

ALLIGATION

- Q 1.** If 5kg of salt costing Rs. 5/kg and 3 kg of salt costing Rs. 4/kg are mixed, find the average cost of mixture per kilogram.
- (a) Rs. 4.5
(b) Rs. 4.625
(c) Rs. 4.75
(d) Rs. 4.125
- Q 2.** A mixture of 125 gallons of wine and water contains 20% of water. How much water must be added to the mixture in order to increase the percentage of water to 25% of the new mixture?
- (a) 10 gals
(b) 8.5 gals
(c) 8 gals
(d) 8.33 gals
- Q 3.** The average salary per head for all employees of a company is Rs. 600. The average salary of 120 officers is Rs. 4000. If the average salary per head of the rest of the employees is Rs. 560, find the total number of workers in the company?
- (a) 10200
(b) 10320
(c) 10500
(d) 10680
- Q 4.** 400 students took the UPPCS PRELIMS EXAM in Lucknow. 60% of the boys and 80% of the girls cleared the cut off in the examination. If the total percentage of students qualifying is 65%, how many girls appeared in the examination?
- (a) 100
(b) 120
(c) 150
(d) 300
- Q 5.** How many kilograms of sugar worth Rs. 3.60 per kg should be mixed with 8 kg of sugar worth Rs. 4.20 per kg such that by selling the mixture at Rs. 4.40 per kg there may be a gain of 10%?
- (a) 6 kg
(b) 3 kg
(c) 2 kg
(d) 4 kg
- Q 6.** A dishonest milkman purchased milk at Rs.10 per litre and mixed 5 litres of water in it. By selling the mixtures at the rate of Rs. 10 per litre he earns a profit of 25%. The quantity of the amount of the mixture that he had was?
- (a) 15 litres
(b) 20 litres
(c) 25 litres
(d) 30 litres
- Q 7.** In what ratio should water be mixed with soda costing Rs. 12 per litre so as to make a profit of 25% by selling the diluted liquid at Rs. 13.75 per litre?
- (a) 10:1
(b) 11:1
(c) 1:11
(d) 12:1
- Q 8.** A dishonest grocer professes to sell pure butter at cost price, but he mixes it with adulterated fat and thereby gains 25%. Find the percentage of adulterated fat in the mixture assuming that adulterated fat is freely available.
- (a) 20%
(b) 25%
(c) 33.33%
(d) 40%

Q 9. The price of a pen and pencil is Rs. 35. The pen was sold at a 20% profit and the pencil at a 10% loss. If in the transaction a man gains Rs. 4, how much is the cost price of the pen ?

- (a) Rs. 10
- (b) Rs. 25
- (c) Rs. 20
- (d) None of these

Q 10. Ravi lends Rs. 3600 on simple interest to Harsh for a period of 5 years. He lends a part of the amount at 4 % and the rest at 6% and receives Rs. 960 as the amount of interest. How much money did he lend at a 4% interest rate ?

- (a) Rs. 2800
- (b) Rs. 2100
- (c) Rs. 2400
- (d) Rs. 1200

Q 11. Two vessels contain spirit and water mixed respectively in the ratio of 1:3 and 3:5. Find the ratio in which these are to be mixed to get a new mixture in which the ratio of spirit to water is 1:2.

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

Q 12. A cistern contains 50 litres of water. 5 litres of water is taken out of it and replaced by wine. The process is repeated again. Find the proportion of wine and water in the resulting mixture.

- (a) 1:4
- (b) 41:50
- (c) 19:81
- (d) 81:19

Q 13. A vessel is full of refined oil. of the refined oil is taken out and the vessel is filled with mustard oil. If the process is repeated 4 times and 10 litres of refined oil is finally left in the vessel, what is the capacity of the vessel ?

- (a) 33 litres
- (b) 2460/81 litres
- (c) 2560/81 litres
- (d) 30 litres

Q 14. Consider the following details:

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	Average Marks in English	Average Marks in Hindi
Girls	9	8
Boys	8	7
Overall Average	8.8	X

What is the value of x in the above table ?

- (a) 7.8
- (b) 7.6
- (c) 7.4
- (d) 7.2

Q 15. A bottle contains 20 litres of liquid 4 litres of liquid A is taken out of it and replaced by the same quantity of liquid B. Again 4 litres of the mixture is taken out and replaced by same quantity of liquid B. What is the ratio of quantity of liquid A to that of liquid B in the final mixture ?

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- (a) 4 : 1
- (b) 5 : 1
- (c) 16 : 9
- (d) 17 : 8

Q 16. A thief steals four gallons of liquid soap kept in a train compartment's bathroom from a container that is full of liquid soap. He then fills it with water to avoid detection. Unable to resist the temptation he steals 4 gallons of mixture again and fills it with water. When the liquid soap is checked at a station it is found that the ratio of the liquid soap now left in the container to that of the water in it is 36:13. What was the initial amount of the liquid soap in the container if it is neither used nor augmented by anybody else during the entire period ?

- (a) 7 gallons
- (b) 14 gallons
- (c) 21 gallons
- (d) 28 gallons

Alligation