Quantitative Aptitude

Directions (Q. 76–80) *What will come in place of question mark (?) in the following questions ?*

76. $36 \times 15 - 56 \times 784 \div 112 = ?$
   (1) 138   (2) 238
   (3) 158   (4) 258
   (5) None of these

77. $28.314 - 31.427 + 113.928 = ? + 29.114$
   (1) 81.711   (2) 80.701
   (3) 71.711   (4) 81.701
   (5) None of these

78. $\frac{2}{3}$ of $1\frac{2}{5}$ of 75% of 540 = ?
   (1) 378   (2) 756
   (3) 252   (4) 332
   (5) None of these

79. 36% of $420 - 56\%$ of $350 = ? - 94$
   (1) 48.2   (2) 49.2
   (3) −138.8   (4) −158.8
   (5) None of these

80. $\left(\sqrt{9}\right)^3 \times \left(\sqrt{81}\right)^5 + (27)^2 = (3)^{(?)}$
   (1) 5   (2) 4
   (3) 7   (4) 6
   (5) None of these

Directions (Q. 81–85) *What approximate value will come in place of question mark (?) in the following questions ? (You are not expected to calculate the exact value)*

81. $1599 \times 199 \div 49 - 1398 + 3877 = ?$
   (1) 9400   (2) 9000
   (3) 8700   (4) 8400
   (5) 9200

82. $7\frac{7}{12} \times 6\frac{7}{19} \div 9\frac{1}{3} = ?$
   (1) 9   (2) 11
   (3) 2   (4) 5
   (5) 13

83. 21.7% of $514.9 - 43.44 = \dfrac{?}{5.5}$
   (1) 320   (2) 335
   (3) 475   (4) 375
   (5) 420

84. $4433.764 - 2211.993 - 1133.667 + 3377.442 = ?$
   (1) 4466   (2) 4377
   (3) 3633   (4) 4144
   (5) 3344

85. $(13.96)^2 - (15.03)^2 + (18.09)^2 - 32.65 = ?$
   (1) 223   (2) 264
   (3) 334   (4) 354
   (5) 201

Directions (Q. 86–90) *What will come in place of question mark (?) in the following number series ?*

86. 13 16 22 33 51 (?)
   (1) 89   (2) 78
   (3) 102   (4) 69
   (5) None of these

87. 39 52 78 117 169 (?)
   (1) 246   (2) 182
   (3) 234   (4) 256
   (5) None of these

88. 656 432 320 264 236 (?)
   (1) 222   (2) 229
   (3) 232   (4) 223
   (5) None of these

89. 62 87 187 412 812 (?)
   (1) 1012   (2) 1437
   (3) 1337   (4) 1457
   (5) None of these

90. 7 8 24 105 361 (?)
   (1) 986   (2) 617
   (3) 486   (4) 1657
   (5) None of these

Directions (Q. 91–95) *In the following questions two equations numbered I and II are given. You have to solve both the equations and—*
Give answer
(1) if $x > y$
(2) if $x \geq y$
(3) if $x < y$
(4) if $x \leq y$
(5) if $x = y$ or the relationship cannot be established

91. I. $x^2 + x - 20 = 0$ II. $y^2 - y - 30 = 0$

92. I. $225x^2 - 4 = 0$
    II. $\sqrt{225y} + 2 = 0$

93. I. $\dfrac{4}{\sqrt{x}} + \dfrac{7}{\sqrt{x}} = \sqrt{x}$
    II. $y^2 - \dfrac{(11)^2}{\sqrt{y}} = 0$ $^{\frac{5}{}}$

94. I. $x^2 - 365 = 364$
    II. $y - \sqrt{324} = \sqrt{81}$

95. I. $3x^2 + 3x + 4 = 0$
    II. $4y^2 - 19y + 12 = 0$

96. The total area of a circle and a square is equal to 5450 sq. cm. The diameter of the circle is 70 cms. What is the sum of the circumference of the circle and the perimeter of the square ?
   (1) 360 cm   (2) 380 cm
   (3) 270 cm   (4) Cannot be determined
   (5) None of these

97. The ratio between the speed of a train and a car is 16 : 15 respectively. Also, a bus covered a distance of 480 km in 8 h. The speed of the bus is three-fourth the speed of the train. How much distance will the car cover in 6 h?
   (1) 450 km   (2) 480 km
   (3) 360 km   (4) Cannot be determined
   (5) None of these

98. Ram's present age is three times his son's present age and two-fifth of his father's present age. The average of the present ages of all of them is 46 years. What is the difference between the Ram's son's present age and Ram's father's present age ?
   (1) 68 years   (2) 88 years
   (3) 58 years   (4) Cannot be determined
   (5) None of these

99. Twenty per cent of Anuj's annual salary is equal to seventy five per cent of Raj's annual salary. Raj's monthly salary is 60% of Ravi's monthly salary. If Ravi's annual salary is ₹ 1.44 lakh. What is Anuj's monthly salary ?
   (1) ₹ 270000   (2) ₹ 27000
   (3) ₹ 324000   (4) ₹ 5400
   (5) None of these

100. The largest and the second largest angles of a triangle are in the ratio of 3 : 2 respectively. The smallest angle is 20% of the sum of the largest and the second largest angles. What is the sum of the smallest and the second largest angles ?
   (1) 80°   (2) 60°
   (3) 100°   (4) 90°
   (5) None of these

Directions (Q. 101–105) *Study the information carefully to answer the questions that follow.*
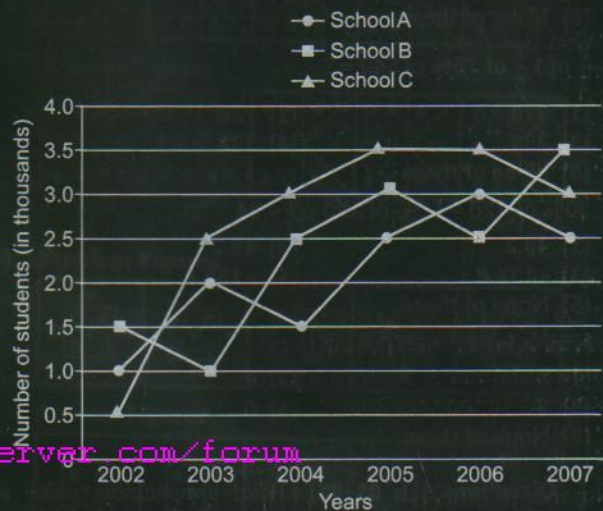
In a school there are 1200 students who have visited five different cities *viz.* Delhi, Kolkata, Varanasi, Mumbai and Jodhpur. Forty five per cent of the total students are boys. Thirty per cent of the total girls visited Mumbai. Two-fifth of the total girls visited Delhi. Number of girls who visited Jodhpur is half of the girls visited Delhi. Two third of the remaining girls visited Kolkata. Total number of students who visited Mumbai is 300. Twenty per cent of the total boys visited Delhi. Forty per cent of the total boys visited Jodhpur. Equal number of boys visited Kolkata and Varanasi.

101. What is the total number of students who visited Varanasi ?
   (1) 78   (2) 69
   (3) 102   (4) 103
   (5) None of these

102. What is the respective ratio between the number of girls visited Kolkata and number of boys visited Mumbai ?
   (1) 22 : 51   (2) 23 : 51
   (3) 21 : 55   (4) 51 : 22
   (5) None of these

103. Total number of students who visited Jodhpur is **approximately** what per cent of number of girls who visited Delhi ?
   (1) 111   (2) 91
   (3) 132   (4) 32
   (5) 72

104. What is the average number of boys who visited Kolkata, Varanasi and Jodhpur together ?
   (1) 110   (2) 122
   (3) 101   (4) 104
   (5) None of these

105. What is the total number of girls who visited Delhi, Mumbai and Varanasi together ?
   (1) 464   (2) 484
   (3) 536   (4) 556
   (5) None of these

Directions (Q. 106–110) *Study the following graph carefully to answer the questions that follow.*

Number of students (in thousands) in three schools over the year

106. What was the average number of students in all the Schools together in the year 2006 ?
   (1) 30000   (2) 9000   (3) 3000
   (4) 6000   (5) None of these

107. How many times the total number of students in all the three Schools A, B and C together was exactly equal among the given years ?
   (1) 2   (2) 5   (3) 4
   (4) 3   (5) None of these

108. Total number of students in School B and School C together in the year 2004 was **approximately** what percentage of the total number of students in School B and School C together in the year 2007 ?
   (1) 85   (2) 80   (3) 75
   (4) 184   (5) 131

109. What was the difference between the total number of students in all the schools together in the year 2003 and number of students in School B in the year 2005 ?
   (1) 2000   (2) 3000
   (3) 3500   (4) 2500
   (5) None of these

110. What was the **approximate** average number of students in School A over all the years together ?
   (1) 1990   (2) 2090
   (3) 2300   (4) 1800
   (5) 2700

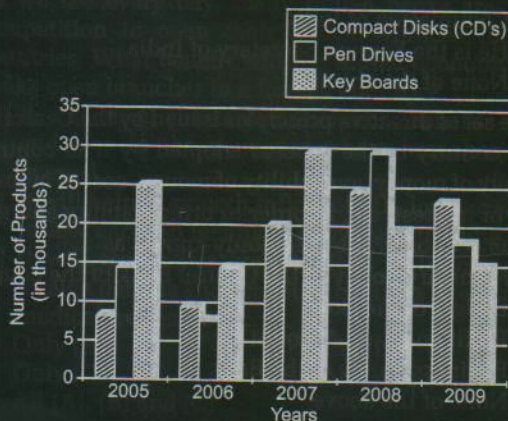**Directions (Q. 111–115)** *Study the following table carefully to answer the questions that follow.*

Number of Officers (in thousands) Passed Out from Five Different Academies During Six Different Years

Years \ Academies	Air Force	Army	Navy	Coast Guard	BSF
2004	1.4	4.2	0.6	1.7	2.6
2005	1.7	5.1	0.9	2.8	3.1
2006	0.9	7.7	1.2	1.6	4.7
2007	2.4	3.6	1.8	4.7	5.8
2008	1.3	4.5	2.9	5.1	6.4
2009	2.7	3.9	3.5	3.9	4.3

111. What was the average number of officers passed out from all the academies together in the year 2007 ?
    (1) 1830 (2) 3660 (3) 3.66 lakh
    (4) 1.83 lakh (5) None of these

112. In which academy the number of the officers passed out continuously increased during the year 2004 to 2009 ?
    (1) Air Force (2) Army and BSF only
    (3) Navy only (4) Coast Guard
    (5) BSF and Navy only

113. What was the respective ratio between the number of officers passed out from Air Force academy in the year 2006 and number of officers passed out from Coast Guard academy in the year 2009 ?
    (1) 30 : 17 (2) 3 : 23 (3) 17 : 30
    (4) 45 : 13 (5) None of these

114. Number of officers passed out from BSF academy in the year 2008 was **approximately** what per cent of the total number of officers passed out from Army academy over all the years together ?
    (1) 12 (2) 19 (3) 33
    (4) 28 (5) 22

115. In which academy the total number of officers passed out over all the years together was the maximum ?
    (1) Air Force (2) Army (3) Navy
    (4) Coast Guard (5) BSF

Directions (Q. 116–120) *Study the following graph carefully and answer the questions that follow.*

Three Different Products (in thousands) Produced by a Company in Five Different Years

116. What was the average number of Pen-drives produced by the company over all the years together ?
    (1) 1700 (2) 1.7 lakh
    (3) 17000 (4) 85000
    (5) None of these

117. What was the total number of all the products produced by the company in the year 2006 and 2008 together ?
    (1) 10750 (2) 107.5 lakh
    (3) 105700 (4) 10570
    (5) None of these

118. What was the respective ratio between the number of CDs produced by the company in the year 2009 and the number of Keyboards produced by the company in the year 2005 ?
    (1) 9 : 10 (2) 11 : 10
    (3) 10 : 9 (4) 10 : 11
    (5) None of these

119. What is the difference between the total number of Pen-drives and CDs produced by the company together in the year 2008 and the number of key boards produced by the company in the year 2006 ?
    (1) 40000 (2) 4000
    (3) 35000 (4) 3500
    (5) None of these

120. What was the respective ratio between the number of Key boards produced by the company in the years 2006, 2007 and 2009 ?
    (1) 1 : 2 : 3 (2) 1 : 2 : 2
    (3) 2 : 1 : 3 (4) 1 : 2 : 1
    (5) None of these

121. A man crosses a stationary train in 12 min. The same train crosses a man in 54 s. What was the respective ratio between the speed of the train and the man ?
    (1) 40 : 7 (2) 400 : 3
    (3) 40 : 3 (4) Cannot be determined
    (5) None of these

122. If a number is subtracted by two-third of 75 per cent of 600, the value so obtained is 320. What is the number ?
    (1) 300 (2) 620
    (3) 720 (4) 500
    (5) None of these

123. The ratio between the angles of a quadrilateral is 7 : 2 : 5 : 6 respectively. What is the sum of double the smallest angle and half the largest angle to the quadrilateral ?
    (1) 162° (2) 198°
    (3) 99° (4) 135°
    (5) None of these

124. 3 men can complete a piece of work in 6 days. 5 women can complete the same work in 18 days. In how many days will 4 men and 10 women together complete the same work ?
    (1) 3 days (2) 5 days
    (3) 2 days (4) 4 days
    (5) None of these

125. The sum of five consecutive numbers is 270. What is the sum of the second and the fifth number ?
    (1) 108 (2) 107
    (3) 110 (4) Cannot be determined
    (5) None of these