

**BANK OF BARODA (QUANTITATIVE APTITUDE)  
MEMORY BASED PAPER - SOLUTIONS**

**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. (e) required difference =  $266 - 165 = 101$

52. (b) required percentage =  $\frac{361}{790} \times 100 \approx 45.7\%$

53. (b) required percentage =  $\frac{165-55}{165} \times 100 = 66\frac{2}{3}\%$

54. (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. (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. (d); Total No. of students in IT =  $\frac{21}{100} \times 7800 = 1638$

No. of boys in IT =  $1638 - (\frac{28}{100} \times 4550) = 364$

Required percentage =  $\frac{364}{1638} \times 100 = 22.22\%$

57. (c); Boys in IT = 364

Boys in mechanical = 949, total boys in IT and Mechanical together = 1313

58. (b); No. of girls in computer science and Electronics and communication together = 1365

No. of boys in Civil and computer science together = 1573

Required percentage =  $\frac{1365}{1573} \times 100 \approx 87\%$

59. (b);

Required % age =  $\frac{364}{7800} \times 100 = 4.66 \approx 4.67\%$

60. (e); No. of girls in computer science =  $\frac{14}{100} \times 4550 = 637$

No. of boys in IT =  $(\frac{21}{100} \times 7800) - (\frac{28}{100} \times 4550) = 364$

Ratio =  $\frac{637}{364} = 7 : 4$

61. (a);  $+(8 \times 6) - 1, +(8 \times 7) - 1, +(8 \times 8) - 1, +(8 \times 9) - 1, +(8 \times 10) - 1$

$284 + (8 \times 9) - 1 = 284 + 71$

= 355

62. (d);  $+(0)^2, -5^2, +10^2, -15^2, +20^2, -25^2, \dots$

$1197 - 25^2 = 1197 - 625$

= 572

63. (d);  $+11^2, +9^2, +7^2, +5^2, +3^2, \dots$

$290 + 5^2 = 290 + 25 = 315$

64. (e);  $\times 1 + 2^3, \times 2 + 3^3, \times 3 + 4^3, \times 4 + 5^3, \times 5 + 6^3, \times 6 + 7^3, \dots$

$1473 \times 5 + 6^3 = 7581$

65. (e);  $-80, +10, -40, +20, \dots$

$447 - 20 = 427$

66. (a);  $(13.68)^2 - (4.78)^2 + (8.28)^3 - (5.24)^3$

=  $187 - 22 + 567 - 143$

=  $165 + 424$

=  $589 \approx 600$

67. (c);  $32 \div 4 \div 10 + 29 = ?$

? =  $8 \div 10 + 29$

? =  $29.8 \approx 30$

68. (e);  $\sqrt{?} = (1248.28 + 51.7) \div 99.9 - 7.98$

$\sqrt{?} = (1300 \div 100) - 8$

$\sqrt{?} = 5$

? = 25

69. (b);  $111.1 + 25.8 + 153.5$

= 290.4

70. (e);  $182 \times 51 - 6889 = (?)^2 + 1369$

$9282 - 6889 = (?)^2 + 1369$

$2393 - 1369 = (?)^2$

$(?)^2 = 1024$

? = 32

71. (b);  $2040 + 2300 + 2400 + 2200 + 2090 + 2120 = 13150$

72. (d);  $\frac{2250-2180}{2180} \times 100 = 3.21\%$

73. (c); Number of students in college P in 2008 = 2540.

Total number of students in P in all years = 13780.

Required percentage =  $\frac{2540}{13780} \times 100 = 18\%$  (approx.)

74. (a); Required ratio =  $(2250 + 2480) : (2260 + 2440)$

=  $4730 : 4700$

=  $473 : 470$

75. (e);  $\frac{(2500+2250+2450+2150+2020+2300)}{6} = \frac{13670}{6} = 2278$

76. (a); Average =  $\frac{1}{6} \times [150 + 300 + 300 + 500 + 650 + 800] = 450$

77. (e);  $650 : 700 : 550$

=  $13 : 14 : 11$

78. (c); Req% =  $\frac{250-200}{200} \times 100 = 25\%$

79. (d);  $\frac{800+700+660}{3} = 720$

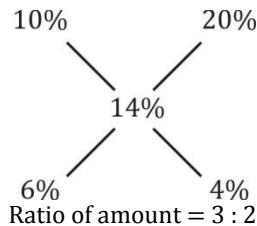
80. (a);  $300 : 200 : 350 = 6 : 4 : 7$

81. (b); Let Required men = x

$\frac{60 \times 60}{\frac{3}{4}} = \frac{(60-x) \times 30}{\frac{1}{4}}$

$40 = 60 - x$

82.  $x = 20$   
 (a); Let the two digit number =  $10x + y$   
 $\therefore 10x + y - x - 10y = 1.8 \times 10$   
 $9x - 9y = 18$   
 $x - y = 2$
83. (d);  $A \rightarrow 3 \times 700 + 3 \times 500 + 6 \times 620$   
 $B \rightarrow 600 \times 12$   
 $\therefore A \rightarrow 7320 = 366 = 183$   
 $B \rightarrow 7200 = 360 = 180$   
 $\therefore$  Ratio of their investment =  $183 : 180$   
 $\therefore$  Amount, A receive =  $\frac{183}{363} \times 726$   
 $= 183 \times 2 = 366$  Rs.
84. (b); Let initial amount = 100  
 Now, total amount =  $100 + 14 + \frac{45}{100} \times 114$   
 $= 165.3$   
 $\therefore 165.3 \rightarrow 16530$   
 $1 \rightarrow \frac{16530}{165.3}$   
 $\therefore 100 \rightarrow 100 \times 100 = 10,000$  Rs.
85. (c); C.P. S.P.  
**80x 90x**  
**(80x + 10) (90x + 2)**  
 $\therefore \frac{105}{100} (80x + 10) = 90x + 2$   
**8400x + 1050 = 9000x + 200**  
**600x = 850**  
 $x = \frac{85}{60}$   
 $\therefore$  Required C.P. =  $\frac{85}{60} \times 80$   
 $= \frac{4 \times 85}{3}$   
 $= \frac{340}{3} = 113 \frac{1}{3}$  Rs.
86. (c); Krishna  $\rightarrow 3x \times 2t \Rightarrow 6xt$   
 Nandan  $\rightarrow x \times t \Rightarrow xt$   
 Ratio of their profits =  $6 : 1$   
 $\therefore$  Required amount =  $\frac{4000}{1} \times 7 = 28000$  Rs.
87. (e); Let total population = 100  
 $\therefore$  After first year =  $100 + 15 = 115$   
 After second year =  $115 - 23 = 92$   
 After third year =  $92 + 4.6 = 96.6$   
 $\therefore 100 \rightarrow 32000$   
 $96.6 \rightarrow \frac{32000}{100} \times 96.6$   
 $= 320 \times 96.6 = 30912$
88. (c); Let students appeared from school A = 100  
 $\therefore$  Qualified students from school A = 60  
 Now, student appeared from school B = 130  
 And Qualified student from school B =  $60 + 36 = 96$   
 $\therefore$  Required % =  $\frac{96}{130} \times 100 = \frac{960}{13} = 73 \frac{11}{13}$  %
89. (b); Let original expenditure of mess for students =  $x$   
 $\therefore (x - 1) \times 40 - 36x = 32$   
 $40x - 40 - 36x = 32$   
 $4x = 72$   
 $x = 18$   
 $\therefore$  Required expenditure =  $18 \times 36 = 648$  Rs.
90. (c); Let amount invested at 20% per annum =  $x$  Rs.  
 By mixture and allegation method



Ratio of amount =  $3 : 2$   
 $\therefore$  Total amount invested =  $\frac{12000}{3} \times 5 = 20,000$  Rs.

91. (d); Let required no. of days =  $x$   
 $\frac{(x-5)}{10} + \frac{(x-3)}{12} + \frac{x}{15} = 1$   
 $\frac{6x-30+5x-15+4x}{60} = 1$   
 $15x - 45 = 60$   
 $15x = 105$   
 $x = 7$  Days
92. (b); Reqd. Probability =  $\frac{2c_1+1c_1}{12c_1} = \frac{3}{12} = \frac{1}{4}$
93. (c); Reqd. probability =  $\frac{1}{12c_2} (4c_1 \times 8c_1 + 4c_2) = \frac{38}{12 \times 11} \times 2 = \frac{19}{33}$
94. (d); Reqd. probability =  $\frac{(4c_2 \times 5c_1)}{12c_3} = \frac{3}{22}$
95. (d);
- |         | C.P. | S.P.              |         |
|---------|------|-------------------|---------|
| Pankaj  | 70   | 100 <sub>x5</sub> | 350 500 |
| Chandan | 100  | 125 <sub>x4</sub> | 400 500 |
- Difference of their profit =  $150 - 100 = 50$   
 $\therefore 50 \rightarrow 135$   
 $500 \rightarrow \frac{135}{50} \times 500 = 1350$  Rs.
96. Ans.(c)  
 Sol. After dividing, we get  $x^2 + x - 12 = 0, x = -4, 3$   
 After dividing we get,  $y^2 + 7y + 12 = 0, y = -4, -3$   
 $x \geq y$
97. Ans.(a)  
 Sol.  $2x^2 - 41x + 20 = 0, x = \frac{1}{2}, 20$   
 $-2y^2 - 19y - 35 = 0, x = \frac{-5}{2}, -7$
98. (a)  
 Sol.  $y = -\frac{59}{5}, x = \frac{-57}{5}$
99. (b);  
 $x = -\frac{21}{6}, -\frac{10}{6} \quad \left| \quad y = -\frac{2}{2}, \frac{-1}{2} \right.$   
 $-\frac{7}{2}, -\frac{5}{3} \quad \left| \quad -1, \frac{-1}{2} \right.$   
 $y > x$
100. (c); I.  $2x^2 - 4x - \sqrt{13}x + 2\sqrt{13} = 0$   
 $2x(x - 2) - \sqrt{13}(x - 2) = 0$   
 $(x - 2)(2x - \sqrt{13}) = 0$   
 $x = 2, \frac{\sqrt{13}}{2}$   
 II.  $10y^2 - 18y - 5\sqrt{13}y + 9\sqrt{13} = 0$   
 $2y(5y - 9) - \sqrt{13}(5y - 9) = 0$   
 $(5y - 9)(2y - \sqrt{13}) = 0$   
 $y = \frac{9}{5}, \frac{\sqrt{13}}{2}$   
 $x \geq y$