Quantitative Aptitude

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

76. $2.8 \times 1.5 + 8\%$ of $250 = ?$
   - (1) 24.2
   - (2) 24.02
   - (3) 242.2
   - (4) 2.42
   - (5) None of these

77. $3\frac{2}{7} - 2\frac{1}{14} - 1\frac{1}{14} - 1\frac{1}{7} = ? + 2\frac{1}{13}$
   - (1) $1\frac{1}{7}$
   - (2) $1\frac{2}{7}$
   - (3) $\frac{1}{7}$
   - (4) $\frac{3}{7}$
   - (5) None of these

78. $\frac{3}{8}$ of $\frac{4}{5}$ of $\frac{2}{3}$ of $730 = ?$
   - (1) 86
   - (2) 146
   - (3) 156
   - (4) 93
   - (5) None of these

79. $8^7 \times 2^6 \div 8^{2.4} = 8^?$
   - (1) 10.6
   - (2) 9.6
   - (3) 8.6
   - (4) 6.6
   - (5) None of these

80. 160% of $250 + ? = 120\%$ of 400
   - (1) 160
   - (2) 40
   - (3) 80
   - (4) 120
   - (5) None of these

Directions (Q. 81–85) *What will come in place of the question mark (?) in each of the following number series ?*

81. 2   8   26   ?   242
   - (1) 78
   - (2) 72
   - (3) 82
   - (4) 84
   - (5) None of these

82. 3   4   12   ?   196
   - (1) 45
   - (2) 40
   - (3) 41
   - (4) 49
   - (5) None of these

83. 9   17   ?   65   129
   - (1) 32
   - (2) 24
   - (3) 35
   - (4) 33
   - (5) None of these

84. 7   13   ?   49   97
   - (1) 27
   - (2) 25
   - (3) 23
   - (4) 29
   - (5) None of these

85. 5   3   6   ?   64.75
   - (1) 15
   - (2) 15.5
   - (3) 17.5
   - (4) 17.25
   - (5) None of these

86. Out of 5 women and 4 men, a committee of three members is to be formed in such a way that at least one member is a woman. In how many different ways can this be done ?
   - (1) 80
   - (2) 84
   - (3) 76
   - (4) 96
   - (5) None of these

87. The present ages of Amit and his father are in the ratio of 2 : 5 respectively. Four years hence the ratio of their ages will become 5 : 11 respectively. What was the father's age five years ago ?
   - (1) 40 yr
   - (2) 45 yr
   - (3) 30 yr
   - (4) 35 yr
   - (5) None of these

88. Twice the square of a number is six times the other number. What is the ratio of the first number to the second ?
   - (1) 1 : 4
   - (2) 2 : 5
   - (3) 1 : 3
   - (4) Cannot be determined
   - (5) None of these

89. Manoj sold an article for ₹ 15000. Had he offered a discount of 10% on the selling price, he would have earned a profit of 8%. What is the cost price ?
   - (1) ₹ 12500
   - (2) ₹ 13500
   - (3) ₹ 12250
   - (4) ₹ 13250
   - (5) None of these

90. The cost of one pens and 4 pencils is ₹ 176 and the cost of 2 pens and 2 pencils is ₹ 48. What is the cost of one pen ?
   - (1) ₹ 16
   - (2) ₹ 14
   - (3) ₹ 12
   - (4) ₹ 18
   - (5) None of these

91. In how many different ways can be letters of the word TOTAL be arranged ?
   - (1) 120
   - (2) 60
   - (3) 48
   - (4) 72
   - (5) None of these

92. If the area of a circle is 616 cm², what is its perimeter ?
   - (1) 76 cm
   - (2) 84 cm
   - (3) 96 cm
   - (4) 80 cm
   - (5) None of these

93. B and C together can complete a work in 8 days, A and B together can complete the same work in 12 days, and A and C together can complete the same work in 16 days. In, how many days can A, B and C together complete the same work ?
   - (1) $3\frac{9}{13}$
   - (2) $7\frac{5}{13}$
   - (3) $7\frac{5}{12}$
   - (4) $3\frac{5}{12}$
   - (5) None of these

94. What will be the compound interest accrued on an amount of ₹ 10000 @ 20% per annum in two years if the interest is compounded half-yearly ?
   - (1) ₹ 4400
   - (2) ₹ 4600
   - (3) ₹ 4641
   - (4) ₹ 4680
   - (5) None of these

95. The income of A is 150% of the income of B and the income of C is 120% of the income of A. If the total income of A, B and C together is ₹ 86000, what is C's income ?
    (1) ₹ 30000 (2) ₹ 32000
    (3) ₹ 20000 (4) ₹ 36000
    (5) None of these

Directions (Q. 96–100) *What approximate value will come in place of the question mark (?) in the following questions ? (You are not expected to calculate the exact value.)*

96. $7999.99 \div 72 \times 49.99 = ?$
    (1) 12000 (2) 12600
    (3) 12500 (4) 11600
    (5) 11000

97. $(25.01)^2 - (15.99)^2 = ?$
    (1) 361 (2) 381 (3) 369
    (4) 375 (5) 356

98. $380 \times 12.25 - 365 \div 15 = ?$
    (1) 4500 (2) 4550 (3) 4800
    (4) 4850 (5) 4650

99. 180% of 25501 + 50% of 28999 = ?
    (1) 62400 (2) 64000
    (3) 60400 (4) 64200
    (5) 61600

100. $171.995 \times 14.995 \div 25 = ?$
    (1) 105 (2) 115
    (3) 110 (4) 125
    (5) 120

Directions (Q. 101–105) *Each of the questions below consists of a question and two statements numbered I and II are given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and*

Give answer (1) if the data in Statement I alone are sufficient to answer the question, while the data in Statement II alone are not sufficient to answer the question.

Give answer (2) if the data in Statement II alone are sufficient to answer the question, while the data in Statement I alone are not sufficient to answer the question.

Give answer (3) if the data in Statement I alone or in Statement II alone are sufficient to answer the question.

Give answer (4) if the data in both the Statements I and II are not sufficient to answer the question.

Give answer (5) if the data in both the Statements I and II together are necessary to answer the question.

Caution Do not mark your answer unless you consider both the statements carefully.

101. What is Nikita's share in the profit of ₹ 50000 earned in the business run by her in partnership with Sharmila ?
    I. Nikita invested an amount 150% of the amount invested by Sharmila.
    II. The amount invested by Sharmila is two-thirds of the amount invested by Nikita.

102. What is a two-digit number ?
    I. The sum of the digits is 6.
    II. The digit in the ten's place is double the digit in the unit's place.

103. What is the rate of interest per cent per annum ?
    I. The amount doubles itself in 10 years.
    II. The simple interest accrued in 5 years is ₹ 5000.

104. In how many days can B alone complete the work ?
    I. B and C together can complete the work in 8 days.
    II. A and B together can complete the work in 12 days.

105. What is the mother's present age ?
    I. The present ages of mother and child are in the ratio of 5 : 1 respectively.
    II. Four years hence the ratio of the ages of mother and child will be 17 : 5 respectively.

Directions (Q. 106–110) *Study the following table carefully to answer these questions.*

Table showing number (in lakhs) of instruments manufactured by six companies over the years

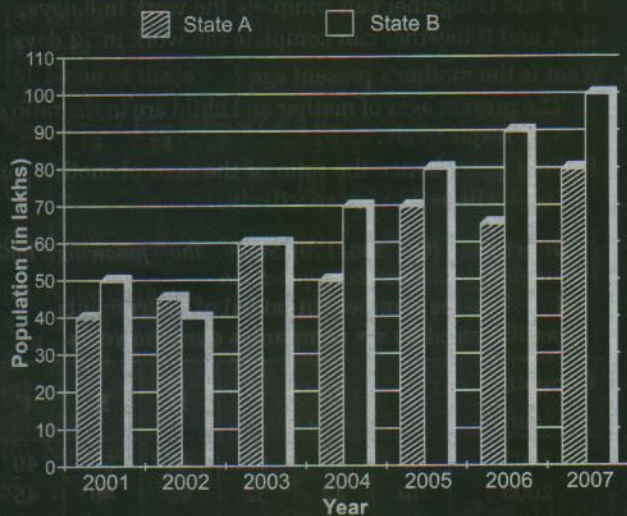| Company → Year ↓	A	B	C	D	E	F
2002	45	35	48	42	50	49
2003	40	32	52	46	48	45
2004	48	36	50	43	56	48
2005	49	37	45	48	52	44
2006	46	30	55	50	54	50
2007	52	38	47	40	51	52

106. What is the average number of instruments manufactured by Company C for all the given years ?
    (1) 4900000 (2) 4950000
    (3) 4850000 (4) 4800000
    (5) None of these

107. The no. of instruments manufactured by Company E in 2004 is **approximately** what per cent of the total no. of instruments manufactured by all the companies together in 2004 ?
    (1) 23 (2) 25
    (3) 20 (4) 16
    (5) 18

108. The total number of instruments manufactured by Company A is **approximately** what per cent of the total no. of instruments manufactured by Company F for all the given years together ?
    (1) 97 (2) 87
    (3) 92 (4) 90
    (5) 85

109. The no. of instruments manufactured by Company B in 2005 is **approximately** what per cent of the total no. of instruments manufactured by Company B in all the years together ?
    (1) 20 (2) 16
    (3) 14 (4) 18
    (5) 22

110. What is the ratio of the total no. of instruments manufactured by all the companies together in 2007 to that in 2006 ?
(1) 56 : 57
(2) 57 : 56
(3) 29 : 28
(4) 28 : 29
(5) None of these

Directions (Q. 111–115) *Study the following graph carefully to answer these questions.*

Population of two states (in lakhs) over the years

111. The population of State B in 2002 is what per cent of the total population of State B in all the years together ? Rounded off to digits after decimal)
(1) 8.26
(2) 7.26
(3) 8.32
(4) 7.82
(5) None of these

112. What is the ratio of the total population of State A for the years 2001, 2002 and 2003 together to the total population of State B for the years 2005, 2006 and 2007 together ?
(1) 27 : 53
(2) 54 : 29
(3) 29 : 54
(4) 53 : 27
(5) None of these

113. For which State and in which year was the per cent rise in population from the previous year was the highest ?
(1) State B-2003
(2) State B-2002
(3) State A-2004
(4) State A-2005
(5) None of the above

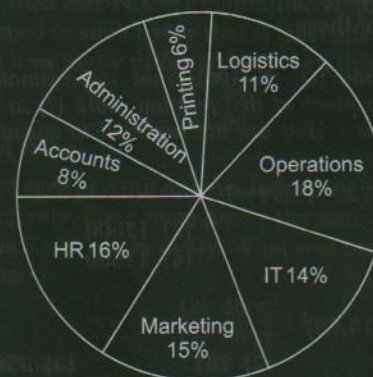114. What is the per cent rise in the population of State B from 2003 to 2004 ?
(1) $16\frac{1}{3}$
(2) $16\frac{2}{3}$
(3) $18\frac{2}{3}$
(4) $18\frac{1}{3}$
(5) None of these

115. **Approximately** what is the average population of State A for all the given years ?
(1) 65 lakh
(2) 50 lakh
(3) 48 lakh
(4) 58 lakh
(5) 52 lakh

Directions (Q.116–120) *Study the following information carefully to answer these questions.*

Percentage of employees in various departments of an organization and the male-female ratio
Total No. of Employees = 2500

Male : Female Ratio

Department	Male : Female
Administration	7 : 5
Accounts	2 : 3
HR	5 : 3
Marketing	7 : 8
IT	3 : 4
Operations	5 : 4
Logistics	6 : 5
Printing	2 : 1

116. What is the ratio of male employees in Administration to those in Printing Department ?
(1) 7 : 4
(2) 4 : 7
(3) 3 : 4
(4) 7 : 3
(5) None of these

117. What is the difference between the total number of employees in IT and that in Operations Department ?
(1) 75
(2) 150
(3) 100
(4) 50
(5) None of these

118. What is the ratio of the total number of males in HR and Marketing to the total number of females in these two departments ?
(1) 13 : 15
(2) 15 : 13
(3) 13 : 17
(4) 17 : 14
(5) None of these

119. How many female employees are there in the HR Department ?
(1) 250
(2) 120
(3) 125
(4) 150
(5) None of these

120. What is the difference between the numbers of male and female employees in Logistics Department ?
(1) 50
(2) 25
(3) 75
(4) 100
(5) None of these

Directions (Q. 121–125) *Study the following table carefully to answer these questions.*

Percentage of marks obtained by six students in different subjects

Subject	History	Geography	Maths	Science	Economics	English
Max Marks	50	50	100	75	100	120
A	86	82	77	72	69	66
B	80	74	73	66	76	84
C	68	92	89	78	75	72
D	76	84	83	81	59	60
E	72	66	82	87	62	78
F	84	64	93	63	81	54

21. What is the average marks obtained by all students in Geography ?
    (1) 41.5
    (2) 42.5
    (3) 38.5
    (4) 39.5
    (5) None of these

122. Marks obtained by E in Economics is approximately what per cent of the total marks obtained by him in all subjects together ?
    (1) 12
    (2) 8
    (3) 10
    (4) 22
    (5) 17

123. What is the overall percentage of marks obtained by all the students in English ?
    (1) 83
    (2) 69
    (3) 71
    (4) 81
    (5) None of these

124. What is the total marks obtained by D in History, Mathematics, Science and English together ?
    (1) 256.25
    (2) 275.55
    (3) 235.75
    (4) 253.75
    (5) None of these

125. What is the total marks obtained by B in all subjects together ?
    (1) 376.3
    (2) 373.6
    (3) 376.6
    (4) 373.3
    (5) None of these