

Grand Test – SCP-180553



$$\Rightarrow 0.8b = 1.2g$$

$$\Rightarrow \frac{b}{g} = \frac{1.2}{0.8} = \frac{3}{2} = 3:2$$

41.(1) Required total = $(10.5 + 4.5 + 8.25) \times 1000 = 23,250$

42. (3) Required average

$$= \left[\frac{15.5 + 18 + 14.5 + 10.5 + 6.5}{5} \times 1000 \right]$$

43. (1)

44. (2) Required population = $10.25 \times 1000 \times \frac{120}{100} = 12,300$

45. (3) Required ratio = $4.75 : 9.5 = 1 : 2$

46. (4) Expenditure of company P in the year

$$2001 = \frac{510}{120} \times 100 = \text{Rs}425\text{lakhs}$$

$$\therefore \text{Required less\%} = \left(\frac{490 - 425}{490} \times 100 \right) \% = 13.26\% \approx 13\% \text{ less}$$

47. (1) Expenditure of company Q in the year 2004 = $490 - 10 = \text{Rs}480 \text{ lakh}$

$$\text{Required profit \%} = \left(\frac{590 - 480}{480} \times 100 \right) \% = 22.91\% \approx 23\%$$

48. (1) Total incomes of company P and Q together in the year 2003

$$= 370 \times \frac{116}{100} + 380 \times \frac{117}{100} = 429.20 + 444.60$$

$$= \text{Rs} 873.80 \text{ lakh}$$

$$\therefore \text{Required average} = \frac{873.80}{2} = \text{Rs} 436.9 \text{ lakh}$$

49. (5) Expenditure of company P in the year 2005 = $515 - 30 = \text{Rs} 485 \text{ lakh}$

$$\therefore \text{Required \%} = \left(\frac{485}{515} \times 100 \right) \% = 94.17\% \approx 94\%$$

50. (2) Profit of company P in the year 2004 = $580 - 490 = \text{Rs} 90 \text{ lakh}$

$$\therefore \text{Required \%} = \left(\frac{550 - 90}{90} \times 100 \right) \% = 511.11\% \approx 511\%$$

51. (4) $P = \frac{8730 \times 100}{6 \times 3} = \text{Rs}48,500$

$$\therefore \text{CI} = 48500 \times \frac{106}{100} \times \frac{106}{100} - 48500$$

$$= 54494.6 - 48500 = \text{Rs} 5,994.60$$

52. (1) Let the time to closed pipe Q = x minutes

$$\text{ATQ, } \frac{18}{24} + \frac{x}{36} = 1$$

$$\Rightarrow \frac{54 + 2x}{72} = 1 \Rightarrow 54 + 2x = 72 \Rightarrow 2x = 18$$

$$\Rightarrow x = 9 \text{ minutes}$$

53. (2) Required number of ways = $\frac{7 \times 4!}{2! \times 2! \times 2!} = 15,120$

54. (2) Let MP = Rs. 100

$$\text{SP} = 100 \times \frac{80}{100} = \text{Rs}80$$

$$\text{CP} = \frac{80}{120} \times 100 = \text{Rs} \frac{200}{3}$$

ATQ,

$$20 - \left(80 - \frac{200}{3} \right) \rightarrow 65$$

$$\Rightarrow \left(20 - \frac{40}{3} \right) \rightarrow 65$$

$$\Rightarrow \frac{20}{3} \rightarrow 65$$

$$\Rightarrow 80 \rightarrow \frac{65 \times 3}{20} \times 80 = \text{Rs}780$$

55. (4) Speed in downstream = $\frac{30}{2} = 15 \text{ km/hr}$

$$\text{Speed in upstream} = \frac{30}{2} = 5 \text{ km/hr}$$

$$\therefore \text{Speed of boat in still water} = \frac{15+5}{2} = 10 \text{ km/hr}$$

56.(2) I. $12x^2 - 47x + 40 = 0$

$$\Rightarrow 12x^2 - 32x - 15x + 40 = 0$$

$$\Rightarrow 4x(3x - 8) - 5(3x - 8) = 0 \Rightarrow x = \frac{5}{4}, \frac{8}{3}$$

II. $4y^2 + 3y - 10 = 0$

$$4y^2 + 8y - 5y - 10 = 0$$

$$\Rightarrow 4y(y + 2) - 5(y + 2) = 0 \Rightarrow y = \frac{5}{4}, -2$$

Clearly, $x \geq y$

57.(3) I. $x^3 - 371 = 629$

$$\Rightarrow x^3 = 1000$$

$$\Rightarrow x = 10$$

II. $y^3 - 543 = 788$

$$\Rightarrow y^3 = 1331$$

$$\Rightarrow y = 11$$

Clearly, $x < y$

58.(5) I. $4x^2 - 20x + 21 = 0$

$$\Rightarrow 4x^2 - 14x - 6x + 21 = 0$$

$$\Rightarrow 2x(2x - 7) - 3(2x - 7) = 0 \Rightarrow x = \frac{3}{2}, \frac{7}{2}$$

II. $9y^2 - 27y + 20 = 0$

$$\Rightarrow y^2 - 12y - 15y + 20 = 0$$

$$\Rightarrow 3y(3y - 4) - 5(3y - 4) = 0 \Rightarrow y = \frac{5}{3}, \frac{4}{3}$$

59. (3) I. $x^2 - 5x + 6 = 0$

$$\Rightarrow x^2 - 3x - 2x + 6 = 0$$

$$\Rightarrow x(x - 3) - 2(x - 3) = 0 \Rightarrow x = 3, 2$$

II. $y^2 - 9y + 20 = 0$

$$\Rightarrow y^2 - 5y - 4y + 20 = 0$$

$$\Rightarrow y(y - 5) - 4(y - 5) = 0 \Rightarrow y = 5, 4$$

Clearly, $x < y$

60. (2) I. $x^2 - 1 = 0$

$$\Rightarrow x^2 = 1 \Rightarrow x = +1, -1$$

II. $y^2 + 4y + 3 = 0$

$$\Rightarrow y^2 + 3y + y + 3 = 0$$

$$\Rightarrow y(y + 3) + 1(y + 3) = 0 \Rightarrow y = -1, -3$$

Clearly, $x \geq y$

61. (2) $\frac{2914.01}{31.1} \times \frac{1.99}{3.01} \times \frac{510.01}{169.99} = ?$

$$\Rightarrow ? = \frac{2914}{31} \times \frac{2}{3} \times \frac{510}{170} = 188 \approx 186$$

62. (3) $\Rightarrow \frac{1787.44}{34.88} \times 48.79 + 1.06 = ?$

$$\Rightarrow ? = \frac{1787}{35} \times 49 + 1 = 2501.8 + 1 = 2502.8 \approx 2500$$

63. (1) $\sqrt{\sqrt{44950} + \sqrt{?}} = 16$

$$\Rightarrow \sqrt{44950} + \sqrt{?} = (16)^2$$

$$\Rightarrow 256 = 212 + \sqrt{?} \Rightarrow \sqrt{?} = 256 - 212$$

$$\Rightarrow ? = (44)^2 = 1936 \approx 1940$$

64. (4) $\sqrt{4360} - \sqrt{6806} + 46.02 = ?$

$$\Rightarrow ? = 66 - 26 + 46 = 86$$

65. (3) $42.33 + 66.83 + 59.98 - 112.01 = ?$

$$\Rightarrow ? = 57.13 \approx 57$$

66-70. In the first step, word starting with last letter according to alphabetical order kept on starting position and smallest number kept on last position and in the second position the second step follows the same rule and so on.

Input: dog on 29 cross 55 ant 98 49 unless 68

Step I: unless dog on cross 55 ant 98 49 68 29

Step II: unless on dog cross 55 ant 98 68 49 29

Step III: unless on dog cross ant 98 68 55 49 29

66. (4)

67. (5)

68. (4)

69. (5)

71-75.

Tuesday	Wednesday	Friday	Saturday
F → Goa	M → Delhi	P → Kerala	H → Mumbai
-	K → Bangalore	D → Punjab	B → Kolkata

71. (1)

72. (4)

73. (2)

74. (3)

76-80.

70. (4)

91-95.

Only I, II and IV are true

87. (5) $M > S \leq P \leq K > C = D \geq J$

I. $C \geq P \rightarrow$ False

II. $M > J \rightarrow$ False

III. $S \leq D \rightarrow$ False

IV. $P > J \rightarrow$ False

None is true

88. (3) $S \leq T = U < P \leq X = W$

I. $W > S \rightarrow$ True

II. $P \leq V \rightarrow$ False

III. $X > T \rightarrow$ True

IV. $U \leq W \rightarrow$ False

Only I and III are true

89. (1) $B \leq C = E \leq F \geq G < M = J$

I. $G \geq C \rightarrow$ False

II. $F \geq B \rightarrow$ True

III. $E < M \rightarrow$ False

IV. $J > C \rightarrow$ False

Only II is true

90. (2) $Q > N \geq M \geq K \geq B > E \geq C = F$

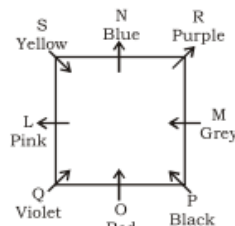
I. $N > C \rightarrow$ True

II. $M \geq B \rightarrow$ True

III. $F < Q \rightarrow$ True

IV. $C < K \rightarrow$ True

All are true



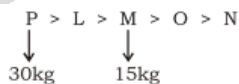
91. (4)

92. (3)

93. (5)

94. (1)

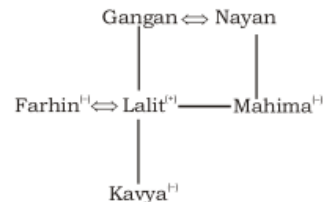
96-97.



96. (5)

97. (1)

98-100.

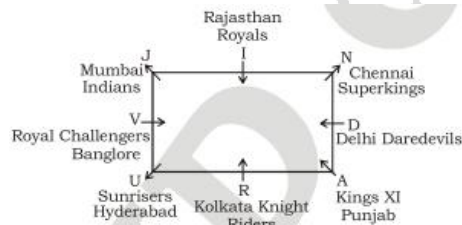


98. (2)

99. (3)

95. (5)

100. (4)



76. (5)

77. (3)

78. (5)

79. (2)

81-85.

80. (2)

Student	Subject	Game	City
P	English	Badminton	Chennai
Q	Hindi	Chess/ Carrom	Kolkata
R	Sanskrit	Kho - Kho	Mumbai
S	Science	Ludo	Delhi
T	Art	Cricket	Mumbai
U	Science	Carrom / Chess	Hyderabad
V	Sanskrit	Foot ball	Bangalore

81. (5)

82. (5)

83. (5)

84. (4)

85. (2)

86. (4)

$D \geq I > F > N = R > U$

I. $F > U \rightarrow$ True

II. $D > R \rightarrow$ True

III. $N \geq I \rightarrow$ False

IV. $U < D \rightarrow$ True