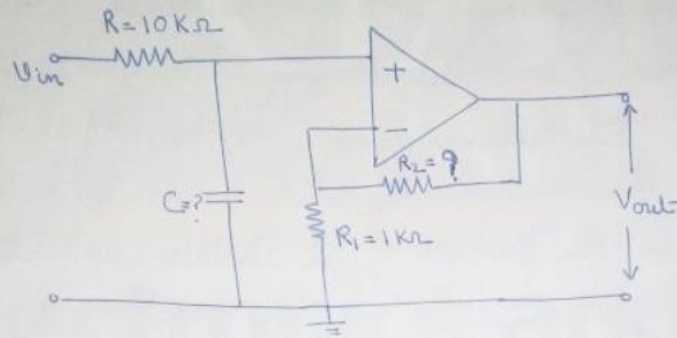
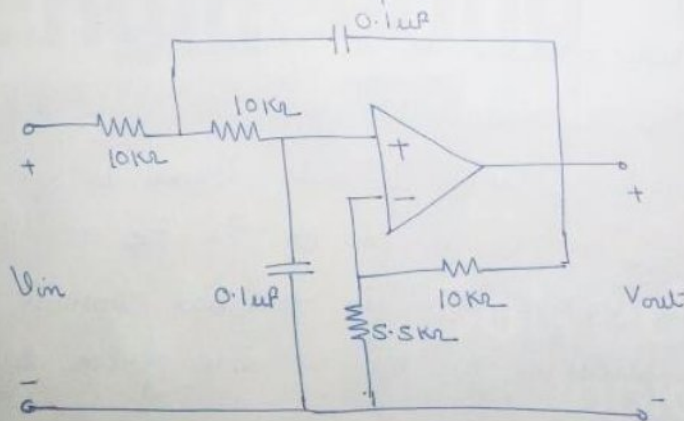


Assignment

1. Design a non-inverting active low pass filter circuit that has a gain of 10 at low frequencies, a high frequency cut-off of 159 Hz and input impedance of 10 k Ω .

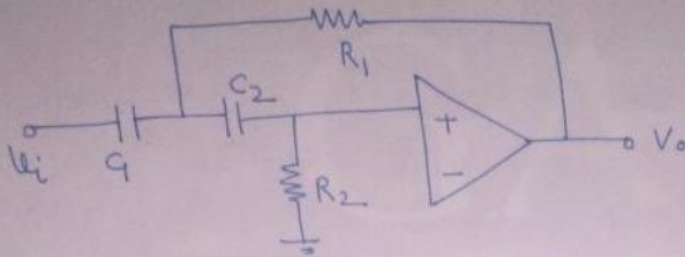


2. Determine the cut-off frequency for the following second order low pass filter circuit.



Note:- All questions to be done on LT Spice also.

3. Determine the filter given below by plotting the frequency response of the circuit on LT Spice.



$$R_1 = 16 \text{ K}\Omega$$

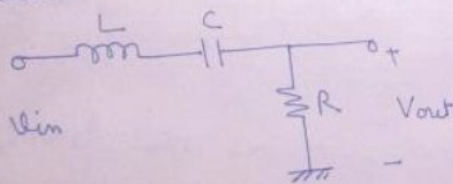
$$R_2 = 16 \text{ K}\Omega$$

$$C_1 = 0.01 \mu\text{F}$$

$$C_2 = 0.01 \mu\text{F}$$

Also find cut-off frequency.

4. Calculate the transfer function for RLC band pass filter.



For $R = 13 \Omega$, $C = 47 \mu\text{F}$ and $L = 0.0022 \text{ H}$, plot the frequency response on LT Spice.