

7] How much should be deposited (present value) in an account paying 3.5% compounded semiannually in order to have an amount of \$1800 in 4 years.

$$P = ?? \quad , \quad r = \frac{3.5}{100} = .035 \quad , \quad S = 1800 \quad , \quad t = 4$$

$$S = P \left(1 + \frac{r}{2}\right)^{2t}$$

$$1800 = P \left(1 + \frac{.035}{2}\right)^{2 \times 4}$$

$$1800 = P(1.0175)^8$$

$$1800 = P(1.148)$$

$$\therefore P = \frac{1800}{1.148} = 1566 \$$$

8] What is the present value for \$6500 payable in 4 years at 12% interest compounded semiannually

$$P = ?? \quad , \quad S = 6500 \$ \quad , \quad t = 4 \text{ years} \quad , \quad r = \frac{12}{100} = .12$$

$$S = P \left(1 + \frac{r}{2}\right)^{2t}$$

$$6500 = P \left(1 + \frac{.12}{2}\right)^{2 \times 4}$$

$$6500 = P(1.06)^8 \rightarrow 6500 = P(1.59)$$

$$\therefore P = \frac{6500}{1.59} = 4078.18$$