

## Solutions by Dev Anoop (Bathinda)

(14) time = 2 years, rate = 6% pa, CI - SI = 90  
let  $P = \text{Rs } 100x$

$$\begin{aligned} \text{SI for I/II year} &= \frac{prt}{100} \\ &= \frac{100x \times 6 \times 1}{100} \\ &= \text{Rs } 6x \end{aligned}$$

$$\begin{aligned} \text{CI for I year} &= \text{SI for I year} = \text{Rs } 6x \\ \text{CI for II year} &= \text{Rs } (6x + 90) \\ P_2 &= 100x + 6x \\ &= \text{Rs } 106x \end{aligned}$$

$$\text{CI}_2 = \frac{P_2 r t}{100}$$

$$6x + 90 = \frac{106x \times 6 \times 1}{100}$$

$$\Rightarrow 600x + 9000 = 636x$$

$$\Rightarrow 36x = 9000 \quad 250$$

$$\Rightarrow x = \frac{9000}{36} \quad 1500$$

$$\begin{aligned} \therefore \text{Principal} &= 100 \times 250 \\ &= \text{Rs } 25000 \end{aligned}$$