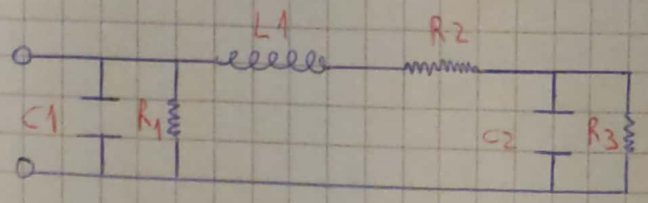
2)



DATOS:

$$Z(S) = \frac{(S^2+S+1)}{(S^2+2S+5)(S+1)}$$

$$Z(S) = \frac{S^2+S+1}{(S+1)(S^2+2S+5)} \rightarrow Y(S) = \frac{(S+1)(S^2+2S+5)}{S^2+S+1} = \frac{S^3+3S^2+5\cdot 7+5}{S^2+S+1}$$

PARTIENDO DE: $\frac{P}{Q} = \frac{R}{Q} + C$

$S^3+3S^2+7S+5 \;|\; S^2+S+1$

$-S^3+S^2+S$

$2S^2+6S+5$

$S \rightarrow SC1 \rightarrow C1 = 1$

$\frac{1}{S} \rightarrow C1$

$\frac{R}{Q} \rightarrow 2S^2+6S+5 \;|\; S^2+S+1$

$-2S^2+2S+2 \quad 2 \rightarrow G1 \rightarrow R1 = 1/2$

$4S+3$

R1

PASO A Z, ES DECIR, EL R_2L_1 EN SERIE $\left(\frac{Q}{R}\right)$:

$S^2+S+1 \;|\; 4S+3$

$-S^2+\frac{3}{4}S \quad \frac{1}{4}S \rightarrow SL1 \rightarrow L1 = 1/4$

$\frac{1}{4}S+1$

L1

$\frac{R}{Q} \rightarrow \frac{1}{4}S+1 \;|\; 4S+3$

$-\frac{1}{4}S+\frac{3}{16} \quad \frac{1}{16} \rightarrow R_2 = 1/16$

$\frac{13}{16}$ R_2

R_2

PASO A Y, " ", EL R_3C_2 EN PARALELO $\left(\frac{Q}{R}\right)$:

$4S+3 \;|\; 13/16$

$\frac{4S}{3} \quad \frac{64}{13}S$

$\frac{1}{T} \rightarrow C2$

$SC2 \Rightarrow C2 = \frac{64}{13}$

$\frac{R}{Q} \rightarrow 3 \;|\; 13/16$

$-3 \quad 13/48 \rightarrow R_3 = G_3^{-1} = 48/13$

$0/$ G_3

R_3