

### 8. Comparing Quantities

- Q 1 When 5% sale tax is added on the purchase of a bedsheet of Rs 300, find the buying price or the cost price of the bedsheet.  
Mark (1)
- Q 2 Find the ratio of the speed of a car 60 km/hr to the speed of a scooter 30 km/hr.  
Mark (1)
- Q 3 Find the ratio of 5 m to 10 km.  
Mark (1)
- Q 4 Convert the ratio 4 : 5 to percentage.  
Mark (1)
- Q 5 76% of 50 students are good in English. How many students are not good in English?  
Mark (1)
- Q 6 A table fan is bought for Rs 560 and expenses of Rs 40 are made on its repairs. It is sold at a profit of 5%. Find the selling price.  
Mark (1)
- Q 7 A man got 10% increase in his salary. If his original salary was Rs 30,000, find his new salary.  
Mark (1)
- Q 8 Find the amount on a principal of Rs 2000 for 2 years at 10% per annum compounded annually. Also find the compound interest.  
Mark (1)
- Q 9 An item marked at Rs 640 is sold for 560. What is the discount and discount%?  
Mark (1)
- Q 10 The price of a car was Rs 2,60,000 last year. It has increased 15% this year. What is the new price?  
Mark (1)
- Q 11 A table is sold at Rs 5000 after allowing a discount of 12.5%. Find its marked price.  
Mark (1)
- Q 12 Ram had Rs 400 left after spending 60% of his money. How much did he have in the beginning?  
Marks (2)
- Q 13 Shalu bought a water cooler for Rs 1100 including a tax of 10%. Find the price of the water cooler before the tax was added.  
Marks (2)
- Q 14 On selling a fan for Rs 810, Sunil gains 8%. For how much did he purchase it?  
Marks (2)
- Q 15 A scooter was bought at Rs 32,000. Its value depreciated at the rate of 8% per annum. Find its value after one year.  
Marks (2)

Q 16 Find the compound interest on Rs 1,60,000 for 2 years at 10% per annum when compounded semi-annually.  
Marks (2)

Q 17 If the cost price of 10 greeting cards is equal to the selling price of 8 greeting cards, find the gain or loss%.  
Marks (2)

Q 18 Rishi bought a wrist watch for Rs 2200 and sold it for Rs 1980. Find his gain or loss%.  
Marks (2)

Q 19 A cricket team won 10 matches out of the total matches they played. If their win percentage was 40, then how many matches did they play in all?  
Marks (2)

Q 20 A shopkeeper offers his customers 10% discount and still makes a profit of 26%. What is the actual cost of an article marked Rs 280?  
Marks (3)

Q 21 A person sells an article for Rs 550, gaining  $\frac{1}{10}$  of its C.P. Find gain%.  
Marks (3)

Q 22 Rahul bought an air conditioner for Rs 22,000 including a tax of 10%. Find the price of the air conditioner before VAT was added.  
Marks (3)

Q 23 Harish sold a bicycle at 8% gain. Had it been sold for Rs 75 more, the gain would have been 14%. Find the cost price of the bicycle.  
Marks (3)

Q 24 Shruti borrows Rs 12,000 at 10% per annum for 3 years at simple interest and Shalini borrows the same amount for the same period at 8% per annum compounded annually. Who pays more interest and by how much?  
Marks (3)

Q 25 Mr. Kashiv sold his old chair at a loss of 15%. If he had sold it for Rs. 800 more, he would have received a profit of 5%. Find the cost price of the table.  
Marks (4)

Q 26 Rakesh bought a watch for Rs. 800 and sold it for Rs. 1000. Mukesh bought a car for Rs. 4,00,000 and sold it for Rs. 4,20,000. Who made a better sale, Rakesh or Mukesh?  
Marks (4)

Q 27 A washing machine was sold for Rs. 5760 after giving successive discounts of 15% and 10% respectively. What was the marked price?  
Marks (4)

Q 28 The marked price of a television is 25% more than the cost price. It is sold at a discount of 10%. If the marked price is Rs. 12,000, then find the cost price, selling price and the profit. What will be the percentage of profit?  
Marks (4)

Q 29 In how much time will the simple interest on Rs. 3,500 at the rate of 6% per annum be the same as simple interest on Rs. 4,000 at 10.5% per annum for 4 years?

Marks (4)

Q 30 A man sold two of his buffaloes for Rs 20,000 each. On one, he made a profit of 5% and on the other, he lost 10%. Find his overall profit% or loss%.

Marks (5)

Q 31 Find the amount and compound interest on Rs 20,000 for 1.5 years at 10% per annum compounded half yearly. Would this interest be more than the interest he gets if it was compounded annually?

Marks (5)

Q 32 If 60% people speak Spanish, 30% speak English and the remaining speak other language, then what percent of the people speak other languages? If the total population is 50 lakhs, find the exact number of people who speak each type of language?

Marks (5)

#### Most Important Questions

Q 1 Ratio is a means of comparing quantities of similar kinds. (T/F)

Q 2 Is  $2:4 = 1:2$ ?

Q 3 Percentages are a means of comparison. (T/F)

Q 4 Increase in price = old price + increase (True/False)

Q 5 Discount = \_\_\_\_\_ - \_\_\_\_\_

Q 6 Find the discount price of a skirt with a price of Rs 200 and a discount of 25%. What will be the sale price.

Q 7 What will be the price of petrol if its price now is Rs 50 and the hike is expected to be 12%?

Q 8 What will be the price of rice if its price now is Rs 25/kg and the reduction is expected to be 8 %?

Q 9 Convert into percentage: - a) 3 : 4

Q 10 What percent of the total distance of 100km is 22km?

Q 11 If M.P = Rs 650 and discount = 10% Find Sale Price

Q 12 A fan of M.P of Rs 1500 is sold for Rs 1080 after allowing a certain discount. Find the rate of discount

Q 13 A shirt with marked price Rs 1500 was sold to a customer for Rs 1080. Find the rate of discount allowed on the shirt.

Q 14 A team won 6 matches out of total that they played. If their winning percentage is 60 percent, what is the total number of matches they played? How many did they lose?

Q 15 What price should Kavita mark on an item, which costs her Rs 2200 so as to gain 26% after allowing a discount of 12%

Q 16 A cycle merchant allows 25% discount on the marked price of the cycle and still makes a profit of 20%. If he gains Rs 360 over the sale of one cycle find M.P of the cycle.

Q 17 A shopkeeper offers his customers 10% discount and still makes a profit of 26%. What is the actual cost to him of an article marked Rs 280.

Q 18 0.6 % can be expressed as

Q 19 
$$\text{Gain\%} = \frac{\text{Gain}}{\text{S.P}} \times 100\%$$

Q 20 
$$\text{Discount} = \frac{\text{M.P.} \times \text{Discount\%}}{100}$$

Q 21 
$$\text{Loss\%} = \frac{(\text{C.P.} - \text{S.P.})}{\text{C.P.}} \times 100\%$$

Q 22 If M.P = Rs x and discount = y%. Find S.P

Q 23 If C.P = Rs X and loss = A% Find S.P.

Q 24 If S.P = Rs. Y and Gain = B% find C.P

Q 25 Total Bill amount = Bill amount + Sales Tax% of (bill amount) (T/F)

Q 26 Price including VAT = \_\_\_\_\_.

Q 27 To calculate the compound interest with the help of simple interest the Principal Amount of second year = \_\_\_\_\_

Q 28

If Principal Amount = P, Rate of Interest = r%, Time period = n years  
Then compound Interest will be = \_\_\_\_\_

Q 29 The Difference between the original principal and last amount is said to be \_\_\_\_\_

Q 30 The time period after which interest is added each time to form a new principal is said to be \_\_\_\_\_

Q 31 What is the formula to calculate Simple interest?

Q 32 Write the formula for computing price including Sales Tax.

Q 33 A man purchased an article for Rs1000. He sold it by gaining two-fifth of its cost price. Find his S.P. of article.

Q 34 C.P = Rs. 225 , overhead charges = 15, S.P = Rs 300. Find loss or profit percent

Q 35 A fruit seller purchased 6 oranges for a rupee and sold them at the rate of Rs 2.50 per dozen, find his gain or loss% .

Q 36 Find the Simple interest of Rs 8500 for 2 years at 8% p.a.

Q 37 Find the Compound interest on Rs 5000 for 1 yr at 8% p.a. compounded annually.

Q 38 Find the amount on Rs 16000 for 3 yrs at 5% p.a. compounded annually.

Q 39 The sale price of an article including the sales tax is Rs 616. The rate of sales tax is 10%. If the shopkeeper has made a profit of 12% then find the cost price.

Q 40 Find the Compound Interest on Rs 6400 for 2yrs compounded annually at  $7\frac{1}{2}\%$  p.a.

Q 41 Find the amount of Rs 12000 after 2yrs, compounded annually, the rate of interest being 5% p.a. during the 1<sup>st</sup> yr and 6% p.a. during the 2<sup>nd</sup> yr.

Q 42 If the C.P of 10 chairs be equal to S.P of 16 chairs. Find gain or loss percent

Q 43 Sabena bought 16 dozen-ball pens and sold them at a loss equal to S.P of 8 ball pens. Find her loss%

Q 44 Find the difference between the compound interest and the simple interest on Rs 32000 at 12% p.a. for 3 yrs.

Q 45 A charity purchased 100 blankets at Rs 2000 each. They found that 10 blankets were defective and they sold these at Rs 1200 each. At what rate should they sell the remaining blankets so as to gain 14% on the whole?

Q 46 Rajan bought two buffaloes for Rs 30000. By selling one at a loss of 15% and other at a gain of 19%, he found that selling price of both buffaloes is the same. Find the C.P of each.

Q 47 A man sold two articles at Rs 25920 each. These were sold at 8% gain and 4% loss respectively. Find the gain or loss present in the whole transaction.

Q 48 In how much time will a sum of Rs 1000 amount to Rs 1331.20 at 10% p.a. Compound interest?

Q 49 At what rate % p.a. will a sum of Rs 7500 amount to Rs 8427 in 2 yrs, compounded annually?

Q 50 Semi annual means \_\_\_\_\_.

Q 51 Quarterly means every \_\_\_\_\_ months in a year.

Q 52 There are \_\_\_\_\_ conversion periods when the interest is computed half-yearly.

Q 53 There are \_\_\_\_\_ conversion periods when the interest is computed quarterly.

Q 54 What is the formula for finding increased population during n years?

Q 55 If the growth rate of a company's employees is r% every year and there head count in 2004 was x million, find their head count in 2009?

Q 56 If the value of a car depreciates by 6 % each year and its current value is 3 lakhs, find its value the next yr.

Q 57 When the interest is calculated semi-annually, the rate of interest of each conversion period is \_\_\_\_\_ & the time period gets \_\_\_\_\_.

Q 58 When the interest is calculated quarterly, the rate of interest of each conversion period becomes \_\_\_\_\_ & the time period becomes \_\_\_\_\_.

Q 59 Compound Interest formula is applicable in following cases (T/F).

- a) To calculate Increase/Decrease in population.
- b) Calculating value of an item increasing/decreasing over a number of years.

Q 60 What will be the compound interest on Rs1000 at the rate of 8% per annum for 1 and  $\frac{1}{2}$  years when interest is compounded quarterly.

Q 61 Find the compound interest on Rs14,000 at the rate of 12% per annum for 1 and  $\frac{1}{2}$  years when interest is compounded semi-annually.

Q 62 Rakesh bought a scooter for Rs 42,000. If its value decreases by 8% every year, find its value at the end of 2 years.

Q 63 Find the amount to be paid on a loan of Rs 50,000 for 3 years at 12% per annum compounded semi-annually.

Q 64 The bacteria in our hands grow at the rate of 20% every hour. What will be their count after 3 hrs if their initial count is 5 lakhs.

Q 65 The population of the world in 2008 is 6 billion. It increases at a rate of 1.5% every year. What will be the population 2 years from now? Also estimate what would have been the population in 2006?