**Exercise 2: Percentages**

Q1: The Salary of a man increased by 20% in the month of August and 5 % in the month of September. By what % is the Salary in October more than that in July of the same year?

a.25% b. 26% c. 15% d. 1%

Q2: If A got 8.33% more votes than B in an election, by what % is B’s votes less than that received by A?

a.7.71% b. 8.33% c. 9.09% d. 10%

Q3: The price of a commodity increased by 20% and therefore a household reduced the consumption of the commodity by 20kgs in order to maintain the expenditure at the earlier level. What was the earlier consumption in Kg?

a. 100 Kg b. 120 Kg c. 150 Kg d. None of These

Q4: If X=2Y and Y=3Z, by what % is X more than Z?

a.166.66% b. 200% c. 83.33% d. 500%

Q5: If the height of a cylinder increases by 20% while the radius decreases by 10%, find the % change in the total surface area of the cylinder?

a. 8% increase b. 10% increase c. 11% decrease d. Cannot be Determined

Q6: The average temperature for the month of July was 18 degrees while the average temperature for the month of August was 22 degrees. By how many percentage was the average temperature in August more than that in July?

a.4 % b. 22.22% c. 20% d. cannot be Determined

Q7: In an examination where the total marks is 60, a candidate needs 40% to pass. If a student gets 18 marks more than the passing marks, what is the marks percentage obtained by the student?

a.46% b. 50% c. 70% d. 43%

Q8: A is 25% less than B while C is 20% more than D. If D is 25% less than A, find the relation between B and C

a. 27B=40C b. 67C=40B c. 27C=40B d. cannot be Determined

Q9: In a class of 66 students, the number of boys is 20% more than the number of girls. If 50% of the girls qualified in a test while 50% of the entire class did not qualify in the test, find the % of boys who did not qualify the test?

a.40% b. 60% c. 50% d. 80%

Q10: When the diameter of a circle increases by x%, the area of the circle increases from 150 sq m to 168.54 sq m. Find the value of x?

a.12% b. 9.27% c. 6% d. 15%

Q11: The residents of a colony had planned for an excursion where each member had to contribute Rs.240 for the trip. At the last minute, 1/7th of the number of people decided to drop out. By what % should the per person contribution increase so that the same amount of money can still be collected?

a.16.66% b. 14.28% c. 20% d. cannot be Determined

Q12: A composite alloy has brass and bronze in the ratio 2:3. If Brass has 30% copper in it while bronze has 40% copper in it, find the % of copper in the alloy?

a.26% b. 24% c. 25% d. 36%

Q13: In an election between 2 contestants, a candidate got 55% of the votes polled and won by a margin of 80 votes. In the next election, the number of votes received by the candidate increased by 20%. Still the candidate lost the election by a margin of 40 votes. What is the increase in the number of votes polled?

a. 1096 b. 568 c. 528 d. 296

Q14: In the EPL, a football club had planned to win at least 60% of its 40 matches. At the half way stage, the club had won only 40% of the matches played. If each match has a definite result, find the maximum number of remaining matches that it can afford to lose?

a. 16 b. 4 c. 10 d. This is not possible

Q15: If the side of a cube increases by 15%, by what % does the surface area of the cube increase?

a.15% b. 30% c. 225% d. 32.25%

Q16: If 20% of half of A is twice the value of 50% of 1/4th of B, then A is what % more or less than B?

a.250% more b. 125% less c. 150% more d. None of These

Q17: In spite of an increase in the price of petrol by 20%, the total expenditure due to petrol decreased by 10%. Find the % change in the consumption?

a.8% decrease b. 25% decrease c. 10% decrease d. None of These

Q18: In a colony where each household gets at least one newspaper, 45% get paper E, 75% get paper F. If the number of households getting exactly one paper is 240, find the total number of households in the colony?

a. 250 b. 300 c. 260 d. 275

Q19: The numerator of a fraction is increased by 25% while the denominator is halved. As a result, the fraction becomes 3/5 more than its original value. Find the original value of the fraction?

a. 2/5 b. 3/5 c. 5/2 d. 3/4

Q20: By what % is 75% of a number more than half the number?

a.25% b. 50% c. 100% d. cannot be Determined

Q21: The price of wheat reduces by 20%. How many Kilograms of wheat can now be purchased at the new price with an amount that was sufficient to buy 120 kg at the earlier price?

a. 140 Kg b. 144 Kg c. 150 Kg d. 100 Kg

Q22: The population of a town increases at the rate of 10% every year. If the present population is 423500, and 2 years ago children formed 5% of the total population, find the number of children in the town 2 years ago?

a. 17500 b. 35000 c. 3, 50,000 d. 175000

Q23: In a market a company A which had sales of 25,000 units had a 20% market share on volume basis. If the company B has a 45% share in the same market, find the number of units sold by company B.

a. 55000 b. 50000 c. 56225 d. 56250

Q24: In 2013, the total market grew by 15% to reach a total sales of Rs.460000. Find the difference between the sales in 2013 to that in 2012?

a. 55000 b. 60000 c. 54000 d. 69000

Q25: A person is getting a salary of Rs.18 lacs per annum. If he desires to get a jump of around 23-35% in a new job, find the difference in the minimum and maximum amounts that he expects to get?

a. Rs. 2 lac b. Rs.2.16 lac c. Rs.3 lac d. Rs.3.5 lac

Q26: The first lot of production in a factory has a reject rate of 5%. The amount of production in the first and second lots is in the ratio 3:4. If the total production is 10,50,000 and its is aimed to get a maximum reject rate of 7%, find the approximate value of the maximum reject rate that the factory can afford in the second lot of production?

a.20% b. 10% c. 8.5% d. 5%

Q27: The length of a rectangle increases by 4.75%. By what % should the breadth decrease so that the overall area remains constant?

a.4.75% b. 5% c. 5.25% d. Cannot be Determined

Q28: The price of an item increased by 20% in the first month and decreased by 15% in the subsequent month. If the new price after the 2 changes is 8160, find the price after the 20% increase became effective?

a. 9600 b. 8000 c. 8540 d. 9000

Q29: If 65% of X is the same as 50% of Y, find the relation between X and Y?

a. X=1.3Y b. X=0.77Y c. 0.77X=Y d. X=1.5Y

Q30:In an election between two candidates ,one got 55% of the total valid votes ,20% of the votes were invalid. If the total number of votes was 7500 ,the number of valid votes that the other candidate got was:

a.2700 b.2900 c. 3000 d. 3100

Q31:1100 boys and 700 girls are examined in a test, 42% of the boys and 30% of the girls pass. The percentage of the total who failed is:

a. 58 b. c.64 d. 78