## CHAPTER (3) HOMEWORK SOLUTION

### Problem (3-5)

\[ Q = 200 \times (P/F, 10\%, 4) \]
\[ = 200 \times 0.683 \]
\[ = 136.60 \]

### Problem (3-6)

**Using single payment factors:**

\[
P = 1400 \times (P/F, 10\%, 1) + 1320 \times (P/F, 10\%, 2) + 1240 \times (P/F, 10\%, 3) + 1160 \times (P/F, 10\%, 4) + 1080 \times (P/F, 10\%, 5)
\]
\[= 1272.74 + 1090.85 + 931.61 + 792.28 + 670.57 \]
\[= 4758.05 \]

### Problem (3-8)

\[ F = 8250, \ n = 4 \text{ semi-annual periods, } i = 4\%, \ P = ? \]

\[
P = F \times (1+i)^{-n} = 8250 \times (1.04)^{-4} = 8250 \times 0.8548 
\]= 7052.10

**Using interest tables:**

\[
P = F \times (P/F, 4\%, 4) = 8250 \times 0.8548 
\]= 7052.10
**Problem (3-14)**

Either:

\[ Q_{10} = Q_6 (F/P, 5\%, 4) \]  
\[ Q_{10} = P (F/P, 5\%, 10) \]  

Since \( P \) is known and \( Q_6 \) is not, solve Equation (2),

\[ Q_{10} = \$60 \times 1.629 = \$97.74 \]

GOOD LUCK