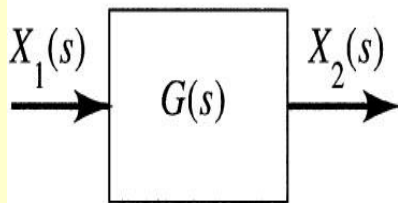


UNIT-1

(Lecture-4)

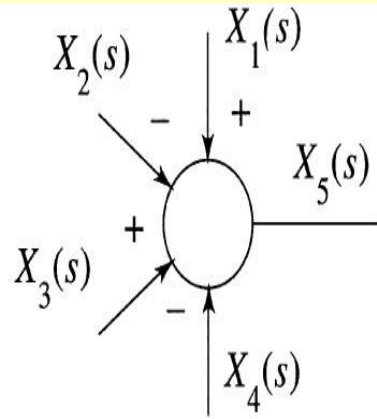
Block Diagrams



$$X_2(s) = G(s)X_1(s)$$

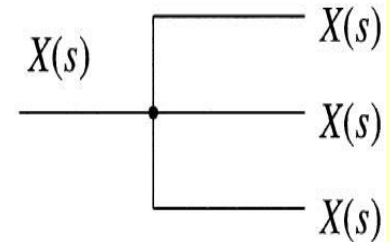
(a)

block



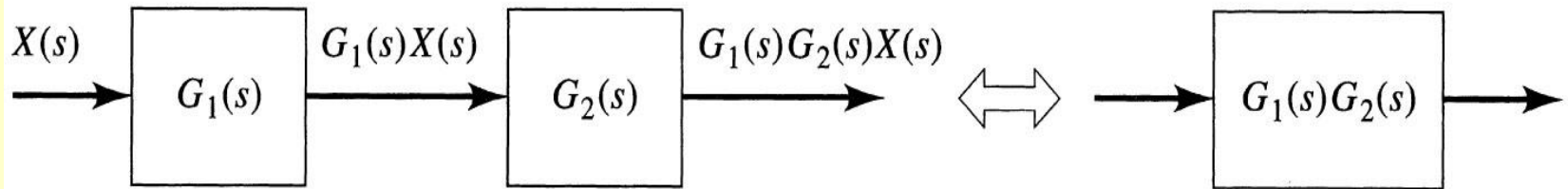
$$X_5(s) = X_1(s) - X_2(s) + X_3(s) - X_4(s)$$

(b) **summer**

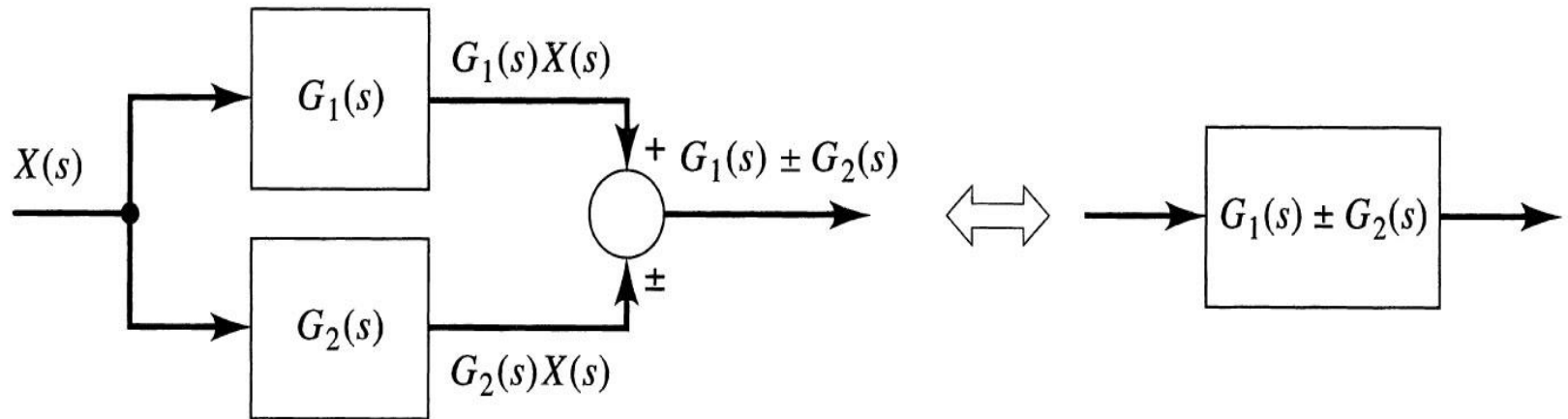


(c)

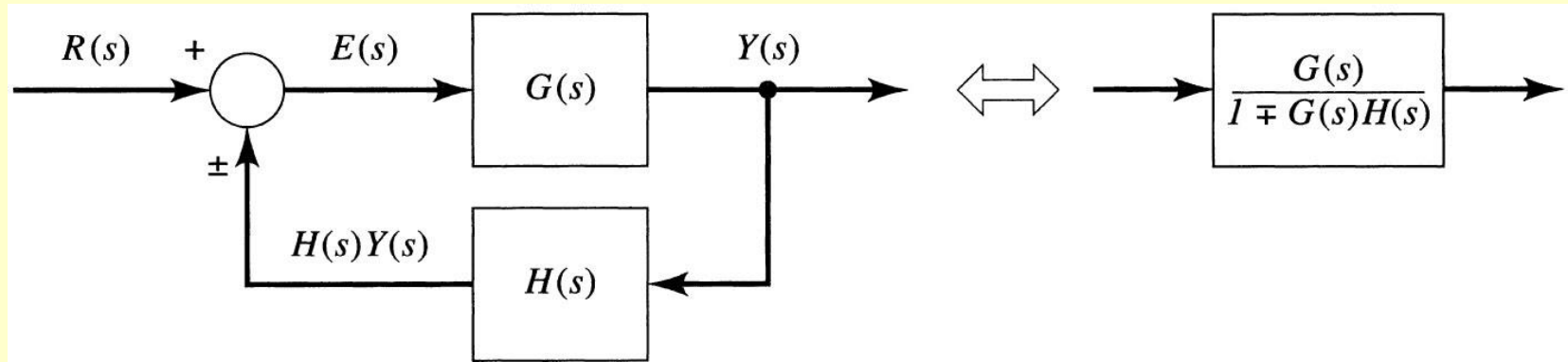
pickoff point



(a)



(b)



$$Y(s) = G(s)E(s)$$

$$E(s) = R(s) \pm H(s)Y(s)$$

$$Y(s) = G(s)[R(s) \pm H(s)Y(s)] = G(s)R(s) \pm G(s)H(s)Y(s)$$

$$T(s) = \frac{Y(s)}{R(s)} = \frac{G(s)}{1 \mp G(s)H(s)}$$