18PWCSE1658 Shah Raza

No: Date: QUIZ # 2

Solution:

$i = 12.5\% = 0.125$

$N = 12$

$P = 16580$

To Find F for 1st P we have to shift it 6 years and for other we have to shift 2 years.

Approach 1:

$F_A = P(1+i)^N$

$F_A = 16580(1+0.125)^6$

$F_A = 16580(1.125)^6$

$F_A = 33607.66$

Approach 2:

$F_B = P(1+i)^N$

$F_B = 16580(1.125)^2$

$F_B = 20890.8$

$F_{\#} = F_A + F_B$

$F_{\#} = 33607.66 + 20890.8$

$F_{\#} = 54,498.46$ ——— (1)

$$F_A = F + 2F(1+i)$$

$$F_A = F + 3.125F$$

$$F_A = 4.125F \quad \longrightarrow (2)$$

Comparing (1) and (2)

$$4.125F = 54498.46$$

$$F = 13211.74$$

No: Date:

Quiz #4

Solution:

$A = 1658 \times 5 = 8290$

$i = 12.5\% = 0.125$

$N = 6$

As $P = A(P/A, i, N)$

$$P_q = \left[\frac{(1+i)^N - 1}{i(1+i)^N}\right]$$

$$P_q = \left[\frac{(1+0.125)^6 - 1}{0.125(1+0.125)^6}\right] \times 8290$$

$$P_q = \left[\frac{1.027}{0.2534}\right] \times 8290$$

$$P_q = 33574.5$$

$$P_0 = P_q + 2AP_4$$

First we have to shift P_q 9 times back and $P_4(2A)$ 4 times back

$$P = P_q(1+i)^{-N} + 2A(1+i)^{-N}$$

$$P = 33574.5(1.125)^{-9} + 2(8290)(1.125)^{-4}$$

$$= 33574.5(0.3464) + 16580(0.624)$$

$$= 11630.207 + 10345.92$$

$$P = 21976.127$$