

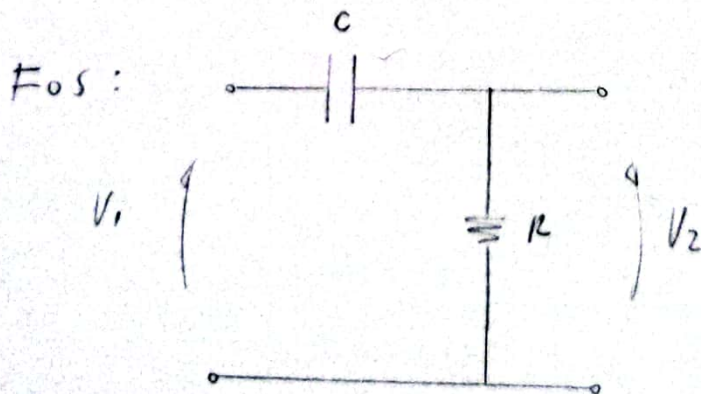
$$T_{PA}(s) = \frac{s^3}{[s - (-0,7983)] [s - (-0,3992 + j0,6914)] [s - (-0,3992 - j0,6914)]}$$

$$T_{PA}(s) = \frac{s^3}{(s + 0,7983) (s^2 + 0,3992s + j0,6914s + 0,3992s + 0,3992^2 + j0,3992 \cdot 0,6914 - j0,6914s - j0,6914 \cdot 0,3992 - j^2 0,6914^2)}$$

$$T_{PA}(s) = \frac{s^3}{(s + 0,7983) [s^2 + (0,3992 + 0,3992)s + 0,3992^2 + 0,6914^2]}$$

$$T_{PA}(s) = \frac{s^3}{(s + 0,7983) (s^2 + 0,7984s + 0,6374)}$$

$$T_{PA}(s) = \underbrace{\frac{s}{(s + 0,7983)}}_{FOS} \underbrace{\frac{s^2}{(s^2 + 0,7984s + 0,6374)}}_{SOS}$$

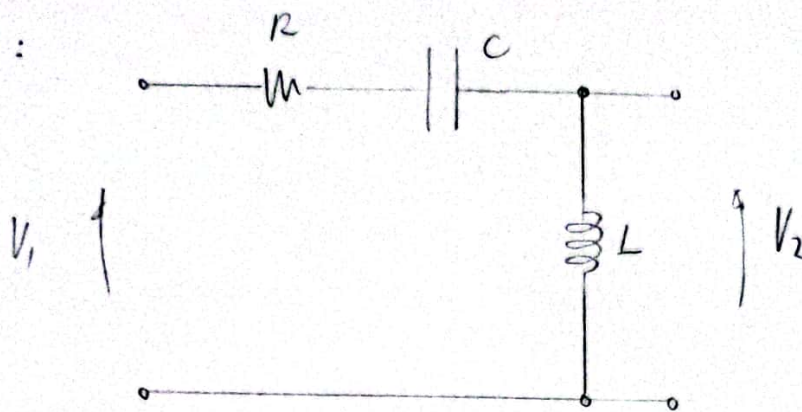


$$T_{FOS}(s) = \frac{V_2}{V_1} = \frac{R}{\frac{1}{sC} + R} = \frac{sRC}{sRC + 1}$$

$$= \frac{s}{s + \frac{1}{RC}}$$

$$\omega_0 = \frac{1}{RC} ; \Omega_z = R ; R = 1 ; C = \frac{1}{R\omega_0} ; C = \frac{1}{0,7983} = 1,2527$$

Sos :



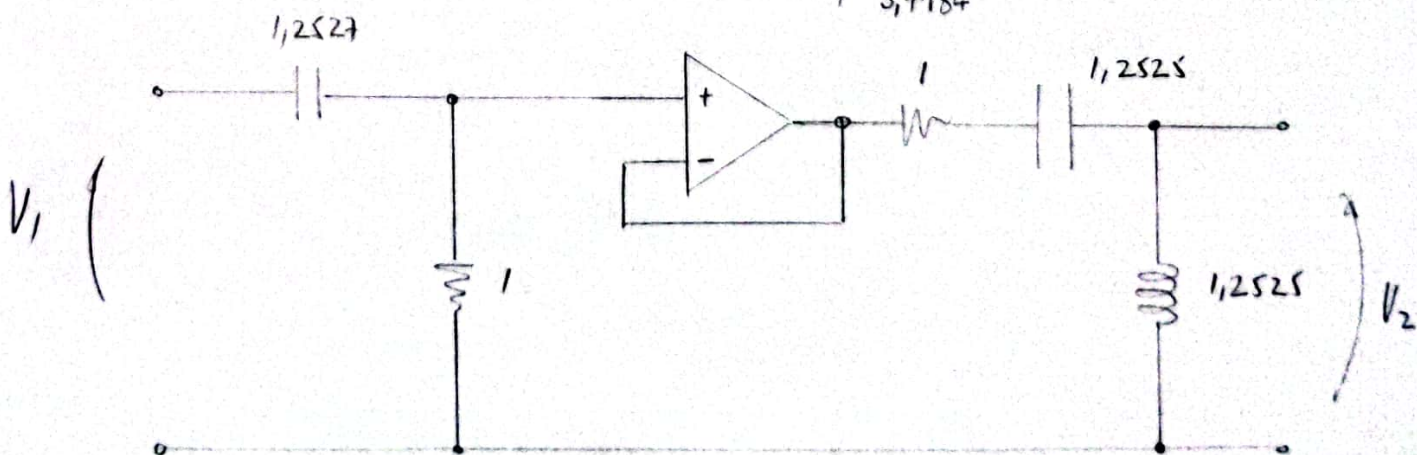
$$T_{sos}(s) = \frac{SL}{R + sL + \frac{1}{sC}} = \frac{s^2 LC}{sRC + s^2 LC + 1} = \frac{s^2}{s^2 + s \frac{R}{L} + \frac{1}{LC}}$$

$$\omega_0^2 = 0,6374 ; \omega_0 = 0,7984$$

$$\frac{\omega_0}{Q} = \frac{R}{L} ; \Omega_z = R ; R = 1 ; L = R \frac{Q}{\omega_0} = R \frac{1}{\omega_0/Q} = 1,2525$$

$$\omega_0^2 = \frac{1}{LC} ; C = \frac{1}{L\omega_0^2} = \frac{1}{R \frac{Q}{\omega_0} \omega_0^2} = \frac{1}{R Q \omega_0} = \frac{1}{\omega_0} = 1,2525$$

$$Q = \frac{\omega_0}{0,7984} = 1$$



$$T_{PA}(s) = \frac{V_2}{V_1}$$