

VIII, IIC PI

Solutions by Dev Anoop (Bathinda)

① P. = ₹ 8000, time = 1 year = 2 half years
rate = 10% pa = 5% h.y.

$$\begin{aligned} \text{amount} &= P \left(1 + \frac{r}{100}\right)^n \\ &= 8000 \left(1 + \frac{5}{100}\right)^2 \\ &= 8000 \times \frac{21}{20} \times \frac{21}{20} \\ &= ₹ 8820 \end{aligned}$$

$$\begin{aligned} \text{CI} &= A - P = 8820 - 8000 \\ &= ₹ 820 \end{aligned}$$

② P. = ₹ 31250, time = $1\frac{1}{2}$ year = 3 half years
rate = 8% pa = 4% h.y.

$$\begin{aligned} \text{amount} &= P \left(1 + \frac{r}{100}\right)^n \\ 14250 &= 31250 \times \frac{104}{100} \times \frac{104}{100} \times \frac{104}{100} \end{aligned}$$

$$\begin{aligned} \text{CI} &= ₹ 35152 \\ &= 35152 - 31250 \\ &= ₹ 3902 \end{aligned}$$