Percentages

Model 1: Basic Percentage   *(CTS 2016,Tech Mahindra 2016)*

1. Sameer spends 20% of his monthly salary on house-rent, 25% on food, 10% on transportation, 15% on education of his children and 18% on household expenses. He saves the remaining amount of ₹ 4800. What is his monthly salary?

   1) ₹ 40000   2) ₹ 28000   3) ₹ 32000   4) ₹ 36000   5) None of these

2. Ishan spent ₹ 35,645 on buying a bike, ₹ 24,355 on buying a television, and the remaining 20% of the total amount he had as cash with him. What was the total amount?

   ₹ 60,000   2) ₹ 72,000   3) ₹ 75,000   4) ₹ 80,000   5) None of these

3. Sujatha invests 7% i.e. ₹ 2170, of her monthly salary in mutual funds. Later she invests 18% of her monthly salary in recurring deposits. Also she invests 6% of her salary on NSC's. What is the total annual income invested by Sujata?

   1) ₹ 125320   2) ₹ 113520   3) ₹ 135120   4) ₹ 115320   5)None of these

4. Sonali invests 15% of her monthly salary in insurance policies. She spends 55% of her monthly salary in shopping and on household expenses. She saves the remaining amount of ₹ 12750. What is Sonali's monthly income?

   1) ₹ 42,500   2) ₹ 38,800   3) ₹ 40,000   4) ₹ 35,500   5) None of these

5. Gaurav spends 40% of the amount he received from father on hostel expenses, 20% on books and stationery and 50% of the remaining on transport. He saves ₹ 450 which is half the remaining amount after spending on hostel expenses, books and stationery and transport. How much money did he get from his father?

   1) ₹ 3000   2) ₹ 6000   3) ₹ 4500   4) ₹ 5000   5) None of these

Model 2: Percentage of Percentage
(AMCAT 2016, Accenture 2016,Tech Mahindra 2016)

6. Prerna decided to donate 30% of her monthly income to an orphanage. But on the day of donation, she changed her mind and donated ₹ 4200, which is 70% of what she had decided earlier. What should be the actual donation as per her earlier decision?

   1) ₹ 8000   2) ₹ 5000   3) ₹ 6,000
   4) Cannot be determined   5) None of these

7. Praveen decided to donate 15% of his salary to a charity. On the day of donation he changed his mind and donated ₹ 1,896, which was 80% of what he had decided earlier. How much is Praveen's salary?

   1) ₹ 18,500   2) ₹ 10,250   3) ₹ 15,800
   4) Cannot be determined   5) None of these

8. The price of a car is ₹ 5, 00,000. It was insured to 90% of its price. The car got completely damaged in an accident and the insurance company paid 80% of the insured amount. That is the difference between the price of the car and the amount of insurance received?

   1) ₹ 1, 40,000   2) ₹ 40,000   3) ₹ 70,000   4) ₹ 80,000   5) None of these

9. The price of a car is ₹ 325000. It was insured to 85% of its price. The car was damaged completely in an accident and the insurance company paid 90% of the insurance. What was the difference between the price of the car and the amount received?

   1) ₹ 32500   2) ₹ 48750   3) ₹ 76375   4) ₹ 81250   5) None of these

10. 15% of 45% of a number is 105.3. What is 24% of that number?

   1) 385.5   2) 374.4   3) 390   4) 375   5) None of these

11. 20% of 65% of a number is 130. What is 54% of that number?

    1) 250   2) 540   3) 260   4) 275   5) None of these

Model 3: Election Problem   *(Capgemini 2016)*

12. In an election between two candidates, the winner secured 58% of the total votes cast and wins by a majority of 2400 votes. How many votes did the loser get?

    1) 6300   2) 7200   3) 3700   4) 4400   5) None of these

13. In an election between two candidates, one gets 72% of the total votes. If the total votes are 8200, by how many votes did the winner win the election?

    1) 1835   2) 1722   3) 3608   4) 4428   5) None of these

14. In a college election between two students, 10% of the votes cast are invalid. The winner gets 70% of the valid votes and defeats the loser by 1800 votes. How many votes were totally cast?

    1) 1800   2) 7200   3) 5000   4) 3600   5) None of these

15. In a college election fought between two candidates, one candidate got 55% of the total valid votes. 15% of the votes were invalid. If the total votes were 15,200, what is the number of valid votes the other candidate got?

    1) 7106   2) 6840   3) 8360   4) 5814   5) None of these

Model 4: A is What Percentage of B   *(Infosys 2015)*

16. In an examination, Ramesh scored 30% less than Suresh and Mahesh scored 20% less than Suresh. Ramesh's score is what per cent of Mahesh's score?

    1) 80%   2) 70%   3) 40%   4) 87.5%   5) None of these

17. 65 is what % of 50?

    1) 250   2) 240   3) 160   4) 130   5) None of these

Model 5: A Is What Percent More/Less than B   *(AMCAT 2015, Deloitte 2015)*

18. If A's salary is 25% more than B's salary, then by what per cent is B's salary less than A's salary?

    1) 25%   2) 20%   3) 16.66%

    4) Cannot be determined   5)None of these

19. If Arjun's salary is 20% more than that of Bheem, then how much percent is Bheem's salary less than that of Arjun?

    1) 16.66%   2) 20%   3) 40%   4) 10%   5) None of these

20. The sale of Company N is 40% less than that of Company T. Then by what per cent is the sale of company T more than that of N?

    1) 66%   2) 20%   3) 40%   4) 10%   5) None of these

21. If A's salary is 25% less than B's salary, then B's salary is what % more than A's salary?

    1) Cannot be determined   2) 21   3) 33.33

    4) 25   5) 20

Model 6: Percentage Change   *(AMCAT 2016)*

22. The profit made by a company in the present year is ₹ 15, 00,000. Two years ago, the profit made by the same company was ₹ 24, 00,000. What is the percentage change in the profit made by the company?

    1) 66.66% inc   2) 66.66% dec   3) 37.5% inc   4) 37.5% dec   5) None of these

Model 7: Effective Percentage Change   *(Infosys 2016)*

23. The length of a rectangle increased by 40% and its breadth increased by 20%. What will be the percentage change in the area of the rectangle?

    1) 50% inc   2)10% inc   3) 44% inc   4) 68% inc   5) None of these

24. The population of a town was 48600. It increased by 25% in the first year and decreased by 8% in the second year. What will be the population of the town at the end of two years?

    1) 65610   2) 55580   3) 60750   4) 64850   5) None of these

25. The revenue of a shop in the month of March was ₹ 40,000. In the month of April, the shopkeeper announced a discount of 20% and hence his sales went up by 20%. What will be the revenue in the month of April?

    1) ₹ 40,000   2) ₹ 50,000   3) ₹ 38,400   4) ₹ 64,800   5) None of these

26. When the cost of petroleum increases by 40%, a man reduces his annual consumption by 20%. Find the percentage change in his annual expenditure on petroleum.

    1) 20%   2) 16%   3) 12%   4) 40%   5) None of these

27. The price of sugar increased by 25%. What should be the percentage decrease in the consumption of sugar by a family, such that their expenditure on sugar remains the same?

    1) 20%   2) 16%   3) 12%   4) 40%   5) None of these

28. If the cost of coriander sold is increased by 33.33%. What should be the % decrease in consumption to keep expenditure same?

    1) 29%   2) 25%   3) 30%   4) 25%   5) None of these

Model 8: Miscellaneous   *(TCS 2016,AMCAT 2016)*

29. A student has to secure 40% marks to pass an examination. He secured 75 marks and was declared FAIL 45 marks. Find the maximum marks set for the examination.

1) 600   2) 200   3) 100   4) 300   5) None of these

30. In an examination, the cut off mark is 40% and a student is declared to be failed by 4 marks when he scored 38%. What is the maximum score a student can get in this exam?

1) 100   2) 300   3) 400   4) 200   5) None of these

31. A student has to secure 30% marks to get through. If he gets 40 marks and fails by 20 marks, find the maximum marks set for the examination.

1) 600   2) 200   3) 100   4) 300   5) None of these

32. 75% of a number when added to 75 becomes the number itself. The number is:

1) 150   2) 200   3) 225   4) 300   5) None of these

33. Difference between 54% of a number and 63% of the same number is 72. What is 80% of that number?

1) 720   2) 600   3) 640   4) 900   5) None of these

34. If 25% of a number is subtracted from a second number, the second number reduces to its five - sixth. What is the ratio of the first number to the second number?

1) 1:3   2) 2:3   3) 3:2

4) Data inadequate   5) None of these

35. 75% of a number is equal to four-fifths of another number. What is the ratio between the first number and the second number?

1) 5:3   2) 15:16   3) 3:5   4) 16:15   5) None of these

36. Two-fifth of one-third of three-seventh of a number is 15. What is 40% of that number?

1) 72   2) 84   3) 136   4) 140   5) None of these

37. In a test consisting of 300 questions, Deepika answered 40% of the first 100 questions correctly. What per cent of the remaining 200 questions does she need to answer correctly for her grade on the entire exam to be 50%?

1) 75%   2) 55%   3) 60%

4) Cannot be determined   5) None of these

38. In a class of 50 students and 5 teachers, each student got sweets that are 12% of the total number of students and each teacher got sweets that are 20% of the total number of students. How many sweets were there?

1) 345   2) 365   3) 330   4) 350   5) None of these

39. The income of A is 150% of the income of B and the income of C is 120% of the income of A. If the total income of A, B and C together is ₹ 86,000, what is C's income?

1) ₹ 30,000   2) ₹ 32,000   3) ₹ 20,000   4) ₹ 36,000   5) None of these

40. The price of sugar falls by 12%. How many quintals can be bought for the same money which was sufficient to buy 44 quintals at the higher price?

1) 54   2) 50   3) 38   4) 48   5) None of these

Answers

1 - 1	2 - 3	3 - 4	4 - 1	5 - 3	6 - 3	7 - 3	8 - 1	9 - 3	10 - 2
11 - 2	12 - 1	13 - 3	14 - 3	15 - 4	16 - 4	17 - 4	18 - 2	19 - 1	20 - 1

21 - 3	22 - 4	23 - 4	24 - 5	25 - 3	26 - 3	27 - 1	28 - 4	29 - 4	30 - 4
31 - 2	32 - 4	33 - 3	34 - 2	35 - 4	36 - 5	37 - 2	38 - 4	39 - 4	40 - 2

Practice Questions

1. Arvind purchased a wrist watch with 30% discount on the labeled price. He sold it with 40% profit on the price he brought. What was his percent loss on the labeled price?

   a) 4   b) 8   c) 2   d) 6

2. The value of x, when 5% of $\sqrt{2}x$ is 0.01 will be

   a) 0.02   b) 0.01   c) 0.05   d) 0.03

3. A man invested 1/3 of his capital at 7%, 1/4 at 8% and the remainder at 10%. If his annual income is ₹ 561, then capital is

   a) ₹ 5400   b) ₹ 6000   c) ₹ 6600   d) ₹ 7200

4. Given A is 50% larger than C and B is 25% large than C, then A is what per cent larger than B?

   a) 25%   b) 50%   c) 75%   d) 20%

5. The number of seats in an auditorium is increased by 25%. The price of a ticket is also increased by 12%. Then the increase in revenue collection will be_

   a) 40%   b) 35%   c) 45%   d) 48%

6. A box has 100 blue balls, 50 red balls, 50 black balls. 25% of blue balls and 50% of red balls are taken away. % of black balls at present is

   a) 50%   b) 25%   c) 331/3 %   d) 40%

7. In a school, 10% of number of girls is equal to 1th/20 of the number of boys. Ratio between the number of boys to number of girls is –

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

8. Price of a commodity has increased by 60%. By what per cent must a consumer reduce the consumption of the commodity so as not to increase the expenditure?

   a) 37   b) 37.5   c) 40.5   d) 60

9. If the price of sugar is raised by 25%, find by how much per cent a householder must reduce his consumption of sugar so as not to increase his expenditure?

   a) 10   b) 20   c) 18   d) 25

10. If 90% of A = 30% of B and B = x% of A, then the value of x is

    a) 800   b) 300   c) 700   d) 400

11. A reduction of 20% in the price of sugar enables me to purchase 5 kg more for ₹ 600. Find the price of sugar per kg before reduction of price.

    a) ₹ 24   b) ₹ 30   c) ₹ 32   d) ₹ 36

12. The price of a commodity rises from ₹ 6 per kg to ₹ 7.50 per kg. If the expenditure cannot increase, the percentage of reduction in consumption is

    a) 15   b) 20   c) 25   d) 30

13. First and second numbers are less than a third number by 30% and 37% respectively. The second number is less than the first by

    a) 7%   b) 4%   c) 3%   d) 10%

14. When the price of an article was reduced by 20%, its sale increased by 80%. What was the net effect on the sale?

   a) 44% increase   b) 44% decrease

   c) 66% increase   d) 75% increase

15. The price of sugar goes up by 20%. If a housewife wants the expenses on sugar to remain the same, she should reduce the consumption by

   a) 15 1/5%   b) 16 2/3%   c) 20%   d) 25%

16. In a factory 60% of the workers are above 30 years and of these 75% are males and the rest are females. If there are 1350 male workers above 30 years, the total number of workers in the factory is

   a) 3000   b) 2000   c) 1800   d) 1500

17. If A's income is 50% less than that of B's, then B's income is what per cent more than that of A?

   a) 125   b) 100   c) 75   d) 50

18. 1.14 expressed as a per cent of 1.9 is

   a) 6%   b) 10%   c) 60%   d) 90%

19. If 60% of A = 3/4 of B, then A:B is

   a) 9:20   b) 20:9   c) 4:5   d) 5:4

20. Two successive price increases of 10% and 10% of an article are equivalent to a single price increase of

   a) 19%   b) 20%   c) 21%   d) 22%

Answers

1 - c	2 - a	3 - c	4 - d	5 - a	6 - c	7 - b	8 - b	9 - b	10 - b
11 - b	12 - b	13 - b	14 - a	15 - b	16 - a	17 - b	18 - c	19 - d	20 - c