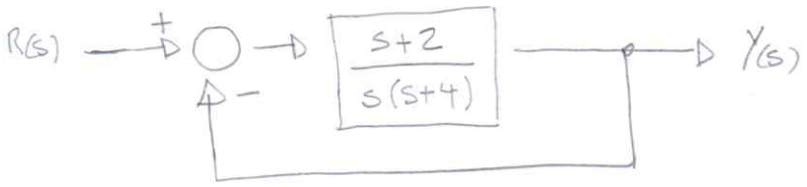
11.



FTMA

$$b=1 \Rightarrow K_v = \lim_{s\to 0} s\cdot\frac{(s+2)}{s(s+4)} = \lim_{s\to 0} \frac{2\left(\frac{s}{2}+1\right)}{4\left(\frac{s}{4}+1\right)}$$

$$= \frac{2}{4} = \frac{1}{2}$$

$$\therefore K_v = \frac{1}{2}$$

$$e_{ss} = \frac{1}{K_v} = 2$$

——//——

$$b=0 \Rightarrow K_p = \lim_{s\to 0} \frac{(s+2)}{s(s+4)} = \lim_{s\to 0} \frac{2\left(\frac{s}{2}+1\right)}{s\,4\left(\frac{s}{4}+1\right)}$$

$$= \infty$$

$$e_{ss} = \frac{1}{1+\infty} = 0$$

——//——

$$b=2 \Rightarrow K_a = \lim_{s\to 0} s^2\cdot\frac{(s+2)}{s(s+4)} = 0$$

$$e_{ss} = \frac{1}{K_a} = \frac{1}{0} = \infty$$

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

$$= \frac{s+2}{s^2+5s+2} = \lim_{s\to 0} \frac{\left(\frac{s}{2}+1\right)\cdot 2}{\left(\frac{s^2}{2}+\frac{5}{2}s+1\right)2} = \underline{1}$$

$K = 1$