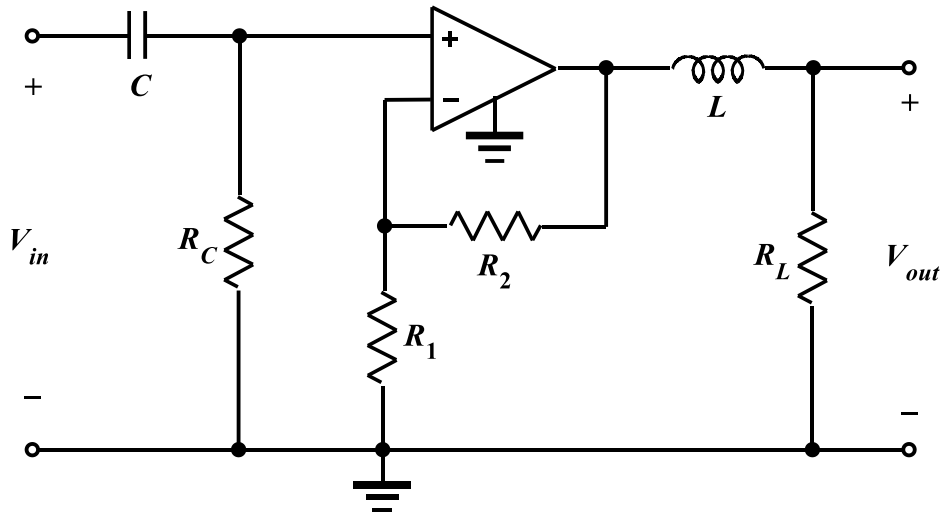


EE 3340
Homework Problem #026

- a. For the active filter circuit shown below, determine an expression for the voltage transfer function in terms of C , R_C , R_1 , R_2 , L and R_L .



- b. Characterize the circuit as BP or BS, and explain your decision.

- c. Given $C = 5 \text{ nF}$, $R_C = 100 \text{ k}\Omega$, $R_1 = 10 \text{ k}\Omega$, $R_2 = 90 \text{ k}\Omega$, $L = 1.1 \text{ H}$ and $R_L = 200 \text{ k}\Omega$, use LTspice to verify your claim.

- d. Use your LTspice plot to estimate the cutoff frequencies for this filter.