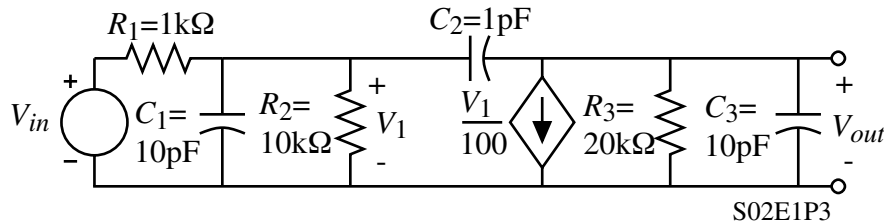


Homework Assignment No. 4

Due Friday, February 10, 2006 in class

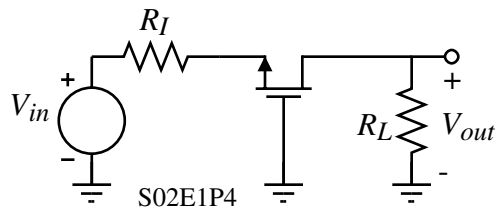
Problem 1 – (10 points)

Find the midband voltage gain and the -3dB frequency in Hertz for the circuit shown.



Problem 2 – (10 points)

Find the midband voltage gain and the exact value of the two poles of the voltage transfer function for the circuit shown. Assume that $R_I = 3\text{k}\Omega$, $R_L = \text{K}\Omega$, $g_m = 1\text{mS}$, $C_{gs} = 4.55\text{pF}$ and $C_{gd} = 1\text{pF}$. Ignore r_{ds} .



Problem 3 - (10 points)

Prob. 7.11 of 3rd and 7.21 of 4th edition

Problem 4 - (10 points)

Prob. 7.15 of 3rd and 7.27 of 4th edition

Problem 5 - (10 points)

Prob. 7.21 of 3rd and 7.37 of 4th edition