( x \times \frac{125}{100} + y \times \frac{120}{100} = 820 \)

On solving, we get \( x = \text{Rs. 530.6} \).
73. Ans.(a)

<table>
<thead>
<tr>
<th></th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black ball</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>White ball</td>
<td>4</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

Each box is equally likely to be selected after that each ball is equally likely to be selected
∴ All the balls have same probability to be selected
∴ Required probability = \(\frac{3}{6+3+5} = \frac{3}{14}\)

74. Ans.(a)
Total number of persons seating at the circular table = 9 + 1 = 10
Considering CEO, X and Y, remaining 7 persons can be seated in 7! Ways. X and Y can sit on either side of the host CEO by 2 ways. Hence, total number of ways = 7! × 2 = 10080.

75. Ans.(c)
Let \(h\) and \(x\) be the height and base of the triangle, then we are given,

\[
\frac{1}{2}hx = 150 \\
\Rightarrow hx = 300
\]

And \(h + x + \sqrt{h^2 + x^2} = 60\)
If we take \(h = 20\) m, \(x = 15\) m
then largest side = \(\sqrt{20^2 + 15^2}\)
= \(\sqrt{625}\) = 25 m

**Direction: 76-80**

<table>
<thead>
<tr>
<th>Subject with maximum marks</th>
<th>Score of Suresh</th>
<th>Score of Rohit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology (75)</td>
<td>42</td>
<td>51</td>
</tr>
<tr>
<td>Economics (150)</td>
<td>105</td>
<td>90</td>
</tr>
<tr>
<td>Sociology (50)</td>
<td>40</td>
<td>36</td>
</tr>
<tr>
<td>Polity (75)</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>Accounts (100)</td>
<td>96</td>
<td>85</td>
</tr>
</tbody>
</table>

76. Ans.(b)
Required ratio = \(\frac{60+51}{55+96} = 111:151\)
77. Ans.(c)
Required percentage $= \frac{60-40}{60} \times 100 = 33\frac{1}{3}\%$

78. Ans.(a)
Required percentage $= \frac{85}{450} \times 100 \approx 18.8\%$

79. Ans.(a)
Required difference $= 96 - 90 = 6$ marks

80. Ans.(b)
Average of Rohit $= \frac{51+90+36+60+85}{5} = 64.4$
Average of Suresh $= \frac{42+105+40+55+94}{5} = 67.6$

Required difference $= 3.2$

81. Ans.(e)
Series is:
$+1^2, +3^2, +5^2, +7^2, +9^2$
So, 154 should be replaced by $90 + 81 = 171$

82. Ans.(b)
The series is :
$\div 2 - 2, \div 2 - 2, \ldots$
So, $240 \div 2 - 2 = 118 \neq 120$

83. Ans.(d)
Series is:
$x \times 1 + 2 \times 2 + 3 \times 3 + 4 \ldots \ldots$
So, $43 \times 4 + 5 = 177$
$\div 176$ should be replaced by 177.

84. Ans.(a)
Series is:
$x \times 1 + 1^2, x \times 2 + 2^2, x \times 3 + 3^2 \ldots$
So, $5 \times 1 + 1^2 = 6 \neq 7$

85. Ans.(c)
Series is:
$x \times 0.5 + 0.5, x \times 1 + 1, x \times 1.5 + 1.5, x \times 2 + 2 \ldots$
$= 3.5 \times 1.5 + 1.5 = 6.75$
So, 6.5 is wrong.

86. Ans. (c)

**Quantity I:**
Total number of ways $= \binom{8}{2} \times \binom{4}{2} + \binom{8}{1} \times \binom{4}{3} + \binom{4}{4} = 168 + 32 + 1 = 201$

**Quantity II:**
3-digit numbers which are divisible by 3 and ends with an even number $= (102, 108, 114, \ldots, 996)$
Required number of 3 – digit numbers $= \frac{996-102}{6} + 1 = 150$
So, **Quantity I > Quantity II.**

87. Ans. (a)
. Quantity I:
\[
\frac{5900 \times 2 \times 3}{100} = 3186
\]
\[\Rightarrow R = 18\%\]
Required interest = \[
\frac{7900 \times (18+5) \times 3}{100}
\]
= Rs.5451

Quantity II:
Equivalent rate of interest of 13% p.a. for 2 years at CI = \[
13 + 13 + \frac{13 \times 13}{100}
\]
= 27.69%
\[
X \times 27.69 = 2325.96
\]
\[\Rightarrow X = Rs.8400\]
So, Quantity I < Quantity II.
88. Ans. (c)

Quantity I:
Let CP & MP of an article be Rs.19x and Rs.30x respectively.
\[19x \times \frac{120}{100} = 912\]
\[\Rightarrow x = 40\]
Required difference = \[30x \times \frac{24}{100} - 19x \times \frac{20}{100}\]
= 7.2x – 3.8x
= Rs.136

Quantity II:
Let cost price of the article be Rs.100x
So, marked price of the article = \[100x \times \frac{170}{100}\]
= Rs.170x
And, selling price of the article = \[170x \times \frac{60}{100}\]
= Rs.102x
102x = 183.6
\[\Rightarrow x = 1.8\]
Required sum = \[170x \times \frac{40}{100} + (102x - 100x)\]
= 68x + 2x
= Rs.126
So, Quantity I > Quantity II.
89. Ans. (e)

Quantity I:
Let speed of boat in still water & speed of stream be ‘11x km/hr.’ and ‘x km/hr.’ respectively.
\[\frac{480}{11x-x} + \frac{480}{11x+x} = 11\]
\[\Rightarrow x = 8\]
So, speed of boat in still water = 11x
= 88 km/hr.
Quantity II:
Let speed of boat in still water & speed of stream be ‘a km/hr.’ and ‘b km/hr.’ respectively.
\[ \frac{350}{3.5} = (a + b) \]
⇒ \( (a + b) = 100 \)  \( \ldots(i) \)
And, \( \frac{380}{5} = (a - b) \)
⇒ \( (a - b) = 76 \)  \( \ldots(ii) \)
On solving (i) & (ii), we get:
a = 88 km/hr.
So, Quantity I = Quantity II.
90. Ans. (c)

Quantity I:
Let A’s present age be 10x years.
So, B’s present age = \( 10x \times \frac{160}{100} \)
= 16x years
And, C’s present age = \( 16x \times \frac{2}{5} \)
= 6.4x years
And, D’s present age = \( 2 \times 6.4x \)
= 12.8x years
16x – 12.8x = 8
⇒ x = 2.5
Hence, required average = \( \frac{10x+16x+6.4x+12.8x}{4} \)
= 11.3x
= 28.25 years

Quantity II:
Let present age of P be p years.
So, present age of R = \( 2 \times (p - 15) \times p \)
= \( (p - 30) \) years
Now, \( (p + 4) = 2 \times (p - 30 + 4) \)
⇒ p = 56
Hence, present age of R = \( (p - 15) \) years
= 41 years
And, present age of Q = \( (p - 30) \) years
= 26 years
So, required age = 26 years
So, Quantity I > Quantity II.
91. Ans.(b)

Number of qualified candidates in exam ‘A’ in 2002 = \( 95000 \times \frac{62.5}{100} \) = 59375
Failed candidates in Exam ‘B’ in 2001 = \( 100000 \times \frac{42.5}{100} \) = 42500
Required percentage = \( \frac{59375-42500}{42500} \times 100 \%
= \frac{16875}{425} \%
92. Ans.(c)
Qualified candidates of Exam ‘A’ in different year,
Candidates in year, 2000 = 85000 \times \frac{65}{100} = 55250

\begin{align*}
2001 & \Rightarrow 90000 \times \frac{60}{100} = 54000 \\
2002 & \Rightarrow 95000 \times \frac{62.5}{100} = 59375 \\
2003 & \Rightarrow 110000 \times \frac{57.8}{100} = 74250 \\
2004 & \Rightarrow 80000 \times \frac{55}{100} = 44000 \\
2005 & \Rightarrow 90000 \times \frac{57.5}{100} = 51750
\end{align*}

Maximum qualification is recorded in 2003

93. Ans.(e)
Total failed student in 2004 = 80000 \times \frac{45}{100} + 85000 \times \frac{27.5}{100} = 59375

Qualified students of Exam ‘A’ in 2000 = 55250

\begin{align*}
\text{Required ratio} & = \frac{59375}{55250} \\
& = 475:442
\end{align*}

94. Ans.(c)

\begin{align*}
\text{Required average} & = \frac{1}{6} \left[ 90000 \times \frac{55}{100} + 100000 \times \frac{57.8}{100} + 105000 \times \frac{60}{100} + 85000 \times \frac{50}{100} + 85000 \times \frac{72.5}{100} + 95000 \times \frac{70}{100} \right] \\
& = \frac{1}{6} \times 340625 = 56771
\end{align*}

95. Ans.(d)

\begin{align*}
\text{Sum of qualified student in exam ‘B’} & = 105000 \times \frac{60}{100} + 85000 \times \frac{50}{100} + 85000 \times \frac{72.5}{100} = 167125 \\
\text{Sum of qualified student in exam ‘A’} & = 90000 \times \frac{60}{100} + 110000 \times \frac{67.5}{100} + 90000 \times \frac{57.5}{100} = 180000 \\
\text{Required difference} & = 180000 - 167125 = 12875
\end{align*}

96. Ans.(d)

From I, \( s = \frac{t}{18} \)

II, \( s = \frac{2t}{36} \)

III \( t = 330 \) m

\therefore \quad \text{III and either I or II only}

97. Ans.(c)

From I, \( x = \frac{20z}{100} + z = \frac{120z}{100} \)

II, \( y = z - \frac{20z}{100} = \frac{80z}{100} \)

III, \( y + z = 72 \)

To find \((x - y)\), all statements are necessary

98. Ans.(b)

\( J : A = 6 : 11 \)
A) \[11x - 6x = 25\]
So we can find out ratio of their age 5 year ago.

B) \[(11x + 5) - (6x + 5) = 25\]

C) \[11x + 6x = 85\]

99. Ans. (e)

Cost price per unit is not given.

100. Ans. (e)

\[8M + 6W = \frac{W}{21}\]

\[1.5(8M + 6W) = 1.5 \times \frac{W}{21}\]

\[12M + 9W = \frac{W}{14}\]

14 days

101. Ans: E,

Exp: Option (e) is the appropriate choice here. The answer can be referred from paragraph 1 where it is given an increase in the number of people interested in western classical now (they perform twice a year to packed auditoriums), for which he credits globalisation and well-travelled millennials open to new experiences. “Social media and accessibility to recordings have also played a part. Even (Amazon Prime) shows like Mozart in the Jungle have exposed more people to the genre.

102. Ans:B,

Exp: Option (b) is the appropriate choice here. The answer can be referred from paragraph 2 where it is given “though audience engagement might be lesser than that for Indian classical music, the number of students is growing”. “You can see it by the sheer volume of pianos that are being sold in the country now. We have to import from Indonesia and Korea to meet the demand,” says Silas

103. Ans:A,

Exp: Option (a) is the appropriate choice here. The answer can be referred from paragraph 2 where it is given “while there are many schools for western classical music across India, they come with inherent flaws. Classes geared to impress examiners are creating rigid performers, with scarcely any room for innovation.”

104. Ans:D,

Exp: Option (e) is the appropriate choice here. The answer can be referred from paragraph 3 where it is given India’s oldest retailers of musical instruments, believes the need of the hour is to up-skill teachers. “We are working on ways to invest in teacher training through workshops, and are in talks with brands like Yamaha to offer such opportunities.

105. Ans:C,

Exp: Option (c) is the appropriate choice here. The answer can be referred from the second line of the 4th paragraph where it is given head of Swarnabhoomi Academy of Music, Chennai, which focuses on contemporary music, says students are recognising the problem, too, especially when they opt for higher studies abroad.

106. Ans:A,
Exp: Option (a) is the appropriate choice here. The answer can be referred from paragraph 4 where it is given “so at Swarnabhoomi, they ensure their rotating faculty — which has included renowned pianist Jordan Rudess, guitarist Rotem Sivan and drummer David Anderson — help bridge the gap”.

107. Ans:B

Exp: Option (b) is the right choice. Rattled off is an idiom which means listed or recited quickly. For example, The treasurer rattled off the list of all those who had not paid their dues.

Recognized means identify (someone or something) from having encountered them before; know again.

108. Ans:B

Exp: Own up is a phrasal verb which means to confess. This idiom uses the verb own in the sense of “acknowledge.”

Bereave means be deprived of a close relation or friend through their death.

Claim means state or assert that something is the case, typically without providing evidence or proof.

Deprecate means to regret deeply.

109. Ans: E

Exp: Let on means reveal information.

Knack means a habit of doing something.

Suppress means forcibly put an end to.

Chide means scold or rebuke.

Coax means persuade (someone) gradually or gently to do something.

110. Ans:D

Exp: The phrase ‘boils down to’ means to reduce or simplify (something) to the most basic, essential, or fundamental element(s). Or to be summarized as. For example, “Your essay is far too long. Please try to cut out any superfluous text and boil it down to about 10 pages.” Hence option (d) is the answer.

Protracts means prolong.

Aggrandize means increase the power, status, or wealth of.

Explicate means analyse and develop (an idea or principle) in detail.

111. Ans:A

Exp: Option (a) is the right choice. Debilitated means make (someone) very weak and infirm. Here burnt out by the end of the year means to become exhausted from overwork.

Invigorated means give strength or energy to.

Inured means accustomed (someone) to something, especially something unpleasant.

Pepy means lively and high-spirited.

Dapper means neat and trim in dress and appearance.

112. Ans:C

Exp: A good prediction is: “But it is believed that improvisation has its beginnings in the seventeenth and eighteenth centuries.”

Beginning with the choices for the second blank, (a) and (c) are the closest matches. (a) can be eliminated because the first word, unlikely, is the opposite of what you’re looking for. (c) seems to fit both blanks well. Hold onto it, and check the others. (b) is out because it is idiomatically incorrect to say that improvisation had its past in the
seventeenth or eighteenth centuries. (d) doesn’t work because the second word, future, is illogical. (e) also doesn’t make sense because the second word, unity, is unsupported in the sentence.

113. Ans: A
Exp: Choice (a) looks good because assumes matches the tone and content of this sentence. Choice (b) does not work because there is nothing in the sentence that tells you how long this has been going on. Choices (c) and (e) can be ruled out because they are not consistent with the author’s tone. The author thinks it is bad that the whales are hunted. The author would not agree that man retains or manifests superior need. Both of these answers imply that man has a right to hunt the whales. Choice (d), assimilates, is not logical in this context. What would the phrase man assimilate superior need mean?

114. Ans: C
Exp: Checking the second word, you are immediately drawn to (c) to (d), both of which have the meaning of “against accepted religious beliefs.” Choice (c) looks good for both blank because every field of thought conveys the idea of a wide array of subjects. Choice (d) doesn’t work for the second blank because field of hope doesn’t relate to the breadth of his explorations but more to expectations; besides, it’s not really clear what the phrase every field of hope is meant to signify. Choice (c) seems correct, but review the others. There is no reason in (a) that his interesting stances would be objectionable to a devout society, and field of science is too limited. He may have explored much more than just science. In (b) and (e), interest and study work for the first blank, but common and optimistic don’t make sense for the second. A devout society would not necessarily reject a common or optimistic stance.

115. Ans: D
Exp: Choice (d), indolence, is perfect because it means “laziness,” but look at the others to double check this answer. Choices (a) and (b), impudence and insolence, are incorrect because they both describe someone who is disrespectful. Harry just doesn’t like to work. Choice (c), eminence, means “high rank” or “high repute,” neither of which work here. It doesn’t make sense that Harry’s eminence would make him what to avoid work. Choice (e), integrity, can be eliminated. It means honesty and has nothing to do with the desire or lack of desire to work.

116. Ans: D
Exp: You can’t predict specific words, but you know you’re looking for a positive word in the first blank, and that the second has to describe how the information is used now. Looking for a positive word in the first blank leads to (b), (e), and possibly (c). Choice (c) does not look very promising because historical is neither positive nor negative, and the second word, lacks, definitely rules this answer out. It’s not logical that a treatise filled with so much information would now lack our most comprehensive information on these topics. Choice (b) looks good for both blanks. Even though important is a good selection for the first blank in (e), the second word, excludes, does not make sense. An important treatise, filled with so much information, would not exclude our most comprehensive information. Choices (a) and (d) can be eliminated—the first word in both is negative.

117. Ans: D
Exp: Refer to the first paragraph of the sentence the author has said that many people live without realizing their power and all the treasures such as bliss, love etc reside in
them, within their deepest self. Yet they remain ignorant because they are currently lost in the world of illusion.

118. Ans: B
Exp: The answer is given in the third paragraph of the passage where it is given that how increasing our time day by day of meditating will bring us to the deeper states of consciousness. “It is not easy to retrain our attention from focussing on the outside to focussing within because our habit has been to focus on the world around us.”

119. Ans: C
Exp: The correct choice is option (c). The alternative way of practicing meditation goal if not at once is by proceeding slowly and steadily and taking methodical steps. Refer to the fourth paragraph where this is explained with the help of example of a heavy load. Rest of the options are not mentioned in the passage so they are not valid and do not hold true.

120. Ans: E
Exp: Refer to the last paragraph, “As our concentration deepens, we will begin to discover our own potential. We will experience a profound transformation that enriches all areas of our life – from personal relations, to physical, mental and emotional health, to our spiritual growth as well as the attainment of our life’s goals. This transformation brings peace and joy into our lives and contributes to a peaceful, loving world.” Hence, option (e) is the correct choice.

121. Ans: A
Option (a) is the right choice. Boost your meditation is the appropriate title of the passage. This is so because the whole passage talks about how meditation can power up our soul. It corroborates how daily efforts can bring us to deeper states of consciousness. Many people learn how to meditate, but they do not practice it to the point of perfecting their ability to withdraw their attention. To do so, meditation needs to be practiced daily. So, we need to sit with a still mind.

122. Ans: B
Exp: The correct sequence of the sentence is BDCA. The phrase in the part (B) 'less than 5 years old' is an adjective giving information on the age. The first part ends with a plural noun ‘children’. It makes sense that that adjective phrase would be adding information to the noun ‘children’. So, B would follow the first part. Part D is giving information about the extent of change in the percentage terms. It is likely that this extent of change is the ‘declination’. Part B ends with the word ‘decline’. So, the part D would follow the part B.

The correct sequence of the arrangement is BDCA.

123. Ans: C
Exp: The first part ends with a verb ‘set’.
What does nations set?
‘They set up museums’ is a good answer.
So, part B would follow the first part.
The correct sequence of the sentence is BADC.

“Nations set up museums to preserve collective memory for future generations.”

124. Ans: B
Exp: The part C is more appropriate to follow the first part.
The correct sequence of the sentence is CADB.
“Democracies are more about institutions than individuals, but often the latter are commemorated for special acts they may have performed.”

125. Ans: D
Exp: Among the given parts, part B makes more sense when it follows the first part, and the part D makes more sense when it follows the part B.
The correct sequence of the sentence is BDCA.

“The museum is only a part of it and is not even the dominant part.”

126. Ans: D
Exp: Part C consists of a conjunction ‘and’, while the part A consists of a compound noun ‘Teen Murti’. It makes more sense if part A would immediately follow the part C, and part B would immediately follow the verb ‘house’ with which part A ends.
The correct sequence of the sentence is CABD.

“The NMML and Teen Murti house the library and other related units, all established after Nehru’s death.”

127. Organic farmers take the best of these methods and combine them with modern scientific knowledge.

128. C
In every term, the government remains silent when the nation expresses shock and anger at the unprecedented level of corruption which results in loss of several lakh crores to the exchequer.

129. D
Importantly, no longer is exploitation of outer space the preserve of a small group of advanced industrialised countries.

130. D
In reality, the scheme undermines the complementary nature of the rights to privacy and information, namely, to make states more transparent.

131. Ans: D
Exp: The most appropriate combination of words is “Flawed and Fallacious”. The hint can be drawn from the phrase “…stricken the power sector” which means undesirable condition in power sector, this can be attained only by defective politics. All the other words are irrelevant in context of the sentence. Hence, option (d) is the most suitable answer choice.

Virtuous means having or showing high moral standards.
Scrupulous means (of a person or process) careful, thorough, and extremely attentive to details.
Flawed means having or characterized by a fundamental weakness or imperfection.
Fallacious means based on a mistaken belief.

132. Ans: C
Exp: The most appropriate combination of words is “surpass and exceed”. Since, the sentence is describing the degree of advancement of artificial intelligence, these two words are befitting in the sentence. All the other words are irrelevant in context of the sentence. Hence, option (c) is the most suitable answer choice.

Surpass means exceed; be greater than.
Sanction means give official permission or approval for (an action).

133. Ans: B
Exp: Since, the sentence is describing about the disasters that have damaged the infrastructure the most appropriate word is “surging” that provides the absolute context to the sentence. All the other words fail to provide precise meaning to the sentence. Hence, option (b) is the most suitable answer choice.
Drizzling means rain lightly.
Surging means (of a crowd or a natural force) move suddenly and powerfully forward or upward.
Gratifying means give (someone) pleasure or satisfaction.

134. Ans: C
Exp: As the sentence is providing information on rebuilding the infrastructure, the most suitable combination of words that fill the blank is “onerous and arduous”. All the other words fail to provide precise meaning to the sentence. Hence, option (c) is the most suitable answer choice.
Onerous means (of a task or responsibility) involving a great deal of effort, trouble, or difficulty.
Arduous means involving or requiring strenuous effort; difficult and tiring.
Mischievous means causing or showing a fondness for causing trouble in a playful way.

135. Ans: A
Exp: The most appropriate combination of words is “realms and province”. All the other words fail to provide precise meaning to the sentence. Hence, option (s) is the most suitable answer choice.
Realms means a field or domain of activity or interest.
Province means an area of special knowledge, interest, or responsibility.
Vicinity means the area near or surrounding a particular place.

136. (b); The most suitable word to fill the blank (A) as well as the blanks of the given sentences is “proliferating” which means increase rapidly in number; multiply. All the other words are irrelevant. Hence, option (b) is the correct answer choice.

137. (a); To make the sentence grammatically and contextually correct, interchange the words positions at (1) and (2) i.e., estimated and launched. All the other words are correct. Hence, option (a) is the correct answer choice.

138. (e); All the parts of the italicized sentence are correct. Hence, option (e) is the most suitable answer choice.

139. (d); The given sentence consist a conjunction “while” which is used to indicate a contrast in the sentence. The latter part of the sentence “while the remaining prefer to use the internet only for product research, communication, entertainment and other purposes” indicates that the initial part of the sentence must mention a dichotomy. Thus, among the given options, option (d) becomes the most viable answer choice.
140. (a); The most suitable word to replace the highlighted incorrect word is “virtual”. “virtual” means almost or nearly as described, but not completely or according to strict definition. All the other words are either grammatically incorrect or contextually meaningless.

**Practice Set-1, Solution**

**Direction (1-5):**
S1. Ans.(d)
S2. Ans.(d)
S3. Ans.(c)
S4. Ans.(a)
S5. Ans.(c)

Direction (6-10):
S6.
(a)
I. M<S (True)
II. M≤Q (False)
S7.
(b)
I. F>T (False)
II. T>J (True)
S8.
(b)
I. V>I (False)
II. W>L (True)
S9.
(a)
I. B<V (True)
II. O<U (False)
S10.
(c)
I. J>R (False)
II. R=J (False)

Direction (11-15):

<table>
<thead>
<tr>
<th>Floor</th>
<th>People</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>S</td>
<td>India</td>
</tr>
<tr>
<td>6</td>
<td>N</td>
<td>Poland</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>Hawaii</td>
</tr>
<tr>
<td>4</td>
<td>Y</td>
<td>China</td>
</tr>
<tr>
<td>3</td>
<td>P</td>
<td>Australia</td>
</tr>
<tr>
<td>2</td>
<td>O</td>
<td>Mangolia</td>
</tr>
<tr>
<td>1</td>
<td>R</td>
<td>Malaysia</td>
</tr>
</tbody>
</table>

S11. Ans.(d)
S12. Ans.(d)
S13. Ans.(c)
S14. Ans.(c)
S15. Ans.(e)

Direction (16-20):

Students let us understand the Logic behind this Question and let’s understand how to solve it. When we see the each step, then we can find that
The machine rearranges one word and one number in each step simultaneously, words are arranged from left end and numbers are arranged from right end.
(i) In this, words are arranged in decreasing manner according to addition of place values of all the vowels present in the word. (For example: Sumeet = 21+5+5 = 31).
(ii) Numbers are arranged in decreasing order, according to difference of their digits. (For example: 27 = 7-2 = 5).
In the last operation, for all words, place values of the first and last letter of the word according to alphabetical series are added. (For example: Sumeet = 19+20 = 39). For all numbers arrangement, the square of the number are to be written. (For example: 19² = 361)

INPUT: Sumeet 68 eat 27 Rome 19 flute 26
Step 1: Sumeet 68 eat 27 Rome flute 26 19
Step 2: Sumeet flute 68 eat Rome 26 19 27
Step 3: Sumeet flute Rome 68 eat 19 27 26
Step 4: Sumeet flute Rome eat 19 27 26 68
Step 5: 39 11 23 25 361 729 676 4624

S16. Ans.(d)
S17. Ans.(a)
S18. Ans.(c)
S19. Ans.(c)
S20. Ans.(a)

Directions (21-25):

S21. Ans.(b)
S22. Ans.(c)
S23. Ans.(e)
S24. Ans.(a)
S25. Ans.(a)
S26. Ans.(c)
From Statement-I  Distance of AD = 13km

From Statement-II  Distance of AD = √208km

S27. Ans. (b); From I.

<table>
<thead>
<tr>
<th>Person</th>
<th>Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>U/X</td>
<td>6</td>
</tr>
<tr>
<td>Z</td>
<td>5</td>
</tr>
<tr>
<td>V</td>
<td>4</td>
</tr>
<tr>
<td>W</td>
<td>3</td>
</tr>
<tr>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>U/X</td>
<td>1</td>
</tr>
</tbody>
</table>

Hence I alone is not sufficient to answer the question. From II.

<table>
<thead>
<tr>
<th>Person</th>
<th>Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>6</td>
</tr>
<tr>
<td>Z/V</td>
<td>5</td>
</tr>
<tr>
<td>V/Z</td>
<td>4</td>
</tr>
<tr>
<td>W</td>
<td>3</td>
</tr>
<tr>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>U</td>
<td>1</td>
</tr>
</tbody>
</table>

Hence U lives on the lowermost floor. Thus II alone is sufficient to answer the question.

S28. Ans. (d)

We can't find that who is greatest even from both the statements taking together.

S29. Ans. (d)
Total distance between school and park can’t be determined. From I & II we can’t determine the distance.

S30. Ans.(e)

From Statement- I, we can find that ‘Sky is’ coded as ‘jo ko’.
From Statement – II, we can find that ‘Sky limit’ is coded as ‘jo ni’.
When we combine both statements we can find that ‘Sky’ is coded as ‘jo’.

Directions (31-35):
<table>
<thead>
<tr>
<th>Day</th>
<th>Friends</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>M</td>
<td>MI</td>
</tr>
<tr>
<td>Tuesday</td>
<td>D</td>
<td>Redmi</td>
</tr>
<tr>
<td>Wednesday</td>
<td>K</td>
<td>Iphone</td>
</tr>
<tr>
<td>Thursday</td>
<td>G</td>
<td>Lenovo</td>
</tr>
<tr>
<td>Friday</td>
<td>P</td>
<td>Nokia</td>
</tr>
<tr>
<td>Saturday</td>
<td>Y</td>
<td>Lava</td>
</tr>
</tbody>
</table>

S31. Ans.(e)  
S32. Ans.(d)  
S33. Ans.(c)  
S34. Ans.(d)  
S35. Ans.(b)

Directions (36-40):
<table>
<thead>
<tr>
<th>Word</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grasshopper</td>
<td>#</td>
</tr>
<tr>
<td>Onwards</td>
<td>$</td>
</tr>
<tr>
<td>Memories</td>
<td>@</td>
</tr>
<tr>
<td>Hard</td>
<td>%</td>
</tr>
<tr>
<td>Seminar</td>
<td>!</td>
</tr>
<tr>
<td>Amphasis</td>
<td>+</td>
</tr>
<tr>
<td>Green</td>
<td>?</td>
</tr>
<tr>
<td>Golden</td>
<td>=</td>
</tr>
</tbody>
</table>

S36. Ans.(d)  
S37. Ans.(c)  
S38. Ans.(e)  
S39. Ans.(e)  
S40. Ans.(a)

S41. Ans.(a)

Clearly, such projects shall be an asset and a source of income to the country later on. So, course I shall follow.
S42. Ans.(b)

I is impractical. Water is essential for life to go on. II is sensible, especially when using ground water is proving to be uneconomical.

S43. Ans.(b)

Clearly, providing the existing Medical Colleges with modern and more sophisticated infrastructure can help them produce more and much learned doctors, as they can then cater to more students and provide quality education. So, only argument II holds strong while I does not.
Hence, the answer is (b).

S44. Ans.(d)

Clearly, any reform process may be changed, diverted or reversed at any stage, if it is to benefit the nation. Also, the idea of considering a process to be non-fruitful just because it has been borrowed from western countries, seems absurd. Thus, neither I nor II holds strong.
Hence, the answer is (d).

S45. Ans.(e)

Clearly, professional jobs require quality and merit and so the students having the required talent can turn out to be better professionals than those who join the course on concession. So, argument I holds strong. However, it is these special concessions which make the professional courses affordable for certain talented students, belonging to socially and economically weaker sections, who otherwise would remain bereft of the same. So, argument II also holds strong.
Hence, the answer is (e).

Directions (46-50):

<table>
<thead>
<tr>
<th>Persons</th>
<th>States</th>
<th>Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Bihar</td>
<td>Blue</td>
</tr>
<tr>
<td>G</td>
<td>UP</td>
<td>Green</td>
</tr>
<tr>
<td>B</td>
<td>WB</td>
<td>Red</td>
</tr>
<tr>
<td>M</td>
<td>AP</td>
<td>Yellow</td>
</tr>
<tr>
<td>T</td>
<td>Delhi</td>
<td>Black</td>
</tr>
<tr>
<td>S</td>
<td>MP</td>
<td>White</td>
</tr>
</tbody>
</table>

S46.Ans.(d)
S47.Ans.(c)
S48.Ans.(a)
S49.Ans.(d)
S50.Ans.(b)

Directions (51 – 55) :
Males in company = \( \frac{86}{79+86} \times 1650 = 860 \)
Females in company = \( 1650 - 860 = 790 \)
Males in Product development department = 198
Employees in Sales and marketing department = \( \frac{18}{100} \times 1650 = 297 \)
Males in Sales and marketing department = \( \frac{5}{9} \times 297 = 165 \)
Females in Sales and marketing department = 132
Males in finance department = 77
Females in Finance department = \( \frac{5}{7} \times 77 = 55 \)
Females in Product development department = 165
Males in HR department = 77 \times 2 = 154
Males in R&D and reinvestment department = 860 - (198+165+77+154) = 266
Females in R&D and reinvestment department = \( \frac{19}{14} \times 266 = 361 \)
Females in HR department = 790 - (132 + 55 + 165 + 361) = 77
51. Ans.(e) required difference = 266 - 165 = 101
52. Ans.(b)
required percentage = \( \frac{361}{790} \times 100 \approx 45.7\% \)
53. Ans.(b)
required percentage = \( \frac{165-55}{165} \times 100 = 66\frac{2}{3}\% \)
54. Ans.(b)
no. of males in Product development, Sales and marketing and HR departments = 198+165+154 = 517
No. of females in Product development, finance and R&D and reinvestment department = 361+55+165 = 581
Difference = 64
55. Ans.(b)
females shifted from Sales and marketing Department = \( \frac{5}{12} \times 132 = 55 \)
Females in HR department = 77 + 55 = 132
Males in HR department = 154
Required ratio = \( \frac{154}{132} = 1.17 \)
56. Ans.(a)

Let the length of passenger train is \( P \), speed \( 2v \) and length of goods train is \( G \), speed \( v \)

\[ \frac{G}{2v-v} = 30 \]

\[ \frac{G}{v} = 30 \]

\[ G = 30v \] ..........(i)

\[ \frac{G+P}{2v-v} = 40 \]

\[ G + P = 40v \] ..........(ii)

\[ \frac{G+P}{2v-v} = \frac{G}{30} \]

\[ G + P = \frac{4}{3} G \]
57. Ans.(b)
\[ \frac{v_0}{v+x} + \frac{v}{v+x} = 10 \quad \text{(i)} \]
\[ \frac{v_0}{v-x} + \frac{v}{v-x} = 13 \quad \text{(ii)} \]
Go through option checking
\[ v = 8 \text{ km/h} \]
\[ h = 3 \text{ km/h} \]
58. Ans.(a)
Let the number of students appeared in A is 100

<table>
<thead>
<tr>
<th>Appeared</th>
<th>Passed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100</td>
</tr>
<tr>
<td>B</td>
<td>115</td>
</tr>
</tbody>
</table>

Required = \[ \frac{92}{115} \times 100 \]
= 80% 
59. Ans.(c)

Let the volume of each vessels is 100

<table>
<thead>
<tr>
<th></th>
<th>Spirit</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vessel 1</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Vessel 2</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Vessel 3</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>Vessel 4</td>
<td>80</td>
<td>20</td>
</tr>
</tbody>
</table>

Ratio = \[ \frac{285}{115} \]
= \[ \frac{57}{23} \]
60. Ans.(a)

\[ 5305.53 = P \left( 1 + \frac{1}{100} \right) \left( 1 + \frac{2}{100} \right) \left( 1 + \frac{3}{100} \right) \]
\[ P = 5000 \text{ Rs.} \]
61. Ans.(b)

Kurla \quad Shanta Kruz \quad Worli

Let the time taken by Kareena for the journey Kurla to Shantakruz is \( t_1 \) and time taken by Shahid for the journey Worli to Shantakruz is \( t_2 \)

\[ t_1 + \frac{3}{2} t_1 = 2 \]
\[ \frac{5}{2} t_1 = 2 \]
\[ t_1 = \frac{4}{5} \text{ hr} = 48 \text{ min.} \]

Total time = \[ t_1 + \frac{3}{4} t_1 = \frac{7}{4} t_1 = \frac{7}{4} \times 48 \]
= 84 min.
62. Ans. (b)

A speaks truth probability = \( \frac{60}{100} = \frac{3}{5} \)
A speaks lie probability = \( 1 - \frac{3}{5} = \frac{2}{5} \)
B speaks truth probability = \( \frac{80}{100} = \frac{4}{5} \)
B speaks lie probability = \( 1 - \frac{4}{5} = \frac{1}{5} \)
Required probability = \( \frac{3}{5} \times \frac{4}{5} + \frac{2}{5} \times \frac{1}{5} \)
\[ = \frac{12}{25} + \frac{2}{25} = \frac{14}{25} \]
\[ = 0.56 \]

63. Ans. (b)

\[ \begin{array}{ccc}
3 & A & 4 \\
2 & B & 6 \\
3 & C & 4 \\
\end{array} \]

In first case time required fill the tank = \( \frac{6}{5} + \frac{6}{2} \)
\[ = 1.2 + 3 = 4.2 \text{ hour} \]
In second case the required to fill the tank = \( \frac{9}{5} + \frac{3}{2} \)
\[ = 1.8 + 1.5 \]
\[ = 3.3 \text{ hour} \]
Difference = 4.2 - 3.3 = 0.9 = 54 \text{ min.} \]

64. Ans. (c)

\[
\begin{array}{ccc}
A & B & C \\
time & 3 & 1 \\
efficiency & 3 & 2 & 6 \\
\end{array}
\]

\[ 12 \times 3 = 5(AB) + 8(BC) + 9(CA) + 5(AB) + 8(BC) + 1(CA) \]
\[ = 5 \frac{1}{9} \text{ days} \]

65. Ans. (c)

Let there is 100 ml milk and cost price is 1 rs./ml.
After 1st mixing total mixture = 100 + 10 = 110 ml.
After 2nd mixing total mixture = 110 + 11 = 121 ml.
Profit = \( \frac{21}{100} \times 100 = 21\% \)

66. Ans. (a)

If the ratio of their share is profit excluding commission = 54000 : 90000
\[ = 6 : 10 \]
\[ = 3 : 5 \]
\[ 3x + C + 5x = 3600 \]
\[ 8x + C = 3600 \]
\[ 3x + C = 1800 \]
\[ 1800 + 5x = 3600 \]
5x = 1800
x = 360
Commission = 1800 – 3 × 360
= 1800 – 1080
= 720
% = \frac{720}{360} \times 100
= 20%
67. Ans.(b)

Whole – seller
Customer
100g false weight
100 false weight
100g true weight
90 g false weight
% profit = \frac{20}{90} \times 100
= \frac{200}{9}
= 22 \frac{2}{9} %
68. Ans.(d)

Avg. × 29 = 696
Avg. = 24
New total age = 27 × 29 = 783
Number of Surgeon = 8
Physician + Nurse = 29 – 8 = 21
Let Nurse = x
(21 – x) × 1 + 8 × 6 + 3 × x = 783 – 696
21 – x + 48 + 3x = 87
69 + 2x = 87
2x = 18
x = 9
69. Ans.(a)

L = \frac{3}{2} B
\frac{3}{2} B \times B \times 150 = 14400, B = 8, L = 12
2(12 + 8) \times h \times 5 = 625, h = 3 \frac{1}{8} m
70. Ans.(b)

Total zinc = \frac{2}{3} + \frac{3}{4} = \frac{17}{12} kg
Total copper = 5 – \frac{27}{12} = \frac{41}{12} kg
Required ratio = 17 : 43
71. Ans.(b)

Let the selling price is SP
Let the cost price of Ajay is A and vijay is V
0.15SP – 0.1 A = 130
0.15SP – 0.1 × \frac{SP}{1.1} = 130
72. Ans. (b) 

\[
\frac{1.65-1}{0.65} \times SP = 130 \\
\frac{0.65}{1.65} \times SP = 130 \\
SP = 2200
\]

73. Ans. (a) 

\[5580 = \frac{15500 \times 3 \times r}{100}\]

\[r = 12\%\]

\[\therefore \text{Required C.I.} = 15500 \left[ \left(1 + \frac{12}{100}\right)^3 - 1 \right]\]

\[= 6276.384\]

74. Ans. (a) 

At the three years amount will be \[= 15000 + \frac{15000 \times 3 \times 8}{100}\]

\[= 18600\text{ Rs.}\]

Now, after three years C.I. annually

So amount \[= 18600 \left(1 + \frac{10}{100}\right)^2\]

\[= 22506\text{ Rs.}\]

75. Ans. (c) 

Let the length, breadth and height be \(l, b, h\) then,

\[
\therefore \text{radius of cone} = \frac{105}{2}\text{ m}
\]

\[
\text{Slant height of cone} = 63\text{ m}
\]

\[\Rightarrow \text{curved surface area of cone} = \pi rl\]

\[= \frac{22}{7} \times \frac{105}{2} \times 63 = 10395\text{ m}^2\]

\[
\text{radius of cylinder} = \frac{105}{2}\text{ m}
\]

\[
\text{height} = 3\text{ m (given)}
\]

\[\therefore \text{curved surface area of cylinder} = 2\pi rh\]

\[= 2 \times \frac{22}{7} \times \frac{105}{2} \times 3 = 990\text{ m}^2\]

\[
\text{Total curved area of structure} \Rightarrow \text{Curved area of cone + curved area of cylinder} = 10395 + 990
\]

\[= 11385\text{ m}^2\]

\[\therefore \text{Total area of canvas} = 11385\text{ m}^2\]

75. Ans. (c)
\[ h = 0.4(\ell + b) \]
\[ \Rightarrow \text{Area of four walls} = 2(\ell + b) \times h = 0.8(\ell + b)^2 \]
\[ \text{Req. area of paper pasting} = 0.8(\ell + b)^2 - 15 = \text{area of wall} \]
\[ \frac{260}{2} = 130 = \text{length of paper} \]
\[ \Rightarrow 130 = \frac{0.8(\ell + b)^2 - 15}{0.5} \]
\[ \Rightarrow (\ell + b) = 10 \Rightarrow h = 0.4 \times 10 = 4 \]
76. Ans. (e)

A) \( M + T + W = 38 \times 3 = 114 \)
B) \( T + W + Th = 43 \times 3 = 129 \)
C) \( T = Th = 45 \)
All the three together are sufficient
77. Ans. (c)

Let the length of rectangle is \( \ell \) and width is \( w \)
Length becomes = 0.85 \( \ell \)
Width becomes = 1.2 \( b \)
A) \( w = 16 \) cm
B) \( \ell = 25 \) cm
C) \( w \times \ell = 400 \) cm
Any two of them are required
78. Ans. (e)

We can not find because there is no information regarding strength of non-officer employees.
79. Ans. (d)

Let the marked price is \( M \) and cost price is \( C \).
A) \( 0.85 M = 1020 \)
\[ M = 1200 \]
B) \( M = \frac{25}{17} C \)
C) \( 0.9 M = \frac{22.5}{17} C \)
A and either B or C.
80. Ans. (c)

B) \( \frac{100 + 80}{v_f - v_2} = 18 \)
\[ v_f - v_2 = 10 \]
C) \( \frac{100 + 80}{v_f + v_2} = 9 \)
\[ v_f + v_2 = 20 \]
From B & C
\[ v_f = 15 \text{ m/sec} \]
\[ v_2 = 5 \text{ m/s} \]
81. Ans. (e)
The given series is based on the following pattern
8.1 + 9.2 = 17.3
17.3 + 9.2 = 26.5
26.5 + 17.3 = 43.8
43.8 + 26.5 = 70.3 ↔ 71.5
70.3 + 43.8 = 114.1
∴ 71.5 is wrong
82. Ans.(c)

So, 96 is wrong.
83. Ans.(c)

So, 48 is wrong.
84. Ans.(d)

So, 356 is wrong.
85. Ans.(d)

∴ Hence, 521 is used wrong.
86. Ans.(b)

Shoes sold in urban areas = 1,13,760 + 1,80,120 + 72,680 + 57,512 = 4,24,072
Shoes sold in rural areas = 1,65,110 + 52,140 + 55,300 = 2,72,550
\[ \therefore \text{Required difference} = 1,51,522 \]
87. Ans. (e)

Required average \[ = \frac{1}{7} \times 7,96,478 \approx 1,13,783 \]
88. Ans. (c)

Required percentage \[ = \frac{0.184 - 0.114}{0.184} \times 100 \approx 38\% \]
89. Ans. (b)

Required ratio \[ = \frac{\frac{7}{150} \times 15,80,000}{\frac{48}{100} \times 15,80,000} = \frac{700}{855} = 140 : 171 \]
90. Ans. (e)

Average number of shoes \[ = \frac{1}{6} \left( \frac{90}{100} \times 15,80,000 \right) = 2,37,000 \]
\[ \therefore \text{Required difference} = 3,63,400 - 2,37,000 = 1,26,400 \]
91. Ans. (b)

No. of students from DPS who like maths \[ = \frac{50}{100} \times \frac{32}{100} \times 5800 \]
No. of students who like Maths \[ = \frac{28}{100} \times 5800 \]
\[ \therefore \text{Required percentage} = \frac{50 \times 32}{28 \times 100} \approx 57\% \]
92. Ans. (d)

Number of students having English as favorite subject \[ = \frac{15}{100} \times 5800 = 870 \]
93. Ans. (b)

Total students who like Physics \[ = \frac{20}{100} \times 5800 = 1160 \]
Total students from KV who like Physics \[ = \frac{1}{2} \times \frac{21}{100} \times 5800 = 609 \]
\[ \therefore \text{Required number of students} = 1160 - 609 = 551 \]
94. Ans. (e)

Number of students from DAV who like other subjects \[ = \frac{68}{100} \times \frac{25}{100} \times 5800 = 986 \]
95. Ans. (a)
Required number of students \( \frac{23}{100} \times 5800 = 1334 \)
96. Ans.(b)

\[ x = 180 - (90 + 30) = 90 - 30 = 60^\circ \]

\[ y = 180 - (60 + 40) \quad \text{(angles subtended by same arc in the same segment are equal)} \]
\[ = 80^\circ \]
\[ \therefore \text{Quantity I} < \text{Quantity II} \]

97. Ans.(a)

Quantity I = \( \frac{100}{120} \times 120 \times 5 \)
\[ = 100 \times 5 = 500 \text{km} \]
Quantity II \[ \rightarrow \frac{d}{15+3} + \frac{d}{15-3} = 25 \]
\[ \frac{d}{18} + \frac{d}{12} = 25 \]
\[ \frac{5d}{36} = 25 \]
\[ d = 180 \text{ km} \]
\[ \therefore \text{Quantity I} > \text{Quantity II} \]

98. Ans.(b)

Quantity I = \( \frac{125}{100} \times (225 - 75) \)
\[ = \frac{125}{100} \times 150 = 187.5 \]
Quantity II = \( \frac{13}{100} \times \frac{125}{100} \times 1200 \)
\[ = 195 \]
\[ \therefore \text{Quantity I} < \text{Quantity II} \]

99. Ans.(a)

\[ x = \frac{-7}{9} \quad \frac{-8}{11} \quad \frac{11}{12} \quad \frac{11}{12} \]
\[ y = \frac{-11}{12} \quad \frac{-11}{12} \]
Hence, \( x > y \)

100. Ans.(d)

\[ x = 4, \frac{-8}{3} \]
\[ y = 4.5, 4 \]
\[ \therefore x \leq y \]

101. Ans.(d)
This paragraph clearly states that the New Deal expanded the role of the central government in regulating the economy and creating social assistance programs. Choices (b) and (c) are incorrect and choice (a) requires an opinion.

102. Ans. (c)

According to the paragraph 3, deep, underlying fissures that already existed in economy led to the Great Depression.

103. Ans. (a)

The passage is primarily an account that describes the causative factors (for example, tariff and war-debt policies, disproportionate wealth, and the accumulation of debt) that led to the Depression and its effects (for example, business failures, bank closings, homelessness, federal relief programs).

104. Ans. (c)

paragraph 2 states that shantytowns were called Hoovervilles because citizens blamed their crisis on the Hoover administration’s refusal to offer assistance.

105. Ans. (b)

although policies can refer to regulations or laws (choice c) or guiding principles or theories (Choice a), in this context, policies refers to the courses of action that are taken, from which a government or business intends to influence decisions or actions. (Choice b) is the only answer that implies action.

106. Ans. (d)

The passage describes the decade as one in which spending dominated over prudent measures like saving (paragraph 3). The wild stock market speculation, also described in that paragraph, is another example of extravagance.

107. Ans. (b)

The analogy depicts the stock market crash of 1929 as a weakening agent to the economy (the way a stressful event may weaken the body’s resistance to illness).

108. Ans. (a)

Devastating - highly destructive or damaging. Lethal - very harmful or destructive.

109. Ans. (b)

Roaring - (of a period of time) characterized by prosperity, optimism, and excitement. Thriving - prosperous and growing; flourishing.

110. Ans. (d)

Spiraled - show a continuous and dramatic increase. Plunge - suffer a rapid decrease in value.

111. Ans. (c)

Refer the third sentence of the first paragraph

112. Ans. (d)
Refer the last of the first paragraph and beginning of the second paragraph
113. Ans.(d)

Refer the last sentence of the fifth paragraph
S114. Ans.(c)

The sixth paragraph talks about the process but the second sentence of the seventh paragraph gives the ideal method.
115. Ans.(d)

Refer the second-last sentence of the passage
116. Ans.(a)

**Resolve**- settle or find a solution to (a problem or contentious matter).
117. Ans.(b)

**Competitive** - relating to or characterized by competition. **Shrinking** - become or make smaller in size or amount.
118. Ans.(d)

**Impossible**- not able to occur, exist, or be done. **Resistance** - the refusal to accept or comply with something.
119. Ans.(c)

**Sector** - an area or portion that is distinct from others.
120. Ans.(e)

**Closure** - an act or process of closing something, especially an institution, thoroughfare, or frontier, or of being closed.
121. Ans.(e)
122. Ans.(d)
123. Ans.(c)
124. Ans.(b)
125. Ans.(a)
126. Ans.(b)

Replace 'for' by 'of'.
127. Ans.(b)

Replace 'on' by 'over'.
128. Ans.(b)

Use 'for' in place of 'in'.
129. Ans.(d)

Use 'for' in place of 'since'.
130. Ans.(b)
‘comprising’ is replaced by ‘comprises’
131. Ans. (c)

Change ‘seemed’ to ‘seems’
132. Ans. (e)

No error
133. Ans.(b)

‘comprising’ is replaced by ‘comprises’
134. Ans.(a):

Replace ‘economy’ with ‘economies’.
135. Ans.(d)

Replace ‘third’ with ‘a third’.
136. Ans. (d)

only (i) and (iii) are correct
(i) Although a rung above Vijender is US-based Russian Matt Korobov, who has 26 wins in 27 fights so far, the top slot in the super middleweight category is held by American Jesse Hart, the reigning North American Boxing Organisation (NABO) champion.
(iii) A rung above Vijender is US-based Russian Matt Korobov, who has 26 wins in 27 fights so far, but the top slot in the super middleweight category is held by American Jesse Hart, the reigning North American Boxing Organisation (NABO) champion.
137. Ans. (a)

Only (i) is correct
(i) On Thursday, violent mobs went on the rampage in the Nagaland capital vandalising and setting on fire government offices and vehicles, prompting deployment of five columns of army to bring the situation under control.
138. Ans. (d)

Only (i) and (iii) are correct
(i) The successful commissioning of the Alaknanda hydropower plant was a moment of personal gratification for me, for the project had seen every possible obstacle—from floods and geological surprises to multiple litigations.
(iii) Since the project had seen every possible obstacle—from floods and geological surprises to multiple litigations, the successful commissioning of the Alaknanda hydropower plant was a moment of personal gratification for me.
139. Ans.(a)

Option (a) is the correct choice as it is perfectly congruent with the theme of the passage, while option (d) is talking about the Yojnas which makes it incorrect and (e) is talking about digitization
140. Ans.(b)
All option are relating to passage but the most suitable option is (b), there can be some confusion in option (b) and (c) but (b) is correct as author has expressed some concerns about tax payment in the last sentence of the passage and option (b) continues that concerns.

**Practice Set-2**

Directions (1-5):

<table>
<thead>
<tr>
<th>Floor</th>
<th>Person</th>
<th>Actor</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>R</td>
<td>Nicole</td>
<td>Red</td>
</tr>
<tr>
<td>8</td>
<td>Y</td>
<td>Scarlet</td>
<td>White</td>
</tr>
<tr>
<td>7</td>
<td>P</td>
<td>Brad</td>
<td>Blue</td>
</tr>
<tr>
<td>6</td>
<td>N</td>
<td>Jhonny</td>
<td>Pink</td>
</tr>
<tr>
<td>5</td>
<td>X</td>
<td>Nicolas</td>
<td>Red</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>Tom</td>
<td>Green</td>
</tr>
<tr>
<td>3</td>
<td>L</td>
<td>Angelina</td>
<td>Yellow</td>
</tr>
<tr>
<td>2</td>
<td>K</td>
<td>Kate</td>
<td>Pink</td>
</tr>
<tr>
<td>1</td>
<td>O</td>
<td>Kristein</td>
<td>Blue</td>
</tr>
</tbody>
</table>

1. Ans.(c)  
2. Ans.(e)  
3. Ans.(e)  
4. Ans.(d)  
5. Ans.(d)  
6. Ans.(d)  
7. Ans.(a)  
8. Ans.(a)  
9. Ans.(c)  
10. Ans.(a)  

Directions (11-15):

<table>
<thead>
<tr>
<th>Day</th>
<th>Employees</th>
<th>Bike</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday</td>
<td>Z</td>
<td>Ducati</td>
</tr>
<tr>
<td>Thursday</td>
<td>M</td>
<td>Honda</td>
</tr>
<tr>
<td>Friday</td>
<td>O</td>
<td>Fuoco</td>
</tr>
<tr>
<td>Saturday</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunday</td>
<td>P</td>
<td>Suzuki</td>
</tr>
<tr>
<td>Monday</td>
<td>B</td>
<td>Thunderbolt</td>
</tr>
<tr>
<td>Tuesday</td>
<td>G</td>
<td>Avenger</td>
</tr>
</tbody>
</table>

S11. Ans.(b)  
S12. Ans.(b)
S13. Ans. (c)
S14. Ans. (d)
S15. Ans. (e)

S16. Ans. (d)

S17. Ans. (e)

S18. Ans. (d)

S19. Ans. (a)

S20. Ans. (e)
Direction (21-25):

Students let us understand the Logic behind this Question and let’s understand how to solve it. When we see the each step, then we can find that

**The machine rearranges one word and one number in each step simultaneously, words are arranged from left end and numbers are arranged from right end.**

(i) In this, words are arranged in decreasing manner according to addition of place value of 1st and last letter of the word according to alphabetical series.

(ii) Numbers are arranged in decreasing order, first all prime numbers are arranged after that non-prime numbers are arranged.

In the last operation, for all words, place values of the first and last letter of the word according to alphabetical series are multiplied. (For example: small -19x12=228). For all numbers, all the digits within the number are added. (For example: 37 = 3+7=10)

**INPUT: 2 small 37 come 55 bus 33 some**

Step 1: Small 2 come 55 bus 33 some 37
Step 2: Small some come 55 bus 33 37 2
Step 3: Small some bus come 33 37 2 55
Step 4: Small some bus come 37 2 55 33
Step 5: 228 95 38 15 10 2 10 6

21.Ans.(a)  
22.Ans.(a)  
23.Ans.(c)  
24.Ans.(c)  
25.Ans.(d)

Directions (26-30):

<table>
<thead>
<tr>
<th>Floor</th>
<th>Students</th>
<th>Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>A</td>
<td>ECE</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Z</td>
<td>CSE</td>
</tr>
<tr>
<td>6</td>
<td>T</td>
<td>IT</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
<td>Civil</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>ME</td>
</tr>
</tbody>
</table>
26. Ans.(c)
27. Ans.(a)
28. Ans.(a)
29. Ans.(d)
30. Ans.(e)

**Directions (31-35):**

31. Ans.(e)

To get the code of Name we have to use both the given statements together. From Statement I we can find that Name either coded as $ or * but from Statement I and II we can clearly find the code of Name i.e. *.

32. Ans.(e)

From I, we have: S >A > R/K> R/K.
From II, we have: S>M>A
Combining the above two, we have: S>M >A > R/K> R/K.
Clearly, A is in the middle.

33. Ans.(d)

From I,

\[
\begin{array}{c}
T \\
\hline
Q \\
\hline
R \\
\hline
N \\
\end{array}
\]

From II,

\[
\begin{array}{c}
M \\
\hline
R \\
\end{array}
\]

By combining both the statements we cannot get the answer.

34. Ans.(a)

From Statement I- We can say that all are not facing the center.
From Statement II-We cannot define.

35. Ans.(d)

By combining both the statements together we cannot find the number of boys in the row.

Directions (36-40):

36. Ans.(c)
37. Ans.(c)
38. Ans.(a)
39. Ans.(e)
40. Ans.(c)
41. Ans. (d)

From the behavior and sense of passage we can clearly say that both are candidates of opponent parties and allegation may hinder their image and it may affect the polling result. Trade and Economy is not discussed in above passage.so III cannot be assumed.

Directions (42-43):

42. Ans.(d)

Only I may be the possible reason for high voltage drama as main root for all this happening is OROP and due to ignorance of Central Govt. to implement OROP make Ram Grewal to suicide. Arrest of Deputy CM is also a high voltage drama but in statement it is mentioned it is illegitimate, which is wrong so we cannot consider this point.
43. Ans. (b)

Only I and III may be the possible effect as by mass strike, people will try to make pressure on Central Govt. to implement OROP. And by giving compensation to family of victim, motive of central govt. will to make people calm.

44. Ans. (a)

The security of the investor's money is not related to the size of the bank. Besides even after consolidation, the number of investors, their amounts and hence the duties shall remain the same and so no employees will be redundant. Reducing the number of smaller banks will also not affect the mutual competition among the banks. Thus, none of the arguments holds strong.

45. Ans. (a)

The reservation of jobs in the private sector too would surely increase opportunities for weaker sections to improve their economic plight. Thus, argument I is strong enough. Also, private sector companies work on a good profit margin and they can and will have to accommodate such a policy if implemented. So, neither II nor IV holds strong. Further, just imitating other countries holds no relevance. So, argument III also does not hold.

Directions (46-50):
46. Ans. (c)
47. Ans. (a)
48. Ans. (c)
49. Ans. (b)
50. Ans. (e)

51. Ans. (e)
Let total people whose favorite food is Punjabi = \( \frac{46}{18} \times 9 = 24 \) lac
Let total people above 25 yr whose favorite food is Punjabi = \( x \)
Then, \( \frac{3}{8} x + (24 - x) \frac{2}{9} = 10 \)
\[ x = 9.6 \text{ L} \]
Required answer = 24 - 9.6 = 14.4 L

52. Ans. (d)
Total number of people below 25 years whose favorite food is Chinese = \( \frac{9.6}{8} \times 7 \)
= 3.2 \times 7
= 22.4 L
Total number of people above 25 years whose favorite food is Chinese = \( \frac{14}{5} \times 9 \)
= 2.8 \times 9
= 25.2 L
Total people whose favorite food is Indian = \( \frac{22.4 + 25.2}{20} \times 25 = 59.5 \text{ Lac} \)

53. Ans. (c)

Let total people above 25 who like French food = \( x \)
Then,
\( (X - 23000) = 11600 \)
\( X = 34600 \)
Total French people = 57600
Required difference = \( 57600 / 16 \times 13 = 46800 \)

54. Ans. (d)
Total people in the town = \( \frac{1}{25} \times 100 = 4 \) L
Required difference = \( \frac{1}{100} \times 4 = 0.16 \text{ L} \)

55. Ans. (d)
We can’t determine these values individually.
56. Ans. (c)
Price per tonne for Airfreight = \( \frac{0.07 \times 30}{0.11 \times 12} \approx 1.6 \)
Price per tonne for Ship = \( \frac{0.09 \times 30}{0.09 \times 12} \approx 2.8 \)
Price per tonne for Pipeline = \( \frac{0.49 \times 12}{0.49 \times 12} = 3.3 \)
Price per tonne for Rail = \( \frac{0.06 \times 30}{0.06 \times 12} \approx 3.3 \)
Price per tonne for Road = \( \frac{0.07 \times 30}{0.07 \times 12} \approx 0.7 \)
∴ Required answer is transportation by Road

57. Ans.(d)

Cost per tonne incurred = \( \frac{0.1 \times 30}{0.09 \times 12} \approx Rs. 2.8 \)

58. Ans.(e)

Required ratio = \( \frac{28 \times 12}{28 \times 30} = \frac{264}{360} = \frac{11}{15} \)

59. Ans.(b)

Required percentage = \( \frac{3.3 - 2.8}{2.8} \times 100 \approx 18\% \)

60. Ans.(c)

New cost per tone = \( \frac{0.65 \times 30}{0.65 \times 12} = 2.5 \) Rs
∴ Required change ≈ 3.3 – 2.5 = 0.8 Rs

61. Ans.(a)

S62. Ans.(c)

S63. Ans.(e)

The pattern is +26, -11, +26, -11, +26, -11.
∴ ? = 73 + 26 = 99

64. Ans.(e)
The pattern is $+1.5, +2.5, +3.5, +4.5 \ldots$.

65. Ans. (d)

\[
\begin{array}{cccccc}
13 & 20 & 39 & 78 & 145 & 248 \\
7 & 19 & 39 & 67 & 103 & \\
12 & 20 & 28 & 36 & \\
\end{array}
\]

66. Ans. (e)

I. $10x^2 + 35x + 6x + 21 = 0$
II. $5x(2x + 7) + 3(2x + 7) = 0$
III. $(5x + 3)(2x + 7) = 0$
\[x = -\frac{3}{5}, -\frac{7}{2}\]

67. Ans. (c)

I. $2x^2 + 4x + 5x + 10 = 0$
II. $2x(x + 2) + 5(x + 2) = 0$
\[x = -2, -\frac{5}{2}\]

68. Ans. (e)

I. $15x^2 - 20x + 9x - 12 = 0$
II. $5x(3x - 4) + 3(3x - 4) = 0$
\[x = -\frac{3}{5}, \frac{4}{3}\]

I. $20y^2 - 25y - 24y + 30 = 0$
II. $5y(4y - 5) - 6(4y - 5) = 0$
\[ y = \frac{6}{5} \times \frac{5}{4} \]

No relation can be established

69. Ans. (d)

I. \[ 2x^2 - 7x - 8x + 28 = 0 \]
   \[ x(2x - 7) - 4(2x - 7) = 0 \]
   \[ x = 4 \]

II. \[ 2y^2 - 8y - 9y + 36 = 0 \]
   \[ 2y(y - 4) - 9(y - 4) = 0 \]
   \[ y = \frac{9}{2} \]

60. Ans. (d)

I. \[ (7x)^2 + (5)^2 - 2 \times 7x \times 5 = 0 \]
   \[ (7x - 5)^2 = 0 \]
   \[ x = \frac{5}{7} \]

II. \[ 56y^2 - 40y - 42y + 30 = 0 \]
   \[ 8y(7y - 5) - 6(7y - 5) = 0 \]
   \[ y = \frac{5}{7}, \frac{6}{6} \]

71. Ans. (b)

Required value of 7th observation = \((12 - 1) \times 7 - 12 \times 6 = 5\)

72. Ans. (c)

\[ N + V = 52 \]

And \( N + V + \text{age of five children} + 12 \times 2 = 18 \times 7 \)

\[ \text{Or, age of five children} = 126 - 76 = 50 \]

\[ \therefore \text{Required average} = 10 \text{ years} \]

73. Ans. (c)

Ratio of collection from travellers = 6 : 10 : 25

\[ \therefore \text{Income from third class travellers} = \frac{25}{41} \times 12300 = \text{Rs 7500} \]

74. Ans. (a)

Let mixture quantity = \( x \) litres

Then, spirit in 8 litres of mixture = \[ \frac{18}{100} \times 8 = \frac{72}{50} l \]

New amount of spirit = \[ \frac{18}{100} \times \frac{72}{50} = \frac{9x - 72}{50} l \]
\[ \therefore \text{percentage of spirit in new mixture} = 15\% \]
\[ \frac{15}{100} \times x = \frac{9x - 72}{50} \]
\[ \text{or, } x = 48 \text{ l} \]
75. Ans.(c)

Let original price be Rs 100 per kg.
New price = Rs 90 per kg
\[ \therefore \text{New quantity to be purchased in 100 Rs} = \frac{100}{90} \text{ kg} = 1\frac{1}{9} \text{ kg} \]
\[ \therefore \text{Percentage increase in consumption} = \frac{1}{9} \times 100 = 11\frac{1}{9}\% \]
76. Ans.(c)

\[ x = 0.05x + 0.05x + 0.25 \times 0.9x + 0.20 \times 0.9x + 0.245x + 200 \]
\[ \text{or, } x = \frac{200}{0.25} = 800 \]
77. Ans.(c)

\[ 944 - P = \frac{3pr}{100} \text{ or } pr = \frac{94400 - 100P}{3} \]
and \[ 980 - P = \frac{3.75pr}{100} \text{ or } pr = \frac{98000 - 100P}{3.75} \]
on equating, \[ p = Rs 800 \]
\[ r = \frac{144 \times 103}{800 \times 3} = 6\% \]
78. Ans.(b)

Ratio of investment of Tarun and Gulshan = \[ \frac{\frac{20}{25}}{\frac{25}{25}} : \frac{1}{25} = 675 : 625 \]
or, \[ T : G = (\frac{675}{625}) : 1 = 675 : 625 \]
\[ \therefore \text{Tarun's share} = \frac{675}{1201} \times 5204 = Rs 2704 \]
And Gulshan's share = \[ 5204 - 2704 = Rs 2500 \]
79. Ans.(a)

\[ \text{Required C.P} = \frac{100}{120} \times \frac{100}{110} \times \frac{100}{130} \times 1452 = Rs 1000 \]
80. Ans.(b)

Total time taken by the man to complete journey
\[ \text{Time} = \frac{20}{20+5} + \frac{30}{20-5} = 1.2 + 2 = 3.2 \text{ hour or 3 hour 12 minute} \]
81. Ans.(b)
Required sum = \( \left( \frac{1080}{18} \times 26 - 900 \right) + \left( \frac{1080}{18} \times 29 - 1200 \right) + 600 \)
= 660 + 540 + 600 = 1800
82. Ans.(d)

Required ratio = 900 : \( \frac{1080}{18} \times 9 - 400 \) : \( \frac{1080}{18} \times 29 \)
= 900 : 140 : 1740
= 45 : 7 : 87
83. Ans.(c)

Refugees in Camp F = \( \frac{1080}{18} \times 6 \) = 360
Male in Camp E = 1200
\( \therefore \) Required difference = 840
84. Ans.(a)

Female refugees in Camp E = 540
Total refugees in Camp A = \( \frac{1080}{18} \times 12 \) = 720
Total refugees in Camp B = \( \frac{1080}{18} \times 9 \) = 540
\( \therefore \) Required answer is Camp B.
85. Ans.(b)

Female refugees in Camp A = \( \frac{1080}{18} \times 12 - 500 \) = 220
Total refugees in Camp B = \( \frac{1080}{18} \times 9 \) = 540
\( \therefore \) Required percentage = \( \frac{220}{540} \times 100 \approx 40.7\% \)
86. Ans.(e)

Let filled bottle weighs 100 kg
\( \therefore \) weight of empty bottle = 20 kg
After removing some liquid,
Weight = \( \frac{1}{2} \times 100 = 50 \) kg
\( \therefore \) Required fraction = \( \frac{(100-20)-(50-20)}{(100-20)} \)
= \( \frac{1}{2} \)
87. Ans.(c)

After four operations,
Dettol in mixture = \( \left( 1 - \frac{1}{3} \right)^4 \)
\[
\frac{16}{81} \quad \therefore \text{Required ratio} = \frac{16}{65}
\]

88. Ans. (b)

Let amount of milk be \(x\) and that of water be \(y\)

\[\because \text{C.P.} = 6.4x\]

and \(\text{S.P.} = 8 (x + y)\)

Also, \(8(x + y) = \frac{137.5}{100} \times 6.4x\)

\[\Rightarrow 8x + 8y = 8.8x\]

\[\Rightarrow 8y = 0.8x\]

\[\Rightarrow \frac{y}{x} = \frac{1}{10}\]

89. Ans. (d)

Discount in terms of article \(= \frac{1}{16} \times 100 = 6.25\%\)

\[\therefore \text{Overall discount \%} = -4 - 6.25 + \frac{4 \times 6.25}{100} = 10\%\]

Let \(\text{C.P.} = 100\)

\[\therefore \text{S.P.} = 135\]

\[\text{Required M.P.} = \frac{135}{\frac{90}{100}} = 150\]

i.e. 50\% above C.P.

90. Ans. (b)

\[
P \left(1 + \frac{10}{100}\right)^4 - P \left(1 + \frac{10}{100}\right)^2 = 482
\]

\[\Rightarrow 4(1.4641 - 1.44) = 482\]

\[\Rightarrow P = \frac{482}{0.0241} = \text{Rs.} 20,000\]

91. Ans. (c)

\[(A + B)'s \text{1 day work} = \frac{1}{10}\]

\[(B + C)'s \text{1 day work} = \frac{1}{18}\]

Let \(C\) can complete the whole work in \(x\) days.

\[\frac{5}{10} + \frac{5}{18} + \frac{10}{x} = 1\]

\[\Rightarrow \frac{90}{x} = \frac{90}{90}\]

\[\Rightarrow x = 45\text{ days.}\]

92. Ans. (c)
Let speed of train be \( x \)

\[
\frac{\ell}{x^2 - 2x + 5} = 9 \Rightarrow \ell = 9x - 5 \quad \text{(i)}
\]

and \[
\frac{\ell}{x^2 - 4x + 5} = 10 \Rightarrow 9\ell = 90x - 100 \quad \text{(ii)}
\]

From (i) and (ii), \( \ell = 50 \text{ m} \)

93. Ans.(e)

Required number of ways = \( \frac{7! \times 5!}{3! \times 2} = 50400 \)

94. Ans.(c)

\[
\pi \times 36 \times h + \frac{4}{3} \pi (3)^3 = \pi \times 36 \times H
\]

\[
\Rightarrow 4h + 4 = 4H
\]

\[
\Rightarrow H = h + 1
\]

\[
\therefore \text{height is increased by 1 cm.}
\]

95. Ans.(b)

By using formula,

\[
M = \frac{2W_W_1}{\frac{1}{2} \times 2(36h+10W)} = \frac{2M_2}{\frac{2}{3} \times 2(6M+12W)}
\]

\[
\Rightarrow M = 2W
\]

Remaining work = \( 1 - \frac{1}{3} - \frac{2}{9} = \frac{4}{9} \)

\[
\Rightarrow x = 32
\]

\[
\therefore \text{Extra women} = 32 - 24 = 8
\]

96. Ans.(c)

According to given condition

\[
(1 + \frac{2}{19}) \times \frac{15}{100} \times 3800 = \frac{15}{100} \times 4200
\]

Required ratio = \( \frac{36 \times 3800}{27 \times 4200} = 76 : 63 \)

97. Ans.(d)
Increase in students who study Math from institute B and E together in 2017
\[= 22 \times 38 \times \left(\frac{41}{209}\right)\]
\[= 164\]

Increased in students who study Science from institute D and F
\[= 27 \times 42 \times \frac{61}{189} = 366\]

Now total students in both subjects = 3800 + 4200 + 164 + 366 = 8530

98. Ans. (a)
Students who study Math from institute B = 8 \times 38 = 304
Students who study Science from institute G = 12 \times 42 = 504

Average = \[\frac{808}{2} = 404\]

Average of students who study Math from institute C, E and G = \[\frac{1634}{3}\]

Required % = \[\frac{1634}{3} - 404 \times 100\]
\[= \frac{2100}{817} \approx 26\%\]

99. Ans. (e)

Total students who study Math in 2017
\[= \left(100\% - \frac{550}{19}\%\right) \times 3800\]
\[= \frac{350}{19} \times 3800\]
\[= 1350 \times 2 = 2700\]

Total students who study science in 2017
\[= \left(100\% + \frac{400}{21}\%\right) \times 4200\]
\[= \frac{2500}{21} \times 42 = 5,000\]

Required total no. = 22 \times 27 + 34 \times 42
\[= 2022\]

100. Ans. (a)

Total students who study only Math = 200\% \times 400 = 800

Required percentage = \[\frac{800}{4200 - 400} \times 100\]
\[= \frac{400}{19}\%\]

101. Ans. (c)
Refer to the paragraph 1, “It is difficult to compare countries because various factors such as size, culture, history, geography, natural endowments, geopolitics and internal polity come into play. There are some goals which can be achieved by smaller countries; but sometimes smaller countries find it difficult to embark upon certain big technological plans even if they have the funds, because the size of the domestic market is too small”. Part (C) is incorrect; hence (c) is the correct option.

102. Ans. (b)

Refer to the paragraph 1, "There are some goals which can be achieved by smaller countries; but sometimes smaller countries find it difficult to embark upon certain big technological plans even if they have the funds, because the size of the domestic market is too small". Hence (b) is the correct option.

103. Ans. (e)

Refer to the paragraph 2, “The Chinese vision is to prepare the country for entry into the ranks of mid-level developed nations by the middle of the twenty-first century”. None of the options are correct.

104. Ans. (a)

Refer to the paragraph 2, “Documents describing the Chinese vision state that science and technology constitute premier productive forces and represent a great revolutionary power that can propel economic and social development”. Hence (a) is the correct option.

105. Ans. (d)

Refer to the paragraph 2 and 3, “It is interesting to note that the main lessons the Chinese have drawn from their past performance is their failure to promote science and technology as strategic tools for empowerment. They also point to the absence of mechanisms and motivations on science and technology. Similarly, they hold that their scientific activity to promote dependence on science scientific and technological efforts were not oriented towards economic growth”. Hence all options are correct.

106. Ans. (e)

ENDOWMENTS means a quality or ability possessed or inherited by someone. So, Gifts is the word which is similar in meaning to it.

107. Ans. (d)

ORIENTED means align or position (something) relative to the points of a compass or other specified positions. So, Leaning is the word which is similar in meaning to it.

108. Ans. (e)
CONVENTIONAL means based on or in accordance with what is generally done or believed. So, Traditional is the word which is similar in meaning to it.
109. Ans. (b)

CRUCIAL means of great importance. So, Trivial is the word which is opposite in meaning to it.
S110. Ans. (a)

PIVOTAL means of crucial importance in relation to the development or success of something else. So, Irrelevant is the word which is opposite in meaning to it.
111. Ans. (b)

The third paragraph of the passage clearly states the reason. Hence (b) is the correct option.
112. Ans. (c)

Read the sixth paragraph of the passage, “In reality, what happens is the opposite. Supermarkets are themselves the big middlemen.”
113. Ans. (e)

None of the given statements is true in the context of the passage.
114. Ans. (e)

Read the fourth paragraph of the passage. It clearly brings out the fact. Hence (e) is the correct option.
115. Ans. (d)

Read the third sentence of the third paragraph, “The argument for setting up of big retail chains is that the supermarket chains will squeeze out the middlemen thereby providing higher prices to farmers and at the same time provide large investments for the development of post-harvest infrastructure.”
116. Ans. (d)

Compounded - make up (a composite whole); constitute. Addressed - write the name and address of the intended recipient on (an envelope, letter, or parcel).
117. Ans. (c)

Interaction - a particular way in which matter, fields, and atomic and subatomic particles affect one another, e.g. through gravitation or electromagnetism. Improved - develop or increase in mental capacity by education or experience.
118. Ans. (b)

Segment - each of the parts into which something is or may be divided. Provides - make available for use; supply.
119. Ans. (c)

**Fraudulent** - obtained, done by, or involving deception, especially criminal deception. **Deceptive** - giving an appearance or impression different from the true one; misleading.

120. Ans. (b)

**Untarnished** - (of metal or metalware) not having lost its lustre. **Zenith** - the time at which something is most powerful or successful.

121. Ans. (c)

Option (c) completes the paragraph meaningfully.

122. Ans. (a)

The last sentence of the paragraph talks about the political situation between the two states during good monsoon season. So it should be followed by the sentence depicting the situation during bad monsoon season. Hence option (a) completes the paragraph correctly, while the other options talks about different issues.

123. Ans. (d)

The last sentence of the paragraph tells the reason why poor people depend still on cash transactions. So option (d) correctly explains it further. Other options are not relevant to the paragraph.

124. Ans. (b)

Option (b) suggests the final bead of the thread that starts from constant thinking of sense objects, while other options talk about other issues. Hence option (b) correctly completes the paragraph.

125. Ans. (b)

Option (b) correctly completes the paragraph in a meaningful sense, while other options do not match the meaning of the para.

126. Ans. (d)
127. Ans. (d)
128. Ans. (b)
129. Ans. (c)
130. Ans. (d)
131. Ans. (b)
‘Similar’ takes preposition ‘in’. And alike is used as, ‘We all are alike in one thing’. So, common is correct.

132. Ans.(e)

Since ‘behind’ is there, unquestioningly ‘leave’ is the correct option.

133. Ans.(d)

Option (a) is wrong since, no ‘s’ or ‘es’ is suffixed to a verb when using with ‘can’. Hence ‘transform’ is correct.

134. Ans.(b)

‘Greater than’ is used with numbers and ‘larger than’ is used with areas, etc. So, “more” is suitable.

135. Ans.(c)
136. Ans.(e)

convince is in present tense so it is wrong. One may also get confused with option (b) but ‘confident’ goes well with the meaning of the passage.

137. Ans.(a)
138. Ans.(c)

‘Comprise something’ or ‘consist of something’ mean the same.

139. Ans.(d)
140. Ans.(a)