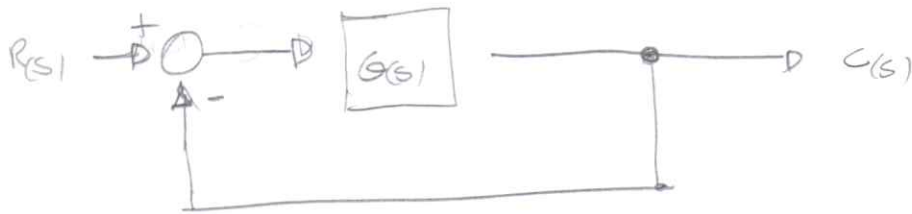9.

a)

$$G(s) = K \frac{2(s+4)}{s^2(s+1)}$$

$$1 + \frac{K \, 2(s+4)}{s^2(s+1)} \implies s^2(s+1) + K \, 2(s+4)$$

$$s^3 + s^2 + 2Ks + 8K$$

$$\boxed{s^3 + s^2 + 2K \, s + 8K}$$

3	1	2K	$\emptyset$
2	1	8K	$\emptyset$
1			
0			