RRB PO PRE MEMORY BASED QUANT- SOLUTIONS

41. (d): x=17/2,19/4 ; y=19/4,13/3 ; $x \geq y$

42. (b); $x = 7; y = 2;\ x > y$

43. (a); $x = 2,\ \frac{11}{9}; y = 3, 4;\ x < y$

44. (c); $x = 4, \frac{-8}{3}; y = \frac{9}{2}, 4;$

45. (b); $x = 7, \frac{-2}{3}; y = \frac{-3}{2}, -1; x > y$

46. (a); Required No. $= \frac{37.5+30+25+37.5+35}{5}$
$= \frac{165}{5}$ lakhs
$= 3300000$

47. (e); Required no. $(30 + 37.5 + 42.5 + 25)$
$= 135$ lakhs
$= 13500000$

48. (b); Required Ratio $= (37.5 + 30) : (42.5 + 27.5)$
$= 27 : 28$

49. (d); Required % $= \frac{40}{25+37.5} \times 100$
$= 64\%$

50. (c); Required no. $= \left(27.5 \times \frac{150}{100}\right) + 35$
$= 76.25$ lakhs
$= 7625000$

51. (b); Ratio $= 15.9 : 4.5$
$= 53 : 15$

52. (e); Required average $= \frac{54}{5} = 10.8$ hundred

53. (a); Difference Bank A – 27
B – 12.4
C – 25.1
D – 28.6
E – 15.9
F – 10.5
∴ Required bank = Bank A

54. (e); Required % $= \frac{8.6}{22.3} \times 100 \approx 39\%$

55. (d); Required male officers $= \frac{100-26}{100} \times 3.5$
$= \frac{74}{100} \times 3.5$
$= 2.59$ hundred
$= 259$

56. (d); C.P of wrist watch = Rs. 450
List price be 'x'
Acc. to question
$450 \times \frac{120}{100} = \frac{90x}{100}$
$x = \frac{450 \times 120}{90} =$ Rs. 600

57. (c); C.P S.P
100 112
–10% 5
90 +30% 117
$5 \longrightarrow 5.75$
$100 \longrightarrow \frac{5.75}{5} \times 100$
$100 \longrightarrow 115$
C.P of article = Rs. 115
To gain 20% S.P must be = $115 \times \frac{120}{100} =$ Rs. 138

58. (d); SI $= \frac{8}{25}$P,
$\frac{SI}{P} = \frac{8}{25}$
Time $= \frac{R}{2}$, Rate = R, $8 = \frac{25 \times \frac{R}{2} \times R}{100}$
$R^2 = 64, R = 8\%$

59. (b);

Acid		Water	Total
Glass I 2	:	$3 \times 9 \times 7$	$5 \times 9 \times 7$
Glass II 3	:	$4 \times 5 \times 9$	$7 \times 5 \times 9$
Glass III 4	:	$5 \times 5 \times 7$	$9 \times 5 \times 7$

Glass I	126	189
Glass II	135	180
Glass III	140	175
	401	544
Required ratio		401 : 544

60. (c);
Sol. Total correct weight of 36 students
$= 50 \times 36 - 73 + 37 = 1800 - 36$
$= 1764$ kg
Correct average $= \frac{1764}{36} = 49$ kg

61. (b); let length of each train
= x meters
Speed of first train $= \frac{x}{4}$ m/sec.

Speed of second train = $\frac{x}{5}$ m/sec.

Relative speed = $\frac{x}{4}+\frac{x}{5}=\frac{9x}{20}$ meter

Required time = $2x \times \frac{20}{9x}$

$=\frac{40}{9}$ sec.

62. (b);

Sol. average speed = $\frac{d}{\frac{d}{3}\times\frac{1}{25}+\frac{d}{4}\times\frac{1}{30}+\frac{d}{50}\times\frac{5}{12}}$

$=\frac{1}{\frac{8+5+5}{600}}$

$=\frac{100}{3}=33\frac{1}{3}$ km/hr

63. (a); (8M + 4W)6 = T.....(i)

M = 2W .....(ii)

From (i) and (ii)

(16W + 4W) × 6 = T

120W = T

T = 60M

(8M + 4W) × 2 + (4M + 8W) × t = T

(8M + 2M) × 2 + (4M + 4M) × t = 60 M

20 + 8t = 60

t = 5 days

64. (c); Let the upstream speed is U and downstream speed is D

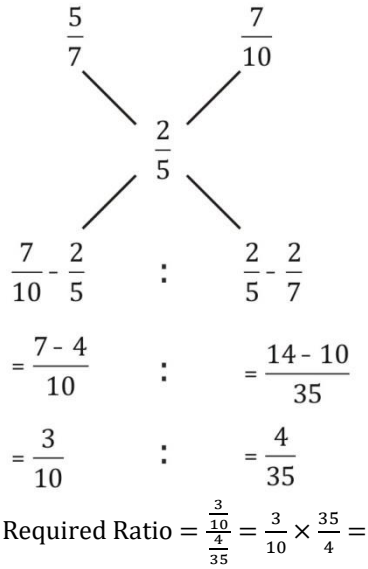
$\frac{25}{U}+\frac{39}{D}=8$ .....(i)

$\frac{35}{U}+\frac{52}{D}=11$ .....(ii)

U = 5, D = 13

Speed of stream = $\frac{D-U}{2}=\frac{13-5}{2}=4$ km/h.

65. (c);



Required Ratio = $\frac{\frac{3}{10}}{\frac{4}{35}}=\frac{3}{10}\times\frac{35}{4}=\frac{21}{8}$

66. (e) Required value = 2% of 6500 =130

67. (c) Required percentage = $\frac{11}{13}\times100=85$

68. (d) Required number of students = (20 + 26 + 17)% of 6500= 63% of 6500 = 4095

69. (d) Required ratio = 24 : 17

70. (a) Required percentage = $\frac{26}{20}\times100=130$

71. (c); $98 \div 14 \times 49 - 294 = (?)^2$

$\Rightarrow 7 \times 49 - 294 = (?)^2$

$\Rightarrow 343 - 294 = (?)^2$

$\Rightarrow (?)^2 = 49$

$\Rightarrow ? = 7$ or -7

72. (a); $(2 \times 3)^3 \div (4 \times 9)^2 \times (27 + 8)^2 = (6)^?$

$\Rightarrow 6^3 \div (36)^2 \times (216)^2 = (6)^?$

$\Rightarrow 6^3 \div (6^2)^2 \times (6^3)^2 = (6)^?$

$\Rightarrow 6^{3-4+6} = (6)?$

$\Rightarrow ? = 5$

73. (b); 103.72

74. (e); $\sqrt{576} \div (4)^2 \times 7.4 + (7)^3 - 231 = ?$

$\Rightarrow 24 \div 16 \times 7.4 + 343 - 231 = ?$

$\Rightarrow 1.5 \times 7.4 + 343 - 231 = ?$

$\Rightarrow 11.1 + 343 - 231 = ?$

$\Rightarrow ? = 123.1$

75. (a); $(\sqrt{3}-2)^2 = ? -\sqrt{12}-\sqrt{36}$

$\Rightarrow 3 + 4 - 4\sqrt{3} = ? - 2\sqrt{3} - 6$

$\Rightarrow ? = 7 - 4\sqrt{3} + 2\sqrt{3} + 6$

$= 13 - 2\sqrt{3}$

76. (a); ×0.5, ×1, ×1.5, ×2.....

77. (b); ×2+1, ×2+3, ×3+4, ×4+5, ×5+6

78. (d); +5, +7, +11, +13, +17

79. (c); 0 2 6 12 20

2 4 6 8

80. (e); +7, +12, +17, +22, +27