Computation of Compound Interest

A. Choose the correct answer:

1. **Find the amount when ₹5000 is invested at 8% per annum compounded annually for 2 years.**
   a) ₹5832 b) ₹5830
   c) ₹5800 d) ₹5900
2. **If the principal is ₹6400, rate is 5% per annum, and time is 2 years, the compound interest is**
   a) ₹640 b) ₹656
   c) ₹660 d) ₹680
3. **A sum of ₹4000 amounts to ₹4410 in 1 year when compounded annually. Find the rate percent.**
   a) 8% b) 9%
   c) 10% d) 11%
4. **Find the compound interest on ₹2000 at 10% per annum for 1 year compounded half-yearly.**
   a) ₹205 b) ₹210
   c) ₹220 d) ₹225
5. **Which one is the correct formula for amount when compounded annually?**
   a) A = $P\left(1 - \frac{r}{100}\right)^t$ b) A = $P\left(1 + \frac{r}{100}\right)^t$
   c) A = $P\left(1 + \frac{rt}{100}\right)$ d) A = $P\left(1 - \frac{rt}{100}\right)$

B. Write the Missing Terms to Complete the Sentences:

1. Compound Interest for 1 year is same as ____ Interest for 1 year.
2. When interest is compounded half-yearly, rate is divided by ____.
3. If Principal = ₹5000, Rate = 6% per annum, Time = 2 years, then Amount = ₹____.
4. Compound Interest = Amount - ____.
5. For 2 years, Amount = P × $\left(1 + \frac{r}{100}\right)^{\cdots\cdots}$.

C. Figure out the answers to these questions:

1. Find the amount and compound interest on ₹10000 for 2 years at 5% per annum compounded annually.

2. Calculate the compound interest on ₹6400 for 1.5 years at 10% per annum compounded half-yearly.
3. A sum of ₹2500 is invested at 8% per annum compounded annually. Find the amount after 3 years.
4. The compound interest on ₹2000 in 2 years is ₹420. Find the rate of interest compounded annually.
5. Find the difference between simple interest and compound interest on ₹8000 at 5% per annum for 2 years.

D. Mark each sentence with a True (✔) or False (✗):

1. Compound interest is always greater than simple interest when time is more than 1 year. ____
2. In half-yearly compounding, the time is doubled. ____
3. In compound interest, interest is added to principal after every period. ____
4. Compound Interest for 1 year is different from Simple Interest for 1 year. ____
5. If principal is ₹10000 and rate is 10%, the amount after 1 year is ₹11000. ____

E. Challenge yourself with these questions:

1. Find the compound interest on ₹3600 for 3 years at 12% per annum compounded annually.
2. A man invested ₹15000 at 8% per annum compounded annually. Find the amount after 2 years.
3. The compound interest on ₹10000 for 2 years is ₹1025. Find the rate per annum.
4. Find the amount and compound interest when ₹5000 is compounded half-yearly at 8% per annum for 1 year.
5. A sum of ₹6400 becomes ₹7056 in 2 years at compound interest. Find the rate of interest.