

IV.6

Rank 1 : $A_2 s \bar{h}_2(s) = \bar{F}_1(s) - \bar{F}_2(s)$

$$A_2 s \bar{h}_2(s) = \bar{F}_2(s) - \bar{F}_3(s)$$

(a) F₂ manipulation

F₂ manipulation

F₃ manipulation

$$F_2 = \alpha_1 F_1 ; F_3 = \alpha_2 h_2$$

$$\bar{F}_3(s) = \alpha_2 \bar{h}_2(s)$$

$$\bar{F}_2(s) = \alpha_1 \bar{h}_1(s)$$

$$\bar{F}_2(s) = \alpha_1 \bar{h}_1(s) \quad \bar{h}_1(s) = \frac{\bar{F}_1(s)}{A_1 s} - \frac{\bar{F}_2(s)}{A_1 s}$$

$$\bar{h}_1(s) = \frac{(1/\alpha_1)}{T_1 s + 1} \bar{F}_1(s)$$

$$\bar{F}_3(s) = \alpha_2 \bar{h}_2(s)$$

$$\bar{h}_2(s) = \frac{(1/\alpha_2)}{T_2 s + 1} \bar{F}_2(s)$$

Req

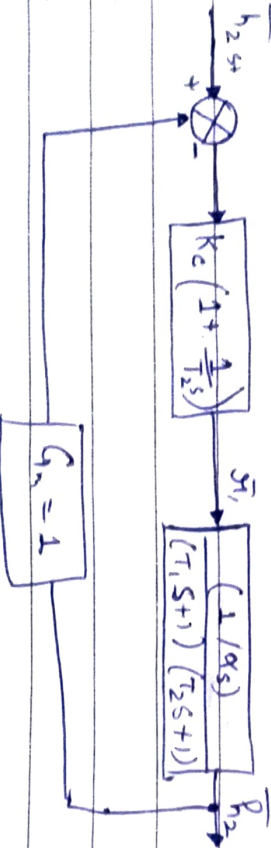
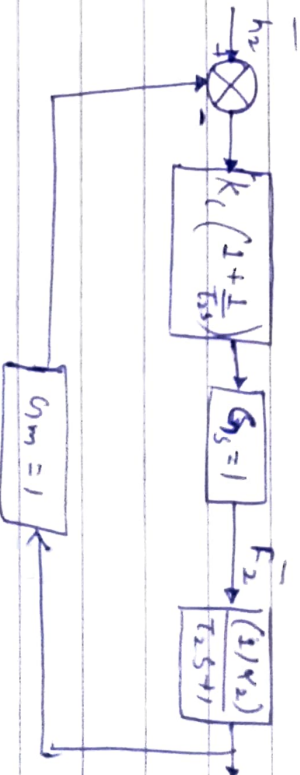
$$\bar{h}_1(s) = \frac{(1/\alpha_1)}{\left(\frac{A_1}{\alpha_1}\right)s + 1} \bar{F}_1(s)$$

$$\left(\frac{A_1}{\alpha_1}\right)s + 1$$

$$\bar{h}_2(s) = \frac{(\alpha_1/\alpha_2)}{\left(\frac{A_2}{\alpha_2}\right)s + 1} \bar{h}_1(s)$$

$$\left(\frac{A_2}{\alpha_2}\right)s + 1$$

$$= \frac{(1/\alpha_2)}{(T_1 s + 1)(T_2 s + 1)} \cdot \bar{F}_1(s)$$



$$T_1 = A_1/\alpha_1, \quad T_2 = A_2/\alpha_2$$