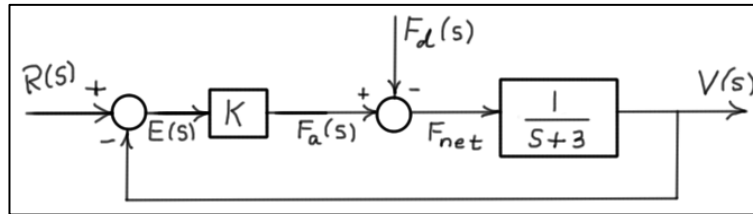


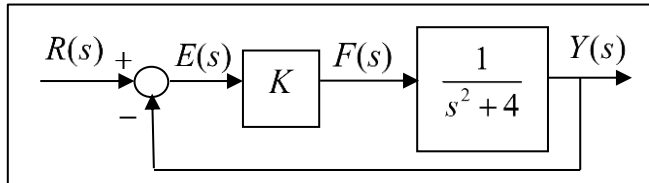
Introductory Control Systems

Exercises #6 – Transfer Functions from Closed Loop Equations Answers

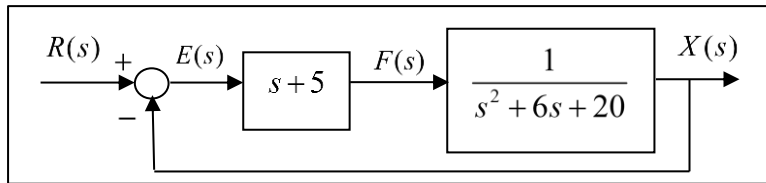
1.
$$\frac{V(s)}{R(s)} = \frac{K}{s+3+K}$$



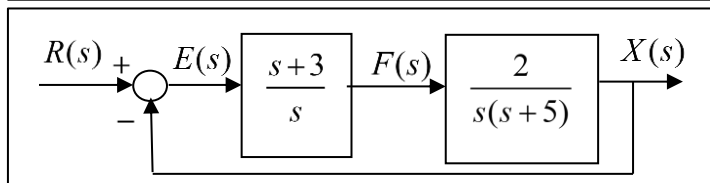
2.
$$\frac{Y(s)}{R(s)} = \frac{K}{s^2+(4+K)}$$



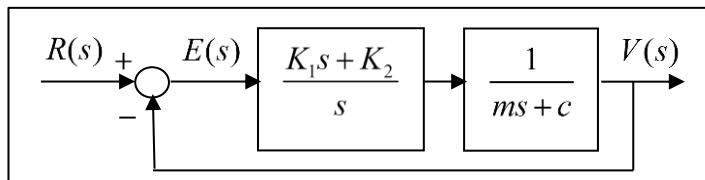
3.
$$\frac{X(s)}{R(s)} = \frac{s+5}{s^2+7s+25}$$



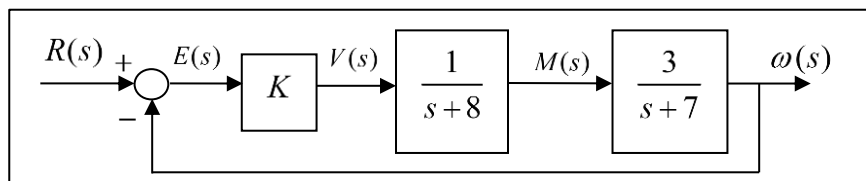
4.
$$\frac{X(s)}{R(s)} = \frac{2(s+3)}{s^3+5s^2+2s+6}$$



5.
$$\frac{V(s)}{R(s)} = \frac{K_1s+K_2}{ms^2+(c+K_1)s+K_2}$$



6.
$$\frac{\omega(s)}{R(s)} = \frac{3K}{s^2+15s+56+3K}$$



7.
$$\frac{Y(s)}{R(s)} = \frac{10}{(s+3)(s^2+9)+10}$$

