

BANK OF BARODA (QUANTITATIVE APTITUDE)
MEMORY BASED PAPER - SOLUTIONS
Directions (51 - 55) :

$$\text{Males in company} = \frac{86}{79+86} \times 1650 = 860$$

$$\text{Females in company} = 1650 - 860 = 790$$

$$\text{Males in Product development department} = 198$$

$$\text{Employees in Sales and marketing department} = \frac{18}{100} \times 1650 = 297$$

$$\text{Males in Sales and marketing department} = \frac{5}{9} \times 297 = 165$$

$$\text{Females in Sales and marketing department} = 132$$

$$\text{Males in finance department} = 77$$

$$\text{Females in Finance department} = \frac{5}{7} \times 77 = 55$$

$$\text{Females in Product development department} = 165$$

$$\text{Males in HR department} = 77 \times 2 = 154$$

$$\text{Males in R\&D and reinvestment department} = 860 - (198+165+77+154) = 266$$

$$\text{Females in R\&D and reinvestment department} = \frac{19}{14} \times 266 = 361$$

$$\text{Females in HR department} = 790 - (132 + 55 + 165 + 361) = 77$$

$$51. \text{ (e) required difference} = 266 - 165 = 101$$

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

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

$$54. \text{ (b) no. of males in Product development, Sales and marketing and HR departments} = 198 + 165 + 154 = 517$$

$$\text{No. of females in Product development, finance and R\&D and reinvestment department} = 361 + 55 + 165 = 581$$

$$\text{Difference} = 64$$

$$55. \text{ (b) females shifted from Sales and marketing}$$

$$\text{Department} = \frac{5}{12} \times 132 = 55$$

$$\text{Females in HR department} = 77 + 55 = 132$$

$$\text{Males in HR department} = 154$$

$$\text{Required ratio} =$$

$$\frac{154}{132} = 1.17$$

$$56. \text{ (d); Total No. of students in IT} = \frac{21}{100} \times 7800 = 1638$$

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

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

$$57. \text{ (c); Boys in IT} = 364$$

$$\text{Boys in mechanical} = 949, \text{ total boys in IT and Mechanical together} = 1313$$

$$58. \text{ (b); No. of girls in computer science and Electronics and communication together} = 1365$$

$$\text{No. of boys in Civil and computer science together} = 1573$$

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

$$59. \text{ (b);}$$

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

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

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

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

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

$$284 + (8 \times 9) - 1 = 284 + 71 = 355$$

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

$$1197 - 25^2 = 1197 - 625$$

$$= 572$$

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

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

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

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

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

$$447 - 20 = 427$$

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

$$= 187 - 22 + 567 - 143$$

$$= 165 + 424$$

$$= 589 \approx 600$$

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

$$? = 8 \div 10 + 29$$

$$? = 29.8 \approx 30$$

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

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

$$\sqrt{?} = 5$$

$$? = 25$$

$$69. \text{ (b); } 111.1 + 25.8 + 153.5$$

$$= 290.4$$

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

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

$$2393 - 1369 = (?)^2$$

$$(?)^2 = 1024$$

$$? = 32$$

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

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

$$73. \text{ (c); Number of students in college P in 2008} = 2540.$$

$$\text{Total number of students in P in all years} = 13780.$$

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

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

$$= 4730 : 4700$$

$$= 473 : 470$$

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

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

$$77. \text{ (e); } 650 : 700 : 550$$

$$= 13 : 14 : 11$$

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

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

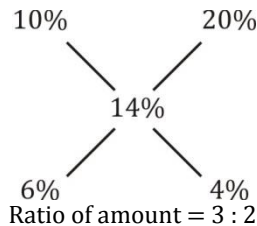
$$80. \text{ (a); } 300 : 200 : 350 = 6 : 4 : 7$$

$$81. \text{ (b); Let Required men} = x$$

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

$$40 = 60 - x$$

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.
 $80x \quad 90x$
 $(80x + 10) \quad (90x + 2)$
 $\therefore \frac{105}{100}(80x + 10) = 90x + 2$
 $8400x + 1050 = 9000x + 200$
 $600x = 850$
 $x = \frac{85}{60}$
 \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 | \times_5 | 350 500 |
| Chandan | 100 | 125 | \times_4 | 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. $10y^2 - 18y - 5\sqrt{13}y + 9\sqrt{13} = 0$
 $2y(5y - 9) - \sqrt{13}(5y - 9) = 0$
 $(5y - 9)(2y - \sqrt{13}) = 0$
 $y = \frac{9}{5}, \frac{\sqrt{13}}{2}$
 $x \geq y$