## TEXT BOOK EXERCISE 7.6

***Q. 1. Find compound interest on ₹ 14,000 for 2 years at 10% per annum compounded annually.***

**Solution.** Here, Principal (P) = ₹ 14,000
Time (T) = 2 years
Rate (R) = 10% per annum

We know that

$$\text{Amount (A)} = P\left(1+\frac{R}{100}\right)^T$$

$$= ₹\ 14000\left(1+\frac{10}{100}\right)^2$$

$$= ₹\ 14000 \times \left(\frac{11}{10}\right)^2$$

$$= ₹\ 14000 \times \frac{11}{10} \times \frac{11}{10}$$

$$= ₹\ 16940$$

Hence, Compound Interest

$$= A - P = ₹\ 16940 - ₹\ 14{,}000$$

$$= ₹\ 2940$$ **Ans.**

**Q. 2. Find compound interest on ₹ 1000 for 3 years at 20% per annum compounded annually.**

**Solution.** Here, Principal (P) = ₹1000

Rate (R) = 20% per annum

Time (T) = 3 years

We know that

$$\text{Amount (A)} = P\left(1+\frac{R}{100}\right)^T$$

$$= ₹\ 1000\left(1+\frac{20}{100}\right)^3$$

$$= ₹\ 1000\left(\frac{120}{100}\right)^3$$

$$= ₹\ 1000\left(\frac{6}{5}\right)$$

$$= ₹\ 1000 \times \frac{6}{5} \times \frac{6}{5} \times \frac{6}{5}$$

$$= ₹\ 1728$$

Hence, Compound Interest (C.I.)

$$= A - P = ₹\ 1728 - ₹\ 1000$$

$$= ₹\ 728$$ **Ans.**

**Q. 3. Multiple Choice Questions :**

(*i*) $\text{S.I.} = \dfrac{P \times ..... \times .....}{100}$

(*a*) R, S (*b*) R, T

(*c*) A, T (*d*) A, R.

(*ii*) S.I. on ₹ 2000 for 1 year at 10% p.a. is :

(*a*) ₹ 2000 (*b*) ₹ 200

(*c*) ₹ 20 (*d*) ₹ 2.

(*iii*) Compound interest = Amount – .....

(*a*) S.I. (*b*) Profit

(*c*) Rate of interest (*d*) Principal.

(*iv*) Formula for calculating amount when compounded annually is :

(*a*) $P\left(1+\frac{T}{100}\right)^R$ (*b*) $R\left(1+\frac{P}{100}\right)^T$

(*c*) $P\left(1+\frac{R}{100}\right)^T$ (*d*) $R\left(1+\frac{T}{100}\right)^P$

(*v*) In case of simple and compound interest for a period more than one year.

(*a*) S.I. < C.I. (*b*) C.I. > S.I.

(*c*) S.I. = C.I. (*d*) None of these.

**Ans.** (*i*) (*b*) R, T, (*ii*) (*b*) ₹ 200,

(*iii*) (*d*) Principal,

(*iv*) (*c*) $P\left(1+\frac{R}{100}\right)^T$,

(*v*) (*b*) C.I. > S.I.