Assignment-

(Solutions)

1. This concept has been disc
in lecture 30. Please refe

2. Mole balance eqn:

$$F_{A0} - F_A + r_A V = 0 \quad \text{——— (1)}$$

Now, $F_{A0} = C_{A0}$

$= 5000$

$= 50$

Also, $F_A = 0.2 F_{A0}$

$r_A = -k C_A$ [rx
has
in
th

$\Rightarrow r_A = -k(0.2) C_{A0}$

$\therefore$ (1) $\Rightarrow$

$$F_{A0} - 0.2 F_{A0} - k C_A V = 0$$

$\Rightarrow 0.8 \cdot 500 \left(\frac{\text{mol}}{\text{h}}\right) - [20 \cdot 63 \left(\frac{1}{\text{h}}\right) \cdot$

$\Rightarrow V = 0.67\ m^3$.

3. This concept has been el
in lecture 30.