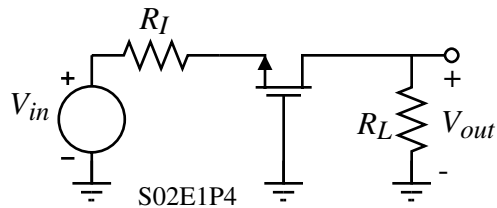## Homework Assignment No. 4

<u>Due Wednesday, February 5, 2003 in class</u>

<u>Problem 1 – (10 points)</u>

Find the midband voltage gain and the exact value of the two poles of the voltage transfer function for the circuit shown. Assume that $R_I = 1\text{k}\Omega$, $R_L = 10\text{K}\Omega$, $g_m = 1\text{mS}$, $C_{gs} = 5\text{pF}$ and $C_{gd} = 1\text{pF}$. Ignore r_{ds}.

<u>Problem 2 - (10 points)</u>

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

<u>Problem 3 - (10 points)</u>

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

<u>Problem 4 - (10 points)</u>

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

<u>Problem 5 - (10 points)</u>

Prob. 7.22 of 3rd and 7.38 of 4th edition