**TYPE/TOPIC OF QUESTIONS:** COMPOUND INTEREST USING FORMULA AND WITHOUT FORMULA

1. Find the compound interest on $10,000 if Ron took loan from a bank for 1 year at 8 % per annum, compounded quarterly.
2. Find the amount and the compound interest on $ 1,00,000 compounded quarterly for 9 months at the rate of 4% per annum.
3. In what time will a sum of $ 8,000 become $ 9,261 at the interest rate of 10% per annum if the interest is compounded six-monthly?
4. At 4% per annum, find the compound interest on a certain sum of money for 1 year, compounded six-monthly, when the simple interest on this sum of money for 2 years at the rate of interest 4% per annum is $ 450.
5. Calculate the compound interest on $ 3500 at 6% per annum for 3 years, the interest being compounded half-yearly.
6. The simple interest on a sum of money for 2 years at 6% per annum is $ 900. What will be the compound interest on that sum at the same rate and for the same period?
7. The difference between the compound interest and the simple interest on a certain sum for 2 years at 5% per annum is $ 40. Find the sum.

**TYPE/TOPIC OF QUESTIONS:** VARIABLE RATES OF COMPOUND INTEREST

8. A sum of $ 4,000 is invested at 8% compound interest for the first year and 10% for the second year. Find the amount after 2 years.
9. If the rates of compound interest for the first and the second year be 7% and 8% respectively, then find the compound interest on $ 6000 for 2 years.
10. Calculate the amount and the compound interest on $ 7,500 is 2 years when the rates of interest for successive years are 8% and 10% respectively.
11. What sum of money will amount to $ 5,724 in 2 years if the compound interest rates are 6% and 8% for successive years?
12. Calculate the compound interest accrued on $ 6,000 in 3 years, compounded yearly, if the rates for the successive years are 5%, 8% and 10% respectively.
13. If the rates of compound interest for the first and the second year be 8% and 7% respectively, then find the compound interest on $ 6000 for 2 years.
14. Calculate the amount of $ 15,000 in 2 years, compounded annually, if the rates for the successive years are 8% and 10% respectively.
15. Calculate the amount and the compound interest on $ 12,500 is 3 years when the rates of interest for successive years are 8%, 10% and 10% respectively.

**TYPE/TOPIC OF QUESTIONS:** RATE OF GROWTH AND DEPRECIATION

16. The price of a car is $ 300000. The value of the car depreciates by 20% at the end of the first year and after that it depreciates by 25% every year. What will be the value of the car after 3 years?
17. The value of as machine depreciated for two years at the rate of 10$ per year and then in the third year it increased by 15%. Find the original value (initial cost of the machine), if its value at the end of 3 years is $ 41,917.50.
18. A man bought a flat at $ 1000000. The price of the flat appreciates by 20% in the first year after purchase. Due to some reason, its price in subsequent years goes on depreciating at the rate of 10% every year. If he sells the flat after 3 years, what will be his profit or loss from it?
19. The population of a town decreased by 12% during 1998 and then increased by 8% during 1999. Find the population of the town, at the beginning of 1998, if at the end of 1990 its population was 2,85,120.
20. The value of a car depreciates every year at the rate of 10%. It was purchased for $ 15000 when new and it was sold for $ 10935. Find the number of years the car was used before selling.