

## Solutions by Dev Anoop (Bathinda)

$$\textcircled{15} \quad \begin{array}{l} CI - SI = \text{Rs } 93, \text{ time} = 3 \text{ years} \\ \text{rate} = 10\% \text{ p.a.}, \text{ let } P = \text{Rs } 100x \end{array}$$

$$\begin{aligned} SI \text{ for 3 years} &= \frac{prt}{100} \\ &= \frac{100x \times 10 \times 3}{100} \\ &= \text{Rs } 30x \end{aligned}$$

$$\begin{aligned} \text{C.I. Amount} &= P \left(1 + \frac{r}{100}\right)^3 \\ &= 100x \left(\frac{110}{100}\right)^3 \\ &= 100x \times \frac{110}{100} \times \frac{110}{100} \times \frac{110}{100} \\ &= \text{Rs } 133.1x \end{aligned}$$

$$\begin{aligned} CI &= 133.1x - 100x \\ &= 33.1x \end{aligned}$$

acc to prob.

$$33.1x - 30x = 93$$

$$3.1x = 93$$

$$x = \frac{93 \times 100}{31}$$

$$\begin{aligned} \therefore \text{Principal} &= 100 \times 30 \\ &= \text{Rs } 3000 \end{aligned}$$