

① 12.2

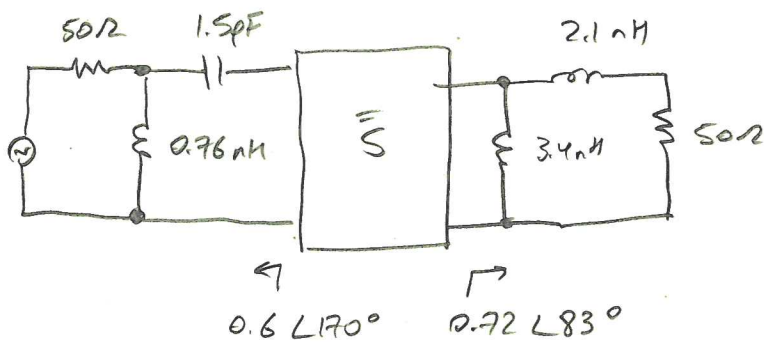
a. $G_p = 19.5 \text{ dB}$, $G_T = 11.9 \text{ dB}$, $G_A = 20.6 \text{ dB}$

b. $\Gamma_L \rightarrow S_{22}^*$ maximizes G_p

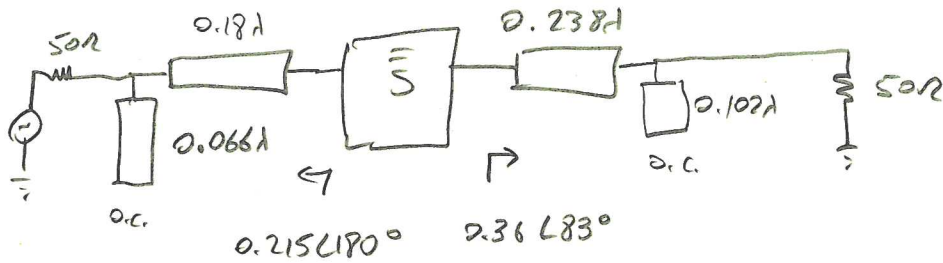
$\Gamma_S \rightarrow S_{11}^*$, $\Gamma_L \rightarrow S_{22}^*$ maximizes G_T for $S_{12} = 0$

$\Gamma_S \rightarrow S_{11}^*$ maximizes G_A for $S_{12} = 0$

② 12.1



③ 12.12



④ 12.13

$V = 0.4$, error band = 7.2 dB

⑤

