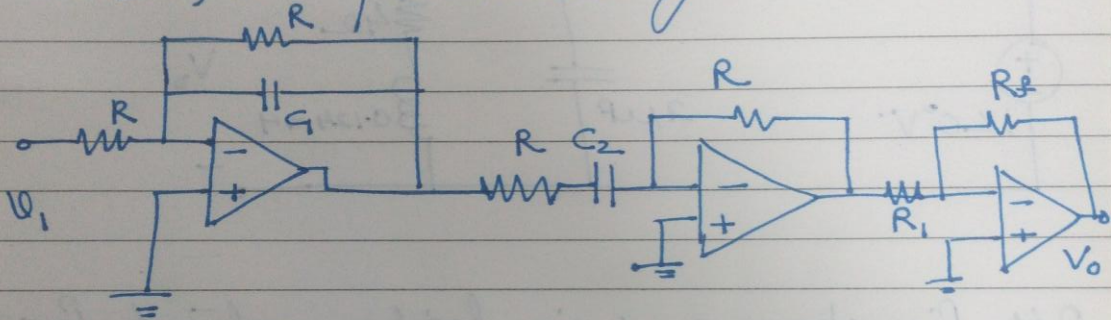


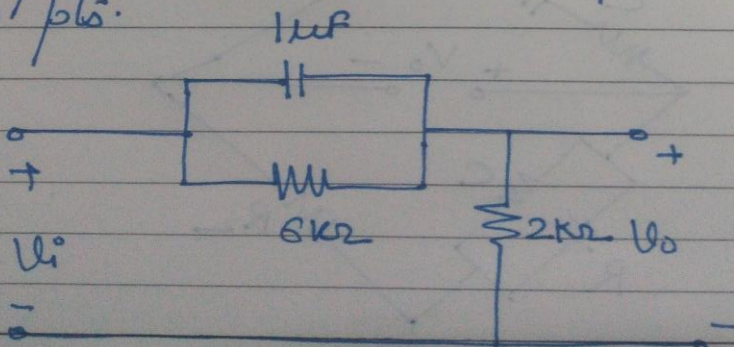
Assignment-8

1. Design a bandpass filter to pass frequencies between 100 Hz and 3000 Hz with $K=10$. Select $R=58\text{ k}\Omega$ where, $K \rightarrow$ pass-band gain.

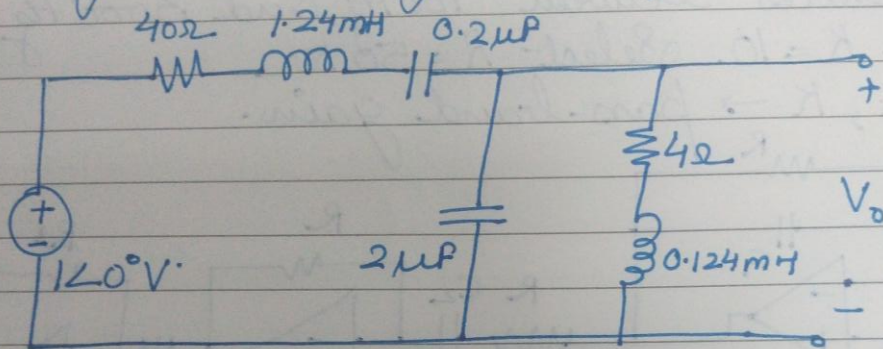


\rightarrow Plot V_o in LT spice to show its filter response.

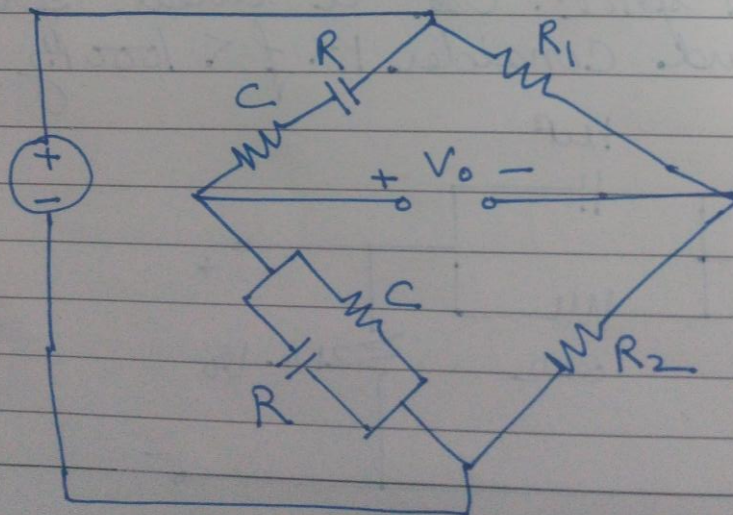
2. Obtain frequency response of circuit using LT spice. Use a linear frequency sweep and consider $1 < f < 1000\text{ Hz}$ with 100/pls.



Q.3. A low-quality factor, double-tuned bandpass filter is shown below. Use LTSpice to generate magnitude plot of $V_o(\omega)$.



Q.4. Fig. shows a wein-bridge network. For gain $\frac{V_o}{V_i} = 3$ and cut-off frequency of 100 Hz. Design the network manually and plot response in L.T spice.



Assume value of $R_1 = R_2 = 1\text{ k}\Omega$