1. A mixture of 160 gallons of wine and water contains 25% water. How much water must be added to the mixture in order to increase the percentage of water to 40% of the new mixture?
   (a) 40 gals (b) 50 gals
   (c) 80 gals (d) 33 gals
2. 800 students took the CAT exam in Delhi. 50% of the boys and 90% of the girls cleared the cut off in the examination. If the total percentage of qualifying students is 60%, how many girls appeared in the examination?
   (a) 100 (b) 120
   (c) 150 (d) 200
3. If 10 kg of sugar costing ₹15/kg and 20 kg of salt costing ₹10/kg are mixed, find the average cost of the mixture in ₹ per kilogram.
   (a) 11.67 (b) 12.33
   (c) 12.67 (d) 11.33
4. The average salary per head of all workers (Grade A and Grade B) of a company is ₹ 400. The average salary of 100 grade A workers is ₹ 1000. If the average salary per head of the rest of the Grade B workers is ₹ 300, find the total number of workers in the company.
   (a) 1000 (b) 800
   (c) 500 (d) 700
5. Ashok purchased two qualities of grains at the rate of ₹ 100 per quintal and ₹ 160 per quintal. In 50 quintals of the second quality, how much grain of the first quality should be mixed so that by selling the resulting mixture at ₹ 195 per quintal, he gains a profit of 30%?
   (a) 10 quintals (b) 14 quintals
   (c) 20 quintals (d) None of these
6. Two types of milk having the rates of ₹8/kg and ₹10/kg respectively are mixed in order to produce a mixture having the rate of ₹9.20/kg. What should be the amount of the second type of milk if the amount of the first type of milk in the mixture is 20 kg?
   (a) 25 kg (b) 30 kg
   (c) 40 kg (d) 20 kg
7. How many kilograms of salt worth ₹ 360 per kg should be mixed with 10 kg of salt worth ₹420 per kg, such that by selling the mixture at ₹ 480 per kg, there may be a gain of 20%?
   (a) 5 kg (b) 3 kg
   (c) 2 kg (d) 4 kg
8. Kiran lends ₹ 1000 on simple interest to Harsh for a period of 5 years. She lends a part of the amount at 2% interest and the rest at 8% and receives ₹ 300 as the amount of interest. How much money (in ₹) did she lend on 2% interest rate?
   (a) 333.33 (b) 666.67
   (c) 400 (d) 500
9. A tank contains 500 liters of wine. 50 liters of wine is taken out of it and replaced by water. The process is repeated again. Find the proportion of water and wine in the resulting mixture.
   (a) 1 : 4 (b) 41 : 50
   (c) 19 : 81 (d) 81 : 19
10. A man purchased a table and a chair for ₹2000. He sold the table at a profit of 20% and the chair at a profit of 40%. In this way, his total profit was 25%. Find the cost price (in ₹) of the table.
    (a) 1500 (b) 900
    (c) 1000 (d) 800
11. A dishonest shopkeeper purchased milk at ₹100 per litre and mixed 10 liters of water in it. By selling the mixture at the rate of ₹ 100 per litre he earns a profit of 25%. The quantity of the amount of the mixture that he had was:
    (a) 50 liters (b) 40 liters
    (c) 25 liters (d) 60 liters
12. A tank has a capacity of 10 gallons and is full of alcohol. 2 gallons of alcohol are drawn out and the tank is again filled with water. This process is repeated 5 times. Find out how much alcohol is left in the resulting mixture finally?
    (a) 2048/625 gallons (b) 3346/625 gallons
    (c) 2048/3125 gallons (d) 625 gallons
13. A vessel is full of milk 1/4 of the milk is taken out and the vessel is filled with water. If the process is repeated 4 times and 100 liters of milk is finally left in the vessel, what is the capacity of the vessel?
    (a) 25600/243 liters (b) $\frac{2461}{81}$ liters
    (c) 25600/81 liters (d) 30 liters
14. In what ratio should two qualities of tea having the rates of ₹ 40 per kg and ₹ 30 per kg be mixed in order to get a mixture that would have a rate ofRs 35per kg?
    (a) 1 : 2 (b) 1 : 1
    (c) 1 : 3 (d) 3 : 1
15. Raman 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 the 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 known that the liquid soap is neither used nor augmented by anybody else during the entire period?

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

16. In what ratio should water be mixed with soda costing ₹12 per litre so as to make a profit of 50% by selling the diluted liquid at ₹15 per litre?

(a) 10 : 1 (b) 5 : 1
(c) 1: 5 (d) 6: 1

17. A sum of ₹ 4 is made up of 20 coins that are either 10 paise coins or 60 paise coins. Find out how many 20 paise coins are there in the total amount.

(a) 10 (b) 13
(c) 16 (d) 15

18. Pinku 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%

19. A mixture of 75 liters of alcohol and water contains 20% of water. How much water must be added to the above mixture to make the water 25% of the resulting mixture?

(a) 5 liters (b) 1.5 litre
(c) 2 liters (d) 2.5 liters

20. A mixture of 40 liters of milk and water contains 10% water. How much water should be added to it to increase the percentage of water to 25%?

(a) 5 liters (b) 6 liters
(c) 2.5 liters (d) 8 liters

21. Two vessels contain a mixture of spirit and water. In the first vessel the ratio of spirit to water is 8 : 3 and in the second vessel the ratio is 5 : 1. A 35 litre cask is filled from these vessels so as to contain a mixture of spirit and water in the ratio of 4 :1. How many liters are taken from the first vessel?

(a) 11 liters (b) 22 liters
(c) 16.5 liters (d) 17.5 liters

22. There are two mixtures of milk and water, the quantity of milk in them being 20% and 80% of the mixture. If 2 liters of the first are mixed with three liters of the second, what will be the ratio of milk to water in the new mixture?

(a) 11 : 12 (b) 11 : 9
(c) 19 : 11 (d) 14 : 11

23. There are two kinds of alloys of silver and copper. The first alloy contains silver and copper such that 93.33% of it is silver. In the second alloy there is 86.66% silver. What weight of the first alloy should be mixed with some weight of the second alloy so as to make a 100 kg mass containing 90% of silver?

(a) 55 kg (b) 50 kg
(c) 70 kg (d) 25 kg

24. Two buckets of equal capacity are full of a mixture of milk and water. In the first, the ratio of milk to water is 1 : 7 and in the second it is 3 : 8. Now both the mixtures are mixed in a bigger container. What is the resulting ratio of milk to water?

(a) 35 : 141 (b) 42 : 49
(c) 43 : 41 (d) 41 : 53

25. A bag contains a total of 105 coins of ₹1, 50 p and 25 p denominations. Find the total number of coins of ₹ 1 if there are a total of 50.5 rupees in the bag and it is known that the number of 25 paise coins are 133.33% more than the number of 1 rupee coins.

(a) 56 (b) 25
(c) 24 (d) None of these

26. Two vessels contain spirit and water mixed respectively in the ratio of 1: 4 and 4: 1 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: 3.

(a) 11 : 1 (b) 13 : 1
(c) 11 : 2 (d) 11 : 3

27. The price of a table and a chair is ₹3000. The table was sold at a 20% profit and the chair at a 10% loss. If in the transaction a man gains ₹ 300, how much is cost price (in ₹) of the table?

(a) 1000 (b) 2500
(c) 2000 (d) None of these

28. A person purchased a pen and a pencil for ₹ 15. He sold the pen at a profit of 20% and the pencil at a profit of 30%. If his total profit was 24%, find the cost price of the pen.

(a) ₹10.50 (b) ₹ 12
(c) ₹ 9 (d) ₹ 10

29. A container is full of a mixture of kerosene and petrol in which there is 18% kerosene. Eight liters are drawn off and then the vessel is filled with petrol. If the kerosene is now 15%, how much does the container hold?

(a) 40 liters (b) 32 liters
(c) 36 liters (d) 48 liters

30. Two solutions of 80% and 87% purity are mixed resulting in 35 liters of mixture of 84% purity. How much is the quantity of the first solution in the resulting mixture?

(a) 15 liters (b) 12 liters
(c) 9 liters (d) 6 liters

31. In the Delhi zoo, there are lions and there are hens. If the heads are counted, there are 180, while the legs are 448. What will be the number of lions in the zoo?
(a) 36 (b) 88
(c) 44 (d) 136

32. A bonus of ₹ 1,00,000 was divided among 500 workers of a factory. Each male worker gets 500 rupees and each female worker gets 100 rupees. Find the number of male workers in the factory.
(a) 250 (b) 375
(c) 290 (d) 125

33. What will be the ratio of honey and water in the final solution formed by mixing honey and water that are present in three vessels of equal capacity in the ratios 4:1, 5:2 and 6:1 respectively?
(a) 166 : 22 (b) 83 : 22
(c) 83 : 44 (d) None of these

34. A mixture worth ₹ 80 a kg is formed by mixing two types of flour, one costing 50 per kg while the other 110 per kg. In what proportion must they have been mixed?
(a) 1 : 1 (b) 1 : 2
(c) 2: 1 (d) 1 : 3

35. A 10 percent gain is made by selling the mixture of two types of milk at ₹ 48 per kg. If the type costing ₹ 61 per kg was mixed with 100 kg of the other, how many kilograms of the former was mixed?
(a) 38 kg (b) 30.5 kg
(c) 19 kg (d) Cannot be determined

36. A man buys milk at ₹ 85 per liter and dilutes it with water. He sells the mixture at the same rate and thus gains 11.11%. Find the quantity of water mixed by him in every liter of milk.
(a) 0.111 liters (b) 0.909 liters
(c) 0.1 litre (d) 0.125 liters

37. In what proportion must water be mixed with honey so as to gain 10% by selling the mixture at the cost price of the honey? (Assume that water is freely available)
(a) 1 : 4 (b) 1 : 5
(c) 1 : 6 (d) 1 : 10

38. A milkman stole milk from a can that contained 50% of milk and he replaced what he had stolen with milk having 20% milk. The bottle then contained only 25% milk. How much of the bottle did he steal?
(a) 80% (b) 83.33%
(c) 85.71% (d) 88.88%

39. Shruti possessing ₹ 10,000, lent a part of it at 5% simple interest and the remaining at 20% simple interest. Her total income after 5 years was ₹7500. Find the sum lent at 20% rate.
(a) ₹1666.67 (b) ₹6666.67
(c) ₹3333.33 (d) None of these

40. Sharman decides to travel 100 kilometres in 8 hours partly by foot and partly on a bicycle, his speed on foot being 10 km/h and that on bicycle being 20 km/h, what distance would he travel on foot?
(a) 20 km (b) 30 km
(c) 50 km (d) 60 km

1. (a)	2. (d)	3. (a)	4. (d)
5. (a)	6. (b)	7. (a)	8. (a)
9. (c)	10. (a)	11. (a)	12. (a)
13. (c)	14. (b)	15. (d)	16. (c)
17. (c)	18. (a)	19. (a)	20. (d)
21. (a)	22. (d)	23. (b)	24. (a)
25. (c)	26. (a)	27. (c)	28. (c)
29. (d)	30. (a)	31. (c)	32. (d)
33. (b)	34. (a)	35. (d)	36. (a)
37. (d)	38. (b)	39. (b)	40. (d)