7. RATIO & PROPORTION

1. Find the 4th proportional to 4, 16 and 7
   (A) 28   (B) 29
   (C) 22   (D) 25

2. If $\dfrac{a}{7} = \dfrac{b}{9} = \dfrac{c}{11}$, then find $a : b : c$?
   (A) 11 : 9 : 7   (B) 9 : 7 : 11
   (C) 7 : 9 : 11   (D) 11 : 7 : 9

3. $\dfrac{1}{x} : \dfrac{1}{y} : \dfrac{1}{z} = 2 : 3 : 5$, then determine $x : y : z$
   (A) 6 : 15 : 10   (B) 3 : 15 : 10
   (C) 15 : 3 : 10   (D) 15 : 10 : 6

4. In a certain school, the ratio of boys to girls is 7 : 5. If there are 2400 students in the school, then how many girls are there in the school ?
   (A) 500   (B) 700
   (C) 800   (D) 1000

5. Divide 990 into 3 parts in such a way that half of the first part, one third of second part and one fifth of third part are equal?
   (A) 198, 494, 298   (B) 198, 297, 495
   (C) 200, 300, 490   (D) 196, 298, 496

6. The total weight of Sanjay and Suresh is 120 kg. If Sanjay weighs 30 kg more than Suresh, then what is the ratio of weight of Suresh to that of Sanjay ?
   (A) 0.4   (B) 0.6
   (C) 0.3   (D) 0.25

7. A sum of Rs. 36.90 is made up of 180 coins which are either 10 paise coins or 25 p coins. The number of 10 p coins is :
   (A) 48   (B) 54   (C) 56   (D) 60

8. The salaries A, B, C are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed respectively in their salaries, then what will be new ratio of their salaries ?
   (A) 3 : 3 : 10   (B) 10 : 11 : 20
   (C) 23 : 33 : 60
   (D) Cannot be determined

9. The proportion of milk and water in 3 samples is 2 : 1, 3 : 2 and 5 : 3. A mixture comprising of equal quantities of all 3 samples is made. The proportion of milk and water in the mixture is :
   (A) 2 : 1   (B) 5 : 1
   (C) 99 : 61   (D) 227 : 133

10. A, B and C play cricket. The ratio of A's runs to B's runs and B's runs to C's runs is 3 : 2. They get altogether 342 runs. How many runs did A make ?
    (A) 162   (B) 108
    (C) 72   (D) 132

11. Two number are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The smaller number is?
    (A) 27   (B) 33   (C) 49   (D) 55

12. In a bag, there are coins of 25 p, 10 p and 5 p in the ratio of 1 : 2 : 3. If there is Rs. 30 in all, how many 5 p coins are there ?
    (A) 50   (B) 100
    (C) 150   (D) 200

13. $(a + b) : (a - b) = 5 : 3$, then find $(a^2 + b^2) : (a^2 - b^2)$?
    (A) 17 : 15   (B) 25 : 9
    (C) 4 : 1   (D) 16 : 1

14. From each of two given numbers, half the smaller number is subtracted. After such subtraction, the larger no. is 4 times as large as the smaller no. What is the ratio of numbers ?
    (A) 5 : 2   (B) 1 : 4
    (C) 4 : 1   (D) 4 : 5

15. A vessel contains liquid A and B in ratio 5 : 3. If 16 litres of mixture is removed and the same quantity of liquid B is added. The ratio becomes 3 : 5. What quantity does the vessel hold
    (A) 30 litres   (B) 40 litres
    (C) 35 litres   (D) 45 litres

16. A dog chases a Rabit. The dog takes 6 leaps for every 7 leaps of the rabbit. The rabbit takes 6 leaps for every 5 leaps of dog. Ratio of their speed is :
    (A) 36 : 35
    (B) 35 : 36
    (C) 36 : 40
    (D) Can't be determined

17. The ratio of incomes of Pankaj and Gauri is 3 : 5 and the ratio of their expenditures is 2 : 3. Who does save more ? (You have to assume that no one takes any loan from anywhere)
    (A) Pankaj   (B) Gauri
    (C) Both save equally
    (D) Depends upon the incomes of Pankaj and Gauri

18. One year ago, the ratio between A's and B's salary was 4 : 5. The ratio of their individual salaries of last year and present year and 3 : 5 and 2 : 3 respectively. If their total salaries for the present year is Rs. 6800, the present salary of A is

(A) Rs. 4080

(B) Rs. 3200

(C) Rs. 4533.40

(D) Rs. 2720

19. Two alloys A and B are composed of two basic elements. The ratios of the compositions of the two basic elements in the two alloys are 5 : 3 and 1 : 2, respectively. A new alloy X is formed by mixing the two alloys A and B in the ratio 4 : 3. What is the ratio of the composition of the two basic elements in alloy X ?

(A) 1 : 1   (B) 2 : 3

(C) 5 : 2   (D) 4 : 3

20. A certain amount was to be distributed among X, Y and Z in the ratio 2 : 3 : 4 respectively, but was erroneously distributed in the ratio 4 : 3 : 2 due to which Z got Rs70 less. Find the amount which was to be distributed.

(A) 315   (B) 368

(C) 375   (D) 399

21. Rs. 42482, are divided between A and B in the ratio 7 : 4. What is the difference between twice the share of A and thrice the share of B?

(A) Rs. 16,699/16,699   (B) Rs. 9,893/9,893

(C) Rs. 7,724/7,724   (D) Rs. 6,796/6,796

22. Third proportional of 12 and 18 is P, while that of 9 and 12 is Q. Find the third proportional of P and Q.

(A) 64/9   (B) 256/27

(C) 16/3   (D) 64/27

23. Komal appeared in four exams all having same marks. The marks obtained in four exams are in the ratio of 3 : 2 : 4 : 5. If the total marks obtained by Komal is 294 then what is the lowest mark obtained by him in any paper?

(A) 21   (B) 24

(C) 42   (D) 63

24. The ratio of a certain fraction with 1/324 has a ratio similar as 6/5 with 7/18. What is the fraction?

(A) 18/35   (B) 1/105

(C) 9/14   (D) 35/36

Direction (Q. 25-29):- Read the following paragraph carefully to answer the question.

In a plane, there are 400 passengers. 44% of the total number of passengers is from China. Two fifth of total number of passengers is from Indian and remaining passengers is from Shri Lanka. 50% of total passengers from China is men and other are children and women in the ratio of 1 : 3. Sixty percent of total passengers from India are male and 20% are children. There is only male passengers from Shri Lanka.

25. What is the total number of male passengers from India and children from China together?

(A) 102   (B) 118

(C) 121   (D) 86

26. Difference in the number of Women from India and China is ?

(A) 27   (B) 49

(C) 34   (D) 21

27. The total number of male passengers is what percent of total number of passengers?

(A) 52   (B) 60

(C) 65   (D) 62

28. What is the respective ratio of male passengers from Shri Lanka, women from China and Children from India?

(A) 39 : 37 : 19   (B) 31 : 32 : 13

(C) 33 : 31 : 11   (D) 32 : 33 : 16

29. If from Shri Lanka instead of men, women and children come in the ratio of 5:3 keeping the number of passengers from Shri Lanka is same. What is the difference in the average number of children before and after the change?

(A) 1   (B) 9

(C) 4   (D) 7