



Compound Interest Ex 14.1 Q9

**Answer :**

$$P = \text{Rs } 8,000$$

$$T = 9 \text{ months} = 3 \text{ quarters}$$

$$R = 20\% \text{ per annum} = 5\% \text{ per quarter}$$

$$A = 8,000 \left( 1 + \frac{5}{100} \right)^3$$

$$= 8,000(1.05)^3$$

$$= 9,261$$

The required amount is Rs 9,261.

Now,

$$CI = A - P$$

$$= \text{Rs } 9,261 - \text{Rs } 8,000$$

$$= \text{Rs } 1,261$$

Compound Interest Ex 14.1 Q10

**Answer :**

$$SI = \frac{PRT}{100}$$

$$\therefore P = \frac{SI \times 100}{RT}$$

$$= \frac{200 \times 100}{10 \times 2}$$

$$= \text{Rs } 1,000$$

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

$$= 1,000 \left( 1 + \frac{10}{100} \right)^2$$

$$= 1,000(1.10)^2$$

$$= \text{Rs } 1,210$$

Now,

$$CI = A - P$$

$$= \text{Rs } 1,210 - \text{Rs } 1,000$$

$$= \text{Rs } 210$$

**Answer :**

To calculate the interest compounded quarterly, we have :

$$\begin{aligned} A &= P \left( 1 + \frac{R}{400} \right)^{4n} \\ &= 64,000 \left( 1 + \frac{10}{400} \right)^{4 \times 1} \\ &= 64,000 (1.025)^4 \\ &= 70,644.03 \end{aligned}$$

Thus, the required amount is Rs 70,644.03.

Now,

$$\begin{aligned} CI &= A - P \\ &= \text{Rs } 70,644.025 - \text{Rs } 64,000 \\ &= \text{Rs } 6,644.03 \end{aligned}$$

\*\*\*\*\* END \*\*\*\*\*