

## Quantitative Aptitude

**Directions (Q. 51–55)** What should come in place of question mark (?) in the following questions ?

51.  $88 \div 5 \div 4 = ?$

- (1) 65.4  
(3) 70.4  
(5) None of these

- (2) 8.4  
(4) 4.4

52.  $\sqrt{1225} = ?$

- (1) 25  
(3) 55  
(5) None of these

- (2) 45  
(4) 15

53.  $36.15 + 71.58 + 6.33 + 2.71 = ?$

- (1) 126.87  
(3) 116.77  
(5) None of these

- (2) 108.67  
(4) 131.57

54.  $64^{3.1} \times 8^{4.3} = 8^?$

- (1) 10.5  
(3) 1.2  
(5) None of these

- (2) 7.4  
(4) 13.3

55.  $216 \times 5 + 102 \times 4 = ?$

- (1) 94228  
(3) 1848  
(5) None of these

- (2) 1488  
(4) 92448

**Directions (Q. 56–60)** What should come in place of the question mark (?) in the following number series ?

56. 9 11 15 ? 39 71

- (1) 29  
(4) 27

- (2) 23  
(5) None of these

- (3) 21

57. 7 8 12 21 ? 62

- (1) 42  
(3) 48  
(5) None of these

- (2) 51  
(4) 35

58. 5 6 16 57 244 ?

- (1) 1225  
(3) 964  
(5) None of these

- (2) 992  
(4) 1245

59. 3 19 97 394 ? 2359

- (1) 1084  
(4) 1958

- (2) 1567  
(5) None of these

- (3) 1177

60. 848 422 208 100 45 ?

- (1) 16.5  
(3) 22.5  
(5) None of these

- (2) 18  
(4) 24

61. Which number should replace both the question marks in the following equation  $\frac{?}{49} = \frac{16}{?}$

- (1) 48  
(3) 38  
(5) None of these

- (2) 18  
(4) 28

62. What is 25% of 50% of  $\frac{2}{3}$ rd of 630 ?

- (1) 36.5  
(3) 45.5  
(5) None of these

- (2) 52.5  
(4) 68.5

63. The average of four consecutive odd numbers is 36. What is the smallest of these numbers ?

- (1) 31  
(4) 47

- (2) 35  
(5) None of these

- (3) 43

64. What would be the compound interest accrued on an amount of ₹ 7850 at the rate of 14 % per annum in two years ?

- (1) ₹ 2351.86  
(3) ₹ 2518.22  
(5) None of these

- (2) ₹ 2880.37  
(4) ₹ 2290.23

65. Mithilesh started a business by investing ₹ 48000. After 7 months, Vidya joined him with a capital of ₹ 56000. At the end of the year of the total profit was ₹ 5885. What is the Vidya's share of the profit ?

(1) ₹ 3625 (2) ₹ 1650  
(3) ₹ 1925 (4) ₹ 3960  
(5) None of these

66. Three-fourth of one number is equal to five-sixth of another number. What is the respective ratio of the first number to the second number ?

(1) 12 : 11  
(2) 11 : 9  
(3) 9 : 10  
(4) Cannot be determined  
(5) None of the above

67. Natasha decided to spend 45% of her salary on shopping. On completion of her shopping, she realised that she had spent only ₹ 11475, which was 60% of what she had decided to spend. How much is Natasha's salary ?

(1) ₹ 29600  
(2) ₹ 38800  
(3) ₹ 42500  
(4) Cannot be determined  
(5) None of the above

68. In how many different way can the letters of the word 'RUDE' be arranged ?

(1) 12 (2) 48  
(3) 16 (4) 24  
(5) None of these

69. The ages of Bhakti and Neil are in the ratio of 8 : 7 respectively. After 6 yr, the ratio of their ages will be 19 : 17. What is the difference in their ages ?

(1) 4 yr (2) 8 yr  
(3) 10 yr (4) 12 yr  
(5) None of these

70. If the numerator of a fraction is increased by 500% and the denominator is increased by 300%. The resultant fraction is  $2\frac{4}{7}$ . What was the original fraction ?

(1)  $\frac{4}{7}$  (2)  $\frac{12}{7}$   
(3)  $\frac{15}{4}$  (4)  $\frac{6}{5}$   
(5) None of these

**Directions (Q. 71-75)** What approximate values should come in place of the question mark (?) in the following questions ?

(Note : You are not expected to calculate the exact value.)

71.  $(15.001)^2 = ?$

(1) 205 (2) 196  
(3) 165 (4) 225  
(5) 298

72.  $11011 \div 101 \div 11 = ?$

(1) 10 (2) 15  
(3) 6 (4) 25  
(5) 20

73.  $927.999 \div 32.007 = ?$

(1) 21 (2) 16  
(3) 38 (4) 35  
(5) 29

74.  $8044.986 + 3250.005 + 149.996 = ?$

(1) 15285 (2) 13625 (3) 11445  
(4) 10555 (5) 12500

75.  $14.001 \times 26.999 \times 7.998 = ?$

(1) 4200 (2) 3000  
(3) 3500 (4) 4000  
(5) 2500

**Directions (Q. 76-80)** In each of these questions two equations numbered I and II are given. You have to solve both the equations and

Give answer (1) if  $x < y$

Give answer (2) if  $x \leq y$

Give answer (3) if  $x > y$

Give answer (4) if  $x \geq y$

Give answer (5) if  $x = y$  or the relationship cannot be established

76. I.  $x^2 - 10x + 24 = 0$

II.  $y^2 - 14y + 48 = 0$

77. I.  $2x^2 - 13x + 20 = 0$

II.  $2y^2 - 7y + 6 = 0$

78. I.  $x^2 - 5x + 6 = 0$

II.  $y^2 - 9y + 20 = 0$

79. I.  $4x^2 - 20x + 21 = 0$

II.  $9y^2 - 27y + 20 = 0$

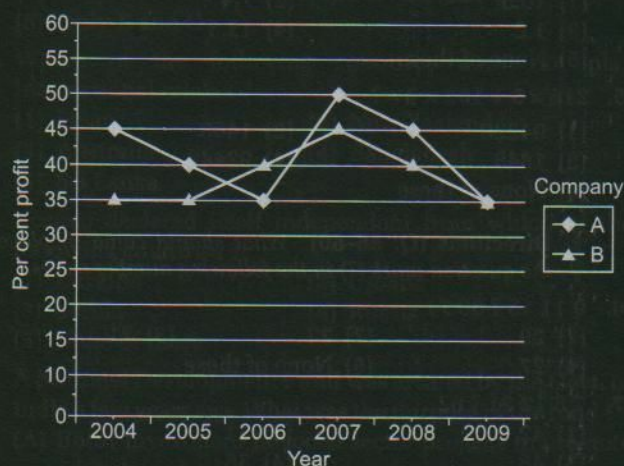
80. I.  $x^2 - 20x + 99 = 0$

II.  $y^2 - 17y + 72 = 0$

**Directions (Q. 81-85)** Study the following graph carefully to answer the questions.

**Per cent Profit Earned by Two Companies Over the Years**

$$\text{Per cent Profit} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} \times 100$$





81. If the income of Company A in the year 2007 was ₹ 6.3 lakh, what was its expenditure in that year ?  
 (1) ₹ 420000 (2) ₹ 325000  
 (3) ₹ 516500 (4) ₹ 250000  
 (5) None of these
82. If the amount of profit made by Company A in the year 2009 was ₹ 31.85 lakh, what was its expenditure in that year ?  
 (1) ₹ 107 lakh  
 (2) ₹ 45 lakh  
 (3) ₹ 91 lakh  
 (4) Cannot be determined  
 (5) None of the above
83. What is the approximate average per cent profit of Company A over all the years together ?  
 (1) 37 (2) 33  
 (3) 39 (4) 48  
 (5) 42
84. If in the year 2004, incomes of both Companies A and B were the same, what would be the respective ratio of their expenditures ?  
 (1) 31 : 33 (2) 27 : 29  
 (3) 16 : 23 (4) Cannot be determined  
 (5) None of these
85. What is the average amount of Profit earned by Company B over the years ?  
 (1) 41.69  
 (2) 38.33  
 (3) 26.45  
 (4) Cannot be determined  
 (5) None of the above

**Directions (Q. 86–90)** Study the following table carefully to answer the questions that follow.

**Number of Students in Six Classes of a School over the Years**

Year	Class					
	V	VI	VII	VIII	IX	X
2004	122	112	100	125	124	116
2005	138	124	116	126	123	120
2006	142	136	120	128	131	121
2007	144	138	128	133	129	121
2008	145	143	130	139	137	124
2009	145	144	134	146	140	128

86. What is the total number of students from all the classes together in the year 2005 ?  
 (1) 747 (2) 728 (3) 764  
 (4) 735 (5) None of these
87. What is the average number of students in all the classes together in the year 2004 ? (Rounded off to the nearest integer)  
 (1) 123 (2) 117  
 (3) 144 (4) 109  
 (5) 138

88. What is the per cent increase in the number of students in class VII in the year 2007 from the previous year? (Rounded off to two digit after decimal)  
 (1) 10.15 (2) 5.48 (3) 6.67  
 (4) 8.93 (5) None of these
89. Number of students in class X in the year 2008 forms approximately what per cent of the total number of students in that class from all the years together ?  
 (1) 9 (2) 31  
 (3) 11 (4) 26  
 (5) 17
90. What is the respective ratio of total number of students in class V in the year 2006 and 2009 together to the total number of students in class VI from the same year ?  
 (1) 39 : 37 (2) 40 : 41  
 (3) 37 : 39 (4) 41 : 40  
 (5) None of these

**Directions (Q.91–95)** Study the table carefully to answer the questions that follow

**Total Number of Students Studying in Different Disciplines in a College and (of These) Percentage of Females and Males**

Discipline	Total Number of Students	Percentage of Females	Percentage of Males
Medical	5450	54	46
Engineering	6500	38	62
Law	2540	35	65
Teaching	3250	74	26
Banking	2200	35	65
Management	4500	58	42

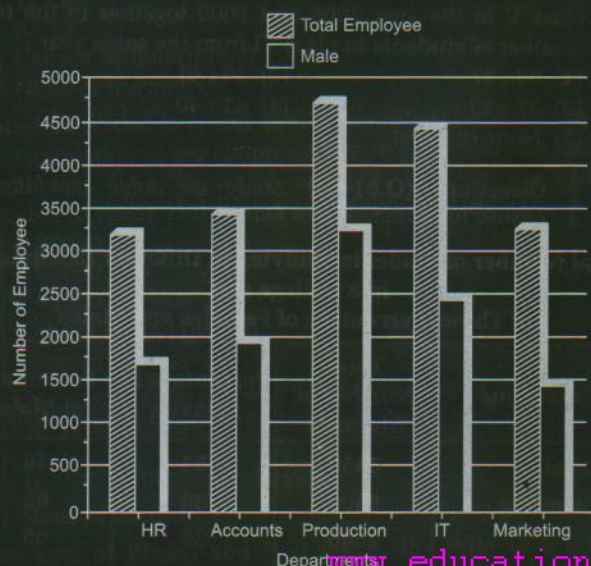
91. What is the total number of males studying in the management and banking disciplines together ?  
 (1) 3180 (2) 3230  
 (3) 3460 (4) 3320  
 (5) None of these
92. What is the respective ratio of the number of females studying in the management and medical disciplines together to the number of males studying in the same disciplines together ?  
 (1) 1668 : 8527 (2) 5553 : 4397  
 (3) 8527 : 1668 (4) 4397 : 5533  
 (5) None of these
93. What is the total number of students studying in all the disciplines together ?  
 (1) 25360 (2) 22580  
 (3) 24440 (4) 28620  
 (5) None of these
94. The total number of students studying in the teaching discipline forms **approximately** what per cent of the total number of students studying in the law discipline ?  
 (1) 141 (2) 78 (3) 117  
 (4) 67 (5) 128



95. What is the respective ratio of the number of females studying in engineering discipline to the number of females studying in the teaching discipline ?
- (1) 38 : 37 (2) 45 : 43  
(3) 37 : 38 (4) 43 : 45  
(5) None of these

**Directions (Q.96-100)** Study the following graph carefully to answer the questions that follow.

**Number of Employees Working in Five Different Departments of an Organization and the Number of Males from the Same**



96. Number of females from the HR department forms approximately what per cent of the total number of employees from that department ?
- (1) 41 (2) 32  
(3) 46 (4) 38  
(5) 51
97. What is the total number of employees from all the departments together ?
- (1) 19250 (2) 18640  
(3) 20160 (4) 17620  
(5) None of the above
98. What is the respective ratio of the number of females and the number of males from the Marketing department ?
- (1) 11 : 8 (2) 7 : 6  
(3) 8 : 11 (4) 6 : 7  
(5) None of these
99. What is the number of females working in the IT department ?
- (1) 1750 (2) 2750  
(3) 2250 (4) 2500  
(5) None of these
100. The number of males in the Production department forms what per cent of the total number of employees from that department ? (Rounded off to two digits after decimal)
- (1) 76.88 (2) 76.64  
(3) 62.25 (4) 68.42  
(5) None of these