Mixture Allegation

1. X liters of milk is taken out and replaced with water from a container having 240 liters milk. Now, 20% of the mixture is taken out and replaced with water. In final mixture, the difference in quantity of milk & water is 128 liters. Find X.

(A) 12 **(B)** 10
(C) 9 **(D)** 11
(E) 8

2. Vessel A contains milk & water in ratio 3 : 2 while vessel B contains milk & water in ratio 5 : 4. If these two mixtures are mixed in ratio 3 : 4. Find ratio of milk to water in final mixture.

(A) 181 : 134 **(B)** 181 : 135
(C) 171 : 134 **(D)** None of these
(E) 29 : 22

3. Two equal pots of milk and water are mixed together in the ratio 7 : 6. If the ratio of milk and water in the first pot was 4 : 1 and the ratio of milk and water in the second pot was 2 : 3 then find by how much percent the quantity of milk was more than the water in the final mixture?

(A) 40% **(B)** 25%
(C) 30% **(D)** 60%
(E) 50%

4. In a mixture of milk and water the proportion of milk is 60% by weight. If from 80 gm of mixture, 20gm mixture taken out and 6 gm of water added to the mixture. Then find the ratio of milk and water in the new mixture.

(A) 8 : 7 **(B)** 7 : 6
(C) 6 : 5 **(D)** 5 : 4
(E) 7 : 5

5. A mixture contains wine and water in the ratio 3 : 2 and another mixture contains them in the ratio 4 : 5. How many litres of the latter must be mixed with 3 litres of the former so that the resultant mixture may contain equal quantities of wine and water ?

(A) $1\frac{1}{2}$ litre **(B)** $5\frac{2}{5}$ litre
(C) $4\frac{1}{2}$ litre **(D)** $3\frac{3}{4}$ litre
(E) None of these

6. Two vessel A and B is filled with mixture of milk and water in ratio 1 : 4 and 2 : 3 respectively. Both mixtures are poured in vessel C of capacity 70 liter. Vessel C becomes full from these mixtures. If water is 150% more than milk in C then finds the quantity of milk in vessel A.

(A) 8 L **(B)** 6 L
(C) 12 L **(D)** 5 L
(E) 16 L

7. If 360 ml solution containing acid and water in the ratio of 8 : 1, replaced twice by 90 ml water, then what will be the ratio of acid and water in the final mixture?

(A) 1 : 3 **(B)** 1 : 1
(C) 2 : 3 **(D)** 4 : 3
(E) 2 : 1

8. Two Alloys X and Y contain Brass and Aluminum in the ratio 8 : 9 and 1 : 6 respectively. In what ratio should they be mixed so as to have 25% brass?

(A) 15 : 19 **(B)** 3 : 7
(C) 19 : 36 **(D)** 17 : 35
(E) 35 : 16

9. In a 170 lt mixture of milk and water the ratio of milk and water is 12 : 5. If 20% of

the mixture was taken out and 10 liters of water is added. Find the quantity of water in the new mixture.
(A) 60 litres **(B)** 50 litres
(C) 70 litres **(D)** 80 litres
(E) 90 litres

10. A container contains a mixture of milk and water in which water is 24%. 50% of the mixture is taken out in which water is 78 litre less than the milk. Find the remaining quantity of milk in that container?
(A) 171 lit **(B)** 152 lit
(C) 133 lit **(D)** 108 lit
(E) 114 lit

11. The ratio of the quantities of sugar, in which sugar costing Rs. 20 per kg. and Rs. 15 per kg. should be mixed so that here will be neither loss nor gain on selling the mixed sugar at the rate of Rs. 16 per kg.
(A) 2 : 1 **(B)** 1 : 2
(C) 4 : 1 **(D)** 1 : 4
(E) None of these

12. In a mixture of 40 litre, the ratio of milk and water is 4 : 1. If some quantity of mixture taken out and then 4 litre of milk and 4 litre of water is added to the mixture then the ratio of milk and water become 8 : 3. Find the quantity of mixture which was taken out initially ?
(A) 10 litre **(B)** 15 litre
(C) 12 litre **(D)** 18 litre
(E) None of these

13. In one litre of mixture of alcohol and water, 30% is water. The amount of alcohol that must be added to the mixture, so that the part of water in the mixture becomes 15%, is:
(A) 1000 ml **(B)** 700 ml
(C) 300 ml **(D)** 900 ml
(E) 1200ml

14. A container contains 120 lit of pure milk. If X lit of pure milk is replaced with Y lit of water then ratio of milk to water becomes 20 : 1 and if 2X lit of pure milk were replaced by Y lit of water, then ratio of milk to water becomes 16 : 1. Find the value of 'X+Y'?
(A) 20 **(B)** 25
(C) 24 **(D)** 30
(E) 16

15. A container contains 80 lit of pure milk and X lit of water. Ratio of 25% of mixture to the initial quantity of water is 3 : 4 and when Z lit of water is added to it ratio of total mixture to water becomes 9 : 4 then find value of X+Z?
(A) 48 lit **(B)** 72 lit
(C) 80 lit **(D)** 64 lit
(E) 56 lit

16. A jar full of whisky contains 40% alcohol. A part of this whisky is replaced by another containing 19% alcohol and now the percentage of alcohol was found to be 26%. The quantity of whisky replaced is :
(A) 1/3 **(B)** 2/3
(C) 2/5 **(D)** 3/5
(E) None of these

17. A vessel contains 2.5 liters of water and 10 liters of milk. 20% of the contents of the vessel is removed. To the remaining contents, 'x' liters of water is added to reverse the ratio of water and milk. Then 'y' liters of milk are added again to reverse the ratio of water and milk. What is the value of 'y'?
(A) 120 **(B)** 100
(C) 90 **(D)** 140
(E) None of these

18. Wheat of x Rs./kg is mixed with wheat of y Rs./kg in the ratio 2 : 3. On selling the mixture at 49 Rs./kg there is a gain of $16\frac{2}{3}$%If the quantity in which they were

mixed is reversed and selling price remains same, then gain percent becomes $\frac{550}{19}$ %
What is the volume of 'x'.

(A) 25 Rs./kg **(B)** 30 Rs./kg
(C) 28 Rs./kg **(D)** 32 Rs./kg
(E) 20 Rs./kg

19. There are three vessel A, B and C. Vessel A contains mixture of milk and water in ratio 3 : 1. Vessel B contains 20 litres of pure water while vessel C contains 30 litres of pure milk. Half of the content of vessel A is first poured into vessel B. Then content of vessel B is poured into vessel C and finally contents of vessel C is poured into vessel A. The final ratio of milk and water in vessel A is 9 : 4.

Quantity I: Initial quantity of mixture in vessel A.
Quantity II: 80 litres.

(A) Quantity I > Quantity II
(B) Quantity I < Quantity II
(C) Quantity I ≥ Quantity II
(D) Quantity I ≤ Quantity II
(E) Quantity I = Quantity II or No relation

20. Two jar A and B. Both contain 20 % milk. The quantity of jar A is 4 times than that of quantity of jar B. both jar mixtures are mixed and form new mixture C and 15 litres of water is added .The final ratio of water to milk is now 19:4. Find the initial quantity (in litres) of milk in jar B.

(A) 5 **(B)** 4
(C) 10 **(D)** 8
(E) none of these