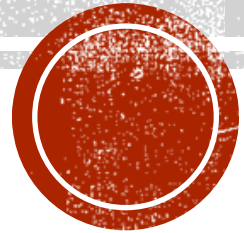
MIXTURE & ALLIGATION



(BASIC QUESTIONS)

1. A mixture contains alcohol and water in the ratio of 12:5. On adding 14 liters of water, the ratio of alcohol to water becomes 4:3. The quantity of alcohol in the mixture is:

(a) 30 L (b) 42 L (c) 28 L (d) 18 L

2. 700 grams of cane sugar solution has 60% of sugar in it. How much sugar should be added to make it 75% in the solution

(a) 320 gm (b) 380 gm (c) 480 gm (d) 420 gm

3. A vessel contains 18 litres mixture of milk and water in the ratio 5: 1. If 3 litres of milk is added to the vessel, then how much water (in litres) should be added to the vessel to have milk and water in the ratio 9: 2?

(a) 2 L (b) 1.5 L (c) 0.5 L (d) 1 L

4. The cost of Type 1 rice is Rs. 15 per kg and Type 2 rice is Rs. 20 per kg. If both Type 1 and Type 2 are mixed in the ratio of 2 : 3, then the price per kg of the mixed variety of rice is:

(a) Rs. 16/kg (b) Rs. 17/kg (c) Rs. 18/kg (d) Rs. 19/kg

5. In what ratio should a grocer mix two varieties of pulses costing Rs.15.5/kg and Rs.20.7/kg respectively, so as to obtain a mixture costing Rs.18.8/kg

(a) 12:19 (b) 19:33 (c) 23:11 (d) 11:17

6. Shovik purchases two types of sugar the first type at Rs.45/kg and second type at Rs.80/kg. In what ratio should shovik blend the first and second type of sugar so that, by selling each kg of blended sugar at Rs.72/kg he makes a profit of 20%.

(a) 4:3 (b) 3:4 (c) 5:4 (d) 2:5

7. A shopkeeper have 2 types of detergents. The first type is 10kg at Rs.45/kg and second type is 8kg at Rs.54/kg. He sold both the detergent at a total profit of Rs.72. At what rate per kg did he sold the mixture.

(a) Rs.52/kg (b) Rs.53/kg (c) Rs.55/kg (d) Rs.49/kg

(MIXING OF TWO OR THREE MIXTURES)

8. Two vessels A and B contains a mixture of Soda and Alcohol in the ratio 3:4 and 4:5 respectively. Equal amount of mixtures from both the vessels is mixed to make a new mixture in vessel C. Find the ratio of Soda and Alcohol in vessel C.

(a) 55:61 (b) 36:55 (c) 55:71 (d) 61:55

9. Two mixtures A and B has milk and water in the ratio 2 : 1 and 2 : 3 respectively. If A and B are mixed in the ratio 1:1 , what is the ratio of milk and water in the new mixture?

(a) 8:1 (b)7:3 (c)8:7 (d) 5:8

10. Sugar costing Rs.140/kg and Rs.135/kg is mixed with a third variety of sugar in the ratio 1:2:1. If the mixture costs Rs.153/kg, then what is the cost per kg of the third variety of sugar.

(a) Rs.200/kg (b) Rs.202/kg (c) Rs.208/kg (d) Rs.205/kg

11. In what ratio should a person mix three types of rice, each costing Rs.70, Rs.80 and Rs130 per kg so that the mixture costs Rs.100/kg.

(a) 1:3:3 (b) 3:1:3 (c) 3:3:1 (d) 1:2:3

12. A merchant mixes three variety of rice costing Rs.20/kg, Rs.24/kg and Rs.30/kg and sells the mixture at a profit of 20% at Rs.30/kg. How many kg of second variety will be in the mixture if 2kg of third variety is there in mixture.

(a) 3kg (b) 2kg (c) 7kg (d) 5kg

13.Two vessels A and B contain alcohol and water in the ratio 7:5 and 17:7 respectively. In what ratio should the mixtures from two vessels A and B be mixed to get a new mixture containing alcohol and water in the ratio 5:3?

(a) 2:3 (b)2:1 (c)4:3 (d)3:1

14. A container contains 36 liters of water. 6 liters of water was taken out from this container and replaced with oil. This process was repeated twice. How much water is inside the container?

(a) 30 litres (b) 25 litres (c) 28 litres (d) 20 litres

15. A vessel is filled with a liquid, 5 parts of which are water and 11 parts are syrup. How much part of mixture should me removed and replaced with water so that the mixture contains syrup and water in ratio of 3:2

(a) 7/55 (b) 11/53 (c) 17/55 (d) 13/33

16. Three containers of equal capacity are completely filled with a mixture of acid and water. The ratio of mixtures of acid and water in these three containers are 1:4, 3:7 and 2:3. If all three are mixed in a single container, what will be the ratio of acid and water in resulting container.

(a) 3:7 (b) 7:3 (c) 5:3 (d) 8:5

USAGE OF ALLEGATION METHOD IN DIFFERENT TOPICS

17. 12500 students appeared in an exam. 50% of these boys and 70% of the girls cleared the examination. If total percent of students qualifying is 60%. Find the number of girls appeared in examination

(a) 6350 (b) 6250 (c) 6600 (d) 6850

18. A trader had 360kg of rice. He sold a part of it at 16% profit and the rest at 4% profit, so that he made a total profit of 12%. How much kg of rice did he sold at 4% profit.

(a) 100kg (b) 150kg (c) 120kg (d) 130kg

19. The average salary of the entire staff in an office is 5000. Out of this, the average salary of the men is 4600 and the salary of women is `5200. Find the number of men if the number of women are 40.

(a) 18 (b) 20 (c) 23 (d) 25