

VIII, ex 11B, P12

Solutions by Dev Anoop (Bathinda)

$$\textcircled{26} \text{ Bacteria count (I)} = 20000$$

$$R_1 = 10\% , R_2 = 10\% , R_3 = 10\%$$

Bacteria count final

$$= BC_1 \left(\frac{100+R_1\%}{100} \right) \left(\frac{100-R_2\%}{100} \right) \left(\frac{100+R_3\%}{100} \right)$$

$$= 20000 \left(\frac{110}{100} \right) \times \frac{90}{100} \times \frac{110}{100}$$

$$= 21780$$

$$\textcircled{27} \text{ Initial value of machine (IV)} = \text{Rs } 625000$$

$$R = 8\% \text{ p.a}$$

value of machine after 2 years

$$= IV \left(1 - \frac{R}{100} \right)^n$$

$$= 625000 \left(1 - \frac{8}{100} \right)^2$$

$$= 625000 \times \frac{92}{100} \times \frac{92}{100}$$

$$= \text{Rs } 529000$$

$$\textcircled{28} \text{ Initial value of scooter (IV)} = \text{Rs } 56000$$

$$\text{rate} = 10\% \text{ p.a} , \text{ time} = 3 \text{ years}$$

$$\text{value of scooter} = IV \left(1 - \frac{R}{100} \right)^n$$

$$= 56000 \left(1 - \frac{10}{100} \right)$$

$$= 56000 \times \frac{9}{10} \times \frac{9}{10} \times \frac{9}{10}$$

$$= \text{Rs } 40824$$