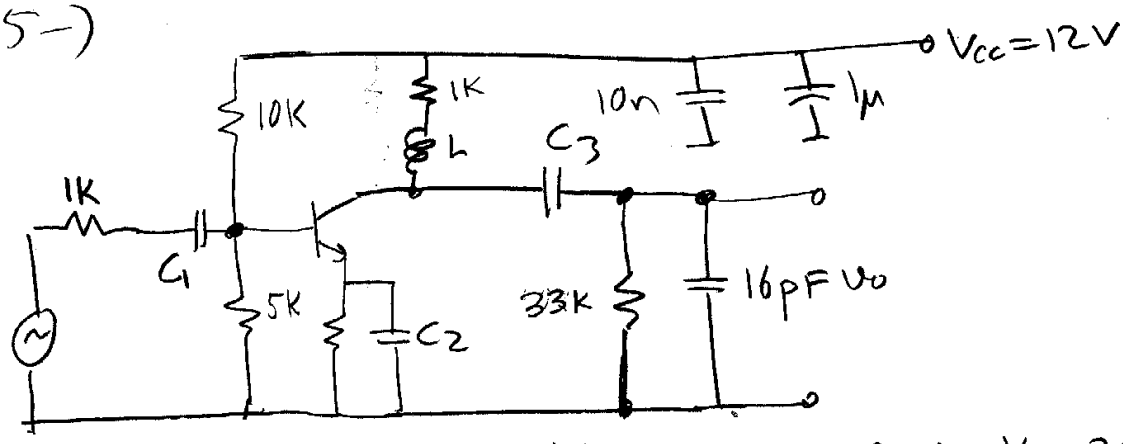
EEE 411/511 – HW #3 due November 7, 2008
assigned Nov 02, 2008

5–)



C_1, C_2 & C_3 are very large $I_C = 10mA$ $V_T = 26mV$

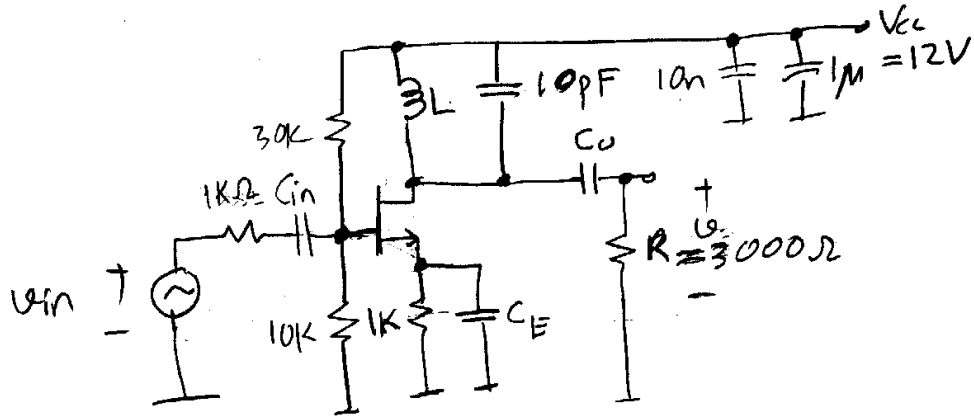
The transistor is an ideal NPN transistor

a–) Find upper cutoff frequency of the amplifier with $L = 0$.

b–) Extend the upper cutoff frequency for maximum BW by choosing an appropriate value for L.

Hint = Please make the necessary simplifying assumptions.

6–)



$g_m = 20mS$ $C_{gs} = 0.2pF$ $C_{gd} = 0.1pF$

a–) Find L to make fresonance = 50MHz

b–) Find the i/p capacitance of the circuit

c–) Estimate upper cutoff frequency from the result in (b)