

45. (3) Word 'VENT' is only one meaningful word with the fourth, fifth and tenth letters of the word TELEVISION.

46-50.

Day	Representative	Country
Monday	Samir	South Africa
Tuesday	Nita	Australia
Wednesday	Gift y	France
Thursday	Paul	Australia
Friday	Richa	South Africa
Saturday	Shweta	France
Sunday	Mohit	South Africa

46. (3) Nita will be travelling on Wednesday.

47. (1) Shweta is travelled on Saturday.

48. (5) None of the above

49. (4) Nita travelled to Australia on Tuesday.

50. (3) Mohit was the last one to travel.

51-54. $P \delta Q \Rightarrow P \leq Q$

$P \% Q \Rightarrow P \geq Q$

$P \odot Q \Rightarrow P = Q$

$P \$ Q \Rightarrow P > Q$

$P * Q \Rightarrow P < Q$

51. (3) **Statement** $R > J, J \geq M, M = K$

Conclusions I. $K = J$ II. $K < J$

So, Conclusions either I or II are true.

52. (5) **Statements** $D \leq R, M > R, M = F$

Conclusions I. $F > D$ II. $F > R$

So, Conclusions I and II are true.

53. (1) **Statements** $H = F, F > R, R < K$

Conclusions I. $R < H$ II. $K > F$

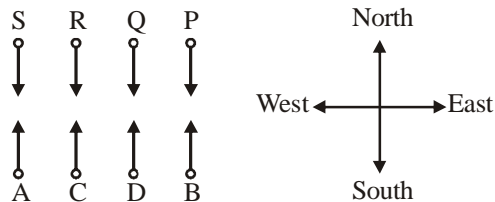
So, only Conclusion I is true.

54. (2) **Statements** $B \geq D, D < T, T \leq R$

Conclusions I. $B > T$ II. $R > D$

So, only Conclusion II is true.

55-59. Eight people seating arrangements are as follows.



55. (3) Except R, all other sitting extreme ends of the line.

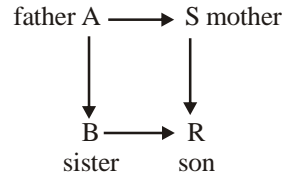
56. (1) P faces B.

57. (5) None is true

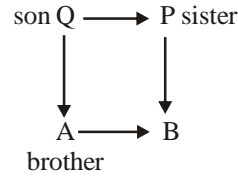
58. (4) D faces Q.

59. (2) D sits exactly between B and C and D faces Q.

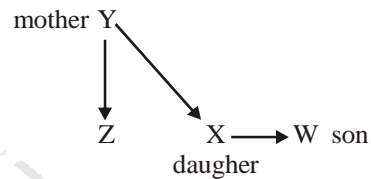
60. (3) $A B + R > S \rightarrow S$ is the wife of A



61. (3) $P + Q > A - B \rightarrow P$ is the niece of B.



62. (1) $W > X < Y * Z \rightarrow W$ is the nephew of Z.

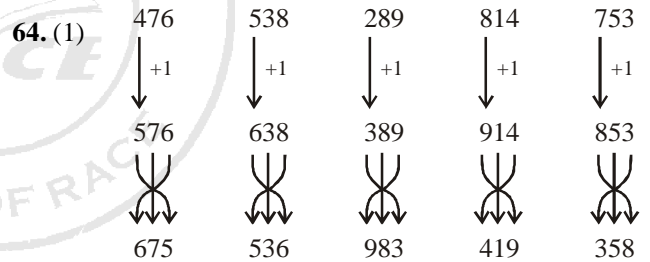


63. (1) Highest number = 841

Lowest number = 289

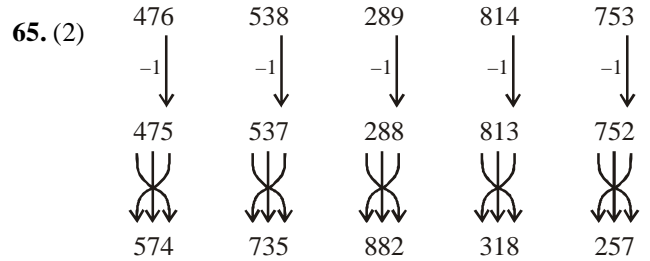
Difference = 525

Now, required second digit = 2



Now, second highest number = 836

\therefore Third digit of 2nd highest number = 6



Now, first digit of 574 = 5

\therefore Third highest number = 574

66. (1) Simple interest = $\frac{8955 \times 10 \times 7}{100} = \frac{626850}{100}$

= T 6268.50

67. (2) Let be number is x.

According to the question,

$\Rightarrow (x^2) + (73)^2 = 14933$

$$\Rightarrow x^2 + 5329 = 14933$$

$$\Rightarrow x^2 = 14933 - 5329$$

$$\Rightarrow x^2 = 9604$$

$$\Rightarrow x = 98$$

68. (3) The total age of a man and his son is = 162 = 32 yr
Total ratio of age = 15+1 = 16

$$\text{Son's age is} = \frac{32}{16} \times 1 = 2 \text{ yr}$$

69. (2) Compound interest = $\left[9000 \left(1 + \frac{12}{100} \right)^2 - 1 \right]$

$$= \left[9000 \left(\frac{112}{100} \right)^2 - 1 \right] = \left[9000 \times \left(\frac{28}{25} \times \frac{28}{25} - 1 \right) \right]$$

$$= \left[9000 \times \left(\frac{784}{625} - 1 \right) \right] = \left[\frac{9000 \times 159}{625} \right]$$

$$= \text{₹} 2289.6$$

70. (3) Simple interest = $\frac{45000 \times 10 \times 3}{100} = \frac{1350000}{100} = \text{₹} 13500$

Ms. Luthra got the total amount = 45000 + 13500 = ₹ 58500

71. (2) B's share in the amount = $\frac{9861 \times 11}{19} = \text{₹} 5709$

72. (1) $3450 \times \frac{42}{100} = \frac{144900}{100} = 1449$ got promotion.

73. (2) Bhairavi scores = $\frac{543}{875} \times 100 = 62.05\% = 62\%$ (approx.)

74. (3) $\therefore 9\% = 540 - 432 = 108$

$$\therefore 9\% = 108 \Rightarrow 1\% = \frac{108}{9}$$

$$\therefore 100\% = \frac{108}{9} \times 100 = 1200 \text{ marks}$$

75. (5) Weight of water in the mixture of 60 g water

$$= 60 \times \frac{75}{100} = 45 \text{ g}$$

Weight of water in the mixture of 45 g water = 45 + 15 = 60 g

$$\text{Percentage of water} = \frac{60 \times 100}{75} = 80\%$$

76. (5) Average of first two number = 48.5

Average of last two numbers = 53.5

Sum of five numbers = 290

Third number = x

$$\therefore 2 \times (48.5) + x + 2 \times (53.5) = 290$$

$$97 + x + 107 = 290$$

$$x = 290 - 204 = 86$$

77. (5) There 5 letters in the word SMART.

So, the required number of ways to arrange = ${}^5P_5 = 5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$.

78. (3) Suppose B got ₹ x.

$$\text{Amount to C} = x - x \times \frac{25}{100}$$

$$= \frac{100x - 25x}{100} = \frac{75x}{100} = \text{₹} \frac{3x}{4}$$

So, the amount to A = $\frac{3x}{4} \times \frac{125}{100} = \frac{15x}{16}$

$$A : B : C = \frac{15x}{16} : x : \frac{3x}{4} = 15x : 16x : 12x$$

Sum of the ratio = 15x + 16x + 12x = 43x

$$\therefore \text{Share of A} = \frac{2236 \times 15x}{43x} = \text{₹} 780$$

79. (4) Loss in weight = 65 - 45 = 20 kg

$$\text{Loss in average weight} = \frac{20}{53} = 0.38 \text{ kg}$$

Original average weight = 58 - 0.38 = 57.62 kg

80. (1)

$$\text{CI} = 20000 \left[\left(1 + \frac{15}{100} \right)^4 - 1 \right] = 20000 \left[\left(\frac{23}{20} \right)^4 - 1 \right]$$

$$= 20000 \left[\frac{23 \times 23 \times 23 \times 23 - 20 \times 20 \times 20 \times 20}{20 \times 20 \times 20 \times 20} \right]$$

$$= 20000 \left[\frac{279841 - 160000}{160000} \right] = 20000 \times \frac{119841}{160000}$$

$$= \text{₹} 14980.125$$

81. (4) Required percentage = $\frac{31}{15} \times 100 = 206.67 \approx 207$

82. (3) $A = 35000 \times \frac{18}{100} \times \frac{3}{10} = 1890$

$$B = 35000 \times \frac{22}{100} \times \frac{11}{20} = 4235$$

$$C = 35000 \times \frac{31}{100} \times \frac{3}{5} = 6510$$

$$D = 35000 \times \frac{15}{100} \times \frac{2}{5} = 2100$$

$$E = 35000 \times \frac{14}{100} \times \frac{1}{4} = 1225$$

Total number of males in all the organizations = 1890 + 4235 + 6510 + 2100 + 1225 = 15960



83. (5) Total number of males in Organizations A and C

$$= 35000 \left(\frac{18}{100} \times \frac{30}{100} + \frac{31}{100} \times \frac{40}{100} \right)$$

$$= \frac{35000}{10000} (540 + 1240) = 3.5 \times 1780 = 6230$$

84. (5) Number of females in Organization B

$$= \frac{35000 \times 22 \times 55}{100 \times 100} = 4235$$

Number of females in organization E

$$= \frac{35000 \times 14 \times 3}{100 \times 4} = 3675$$

Required difference = 4235 - 3675 = 560.

85. (3) In year 2007, Company A earn maximum amount of profit.

86. (3) Suppose in 2005, profit earned = T x

$$\therefore x \times \frac{135}{100} \times \frac{140}{100} = 7.56$$

$$\therefore x = \frac{7.56 \times 100 \times 100}{135 \times 140} = T \text{ 4 lakh}$$

87. (5) Average percent increase in profit of Company A

$$= \frac{(25 + 30 + 40 + 45 + 35 + 30)\%}{6}$$

$$= \frac{(205)\%}{6} = 34.16\% \approx 34\%$$

88. (4) The pattern of series is

$$4 \times 1 + 2 = 6$$

$$6 \times 2 + 4 = 16$$

$$16 \times 3 + 6 = 54$$

$$54 \times 4 + 8 = \boxed{224}$$

89. (3) The pattern of series is

$$5 \times 8 - 1 = 39$$

$$39 \times 7 - 1 = 272$$

$$272 \times 6 - 1 = 1631$$

$$1631 \times 5 - 1 = \boxed{8154}$$

90. (2) The pattern of series is

$$\begin{array}{ccccccc} 768 & & 192 & & 48 & & 12 & & \boxed{3} \\ | & & \uparrow & & \uparrow & & \uparrow & & \uparrow \\ \div 4 & & \div 4 & & \div 4 & & \div 4 & & \end{array}$$

91. (1) $? = 11.304 \times (6.839 - 4.331) \approx 11 \times (7 - 4) \approx 11 \times 3 \approx 33 \approx 30$

92. (2) $? = 61 \times 24.87 \div (14.059 - 6) \approx 61 \times 25 \div (14 - 6) \approx 1525 \div 8$
 ≈ 190.625
 ≈ 190

93. (5) $? = (3.805)^2 \times 2 \times 14.018 - 5.991$

$$\approx (4)^2 \times 14 - 6 = 16 \times 14 - 6 = 224 - 6$$

$$\approx 218 \approx 200$$

94. (3) $? = \sqrt{230} \div 2.017 + 58.794$

$$\approx \sqrt{225} \div 2 + 59 \approx 15 \div 2 + 59$$

$$\approx 7.5 + 59 \approx 66.5 \approx 68$$

95. (1) $? = 3451 \div 9.895 \times 3.0126$

$$\approx 3451 \div 10 \times 3 \approx 345.1 \times 3 \approx 1035.3 \approx 1050$$

96. (3) Three Consonant out of 7 and 2 vowels out of 4 can be chosen in ${}^7C_3 {}^4C_2$ ways. Since, each group contain 5 letters, which can be arranged among themselves in 5! Ways.

Hence, the required number of words
 $= ({}^7C_3 {}^4C_2) 5! = 25200$

97. (5) $? = 1 \frac{1}{4} + 1 \frac{5}{9} \times 1 \frac{5}{8} \div 6 \frac{1}{2} = \frac{5}{4} + \frac{14}{9} \times \frac{13}{8} \times \frac{1}{13}$

$$= \frac{5}{4} + \frac{7}{18} = \frac{45 + 14}{36} = \frac{59}{36} = 1 \frac{23}{36}$$

98. (5) $289 = 17^{x/5} \Rightarrow 17^5 = 17^{x/5}$

$$\frac{x}{5} = 2 \Rightarrow x = 2 \times 5 \Rightarrow x = 10$$

99. (5) $? = 0.01 \times 0.1 - 0.001 \div 10 + 0.01$

$$= 0.001 - 0.001 \times \frac{1}{10} + 0.01$$

$$= 0.001 - 0.0001 + 0.01 = 0.0109$$

100. (4) $500 \times \frac{x}{100} = 300 \times \frac{y}{100}$

$$\Rightarrow 5x = 3y$$

$$\Rightarrow y = \frac{5x}{3} \quad \dots(i)$$

$$\frac{xy \times 200}{100 \times 100} = 60$$

$$\Rightarrow xy = 3000$$

$$\Rightarrow x \times \frac{5x}{3} = 3000 \quad \left[\because y = \frac{5x}{3} \right]$$

$$\Rightarrow 5x^2 = 3000 \times 3$$

$$\Rightarrow x^2 = \frac{3000 \times 3}{5}$$

$$\Rightarrow x^2 = 1800 \Rightarrow x = \sqrt{1800} = \sqrt{2 \times 3 \times 3 \times 10 \times 10}$$

$$\therefore x = 30\sqrt{2}$$