UNIT II - COMMERCIAL ARITHMETIC

Simple Interest and Compount Interest ⟨8⟩

1m	2m	3m	4m	5m	6m	Total
–	1(K)	1(K)	–	1(A)	–	10

1 MARK QUESTIONS

1. Find the interest on ₹1,500 at 4% p.a for 145 day.   (Knowledge)
2. What is the simple interest for 245 days for ₹6000 at 8% p.a simple interest.
3. What is the simple interest on ₹650 for 14 weeks at 6% p.a?
4. Priya invested ₹6,000 for 3 years and received ₹1,080 as interest. Find the rate of interest.
5. What principal will amout to ₹46,000 in 7 years at 12% p.a?

2 MARKS QUESTIONS

1. In what time will the simple interest on ₹500 at 6% be equal to the interest on ₹540 for 8 years at 5%?
2. If the simple interest on a certain sum of money after $6\frac{1}{4}$ years is $\frac{3}{8}$ of principal, what is the rate of interest p.a?
3. If 500 amounts to ₹725 at 9% simple interest in sometime. What will ₹600 amount to at 11% in the same time.
4. A certain sum of money amounts to ₹24,200 in 2 years at 10% compound interest. Find the sum.
5. On what sum will the compound interest at 5% p.a. for two years compounded annually be ₹1640?
6. If the nominal rate is 13% and frequency of computing interest is once in 4 months. Find the effective rate of interest.

3 MARKS QUESTIONS

1. The simple interest on a certain sum of money is $\frac{4}{25}$ th of the sum and the rate percent equals the number of years. Find the rate of interest.
2. A sum of money doubles itself in 12 years, 6 months. In how many years will it triple itself?
3. The difference between simple interest received from two diferent sources on ₹2500 for 3 years is 375. Find the difference in their rate of interest.
4. Find the compound interest on ₹6000 for 3 years at 5% p.a. If interest is calculated half-yearly.

5. ₹16000 invested in 10% p.a compounded semi-annually amounts to ₹18522. Find the time period of investment.

6. The cost of refrigerator is ₹27,000. If it depreciates at the rate of 8%, find its value after 4 years.

7. In 2010 the population of a town was ₹2,70,000. If the rate of increase is 45 per thousand of the population, find the estimated population for the year 2025.

8. The population of a town was ₹40,000. If the annual birth rate is 8% and death rate is 2%. Calculate the population after 3 years?

5 MARKS QUESTIONS

1. If a certain sum of money is doubled in 8 years at a given simple interest. In how many years will it be four times?

2. A sum was put at simple interest at a certain rate for 4 years. If it had been put at 2% higher rate it would have fetched ₹56 more. Find the sum.

3. A lent ₹5000 to B for 2 years and ₹3000 to C for 4 years on simple interest at the same rate and received ₹2200 in all from both of them as interest. Find the rate of interest.

4. A person invested an amount of ₹12,000 at the rate of 10% p.a S.I and another amount at the rate of 20% p.a S.I. The total interest earned at the end of one year is eqal to 14% of the total amount invested. Find the total amount invested.

5. A sum of money placed at compound interest doubles itself in 4 years. In how many years will it amount to eight times.

6. A sum of money invested at compound interest amounts in 2 years to ₹4410 and in 3 years to ₹4630.5. Find the rate of interest and the original sum.

7. If ₹2000 amounts to ₹2315.25 at compound interest in 3 years, find the rate of interest.

8. Find the compound interest on ₹7500 at 14% for 4½ years while interest is calculated half yearly.

9. The bacteria in a culture grew by 8% in the first hour decreases by 8% in the second hour, and again increases by 7% in the third hour. If at the end of the third hour the count of bacteria is 12170 thousands, find the original count (in thousands) of bacteria in sample.

10. A machine worth of ₹12000 is depreciated at the rate of 10% a year. It was sold eventually as waste metal for ₹200. Find the number of years the machine was in use.

11. The scrap value obtained by a selling a machine after 10 years of purchase is 19660.8. If the machine depreciated at the rate of 20% p.a. Find the cost at which the machine was purchased 10 years ago.

12. A person borrows a certain sum of money at 3% p.a. simple interest and invests the same at 5% p.a. compound interest compounded annually. After 3 years he makes a profit of ₹1082. Fidn the amount he borrowed.

13. If the difference between simple interest and compound interest for 3 years at 2.5% p.a is ₹625, find the sum invested.

14. A person borrowed 65,000 at 8% p.a S.I for 4 years and lent out the money for 10% C.I for 4 years. How much did the person gain?

15. A person invested equal amounts, one at 6% S.I and other at 5% C.I. If the former earns ₹437.5 more as interest at the end of two years. Find the total amount invested.

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