# **Concept of Compound interest**

### A. Choose the correct answer:

1. The formula for amount when interest is compounded annually is:

a) A = P $\left(1 + \frac{r}{100}\right)^t$	b) A = P $\left(1 - \frac{r}{100}\right)^{1}$
c) A = P $\left(1 + \frac{rt}{100}\right)$	d) A = P $\left(1 - \frac{rt}{100}\right)$

2. If ₹5000 is invested at 10% per annum compounded annually for 2 years, the amount is:

a) ₹6000	b) ₹6050
c) ₹6100	d) ₹6150

#### 3. In compound interest, interest is calculated on:

- a) Only Principal b) Principal and Previous Interest
- c) Only Interest d) Only Rate
- 4. The compound interest on ₹4000 at 5% per annum for 2 years, compounded annually is:

a) ₹400	b) ₹410
c) ₹420	d) ₹430

5. If the principal is ₹2000, rate is 10% per annum compounded yearly, the amount after 1 year is:

a) ₹2100	b) ₹2200
c) ₹2300	d) ₹2400

#### B. Write the Missing Terms to Complete the Sentences:

- 1. Compound Interest = Amount \_\_\_\_.
- 2. The principal for the second year in compound interest becomes \_\_\_\_\_.
- 3. In compound interest, interest for each year is calculated on \_\_\_\_\_ amount.
- 4. For 2 years compounded annually, Amount =  $P \times \left(1 + \frac{r}{100}\right)^{1}$ .
- 5. When the rate is 5% per annum, in 2 years, amount becomes \_\_\_\_\_ times the principal.

### C. Figure out the answers to these questions:

1. Find the compound interest on ₹5000 for 2 years at 8% per annum compounded annually.

- A sum of ₹10000 is compounded annually at 5% per annum. Find the amount after 2 years.
- 3. Find the compound interest on ₹8000 for 3 years at 10% per annum compounded annually.
- A sum amounts to ₹12100 in 2 years at 10% compounded annually. Find the principal.
- 5. Find the difference between the simple interest and compound interest on ₹4000 for 2 years at 5% per annum.

## D. Mark each sentence with a True ( $\checkmark$ ) or False (X):

- 1. In compound interest, the principal remains the same every year.
- 2. Compound interest is always more than simple interest for more than 1 year.
- 3. Compound interest for 1 year is equal to simple interest for 1 year.
- 4. The formula A =  $P\left(1 + \frac{r}{100}\right)^{t}$  is used to calculate amount in compound interest.
- 5. If interest is compounded yearly, then interest is added to principal every year.

## E. Challenge yourself with these questions:

- 1. Find the amount and compound interest on ₹15000 for 2 years at 12% per annum compounded annually.
- 2. A sum of ₹25000 becomes ₹30250 in 2 years compounded annually. Find the rate of interest.
- 3. Find the compound interest on ₹6400 at 5% per annum for 2 years.
- 4. The amount after 2 years at 10% per annum compounded annually is ₹12100. Find the compound interest.
- 5. A sum of money is compounded annually at a rate of 8% per annum. Find the amount after 3 years if principal is ₹5000.