Homework 8 – Due 11/16/2016

Problems (not review questions): 10.1, 10.3, 10.5, 10.32, 10.34

Solutions for 10.1, 10.3 and 10.5 are in book_soulutions.pdf on mycourses

For 10.32, 10.34 use the following equation to find transmission zero frequency → *fz = gm / (2*pi*C_{gd})*

Solutions for 10.32: A_M = -36.4 V/V, f_H = 15.2 kHz, f_Z = 1.6 GHz

Solutions for 10.34: A_M = -81 V/V, f_H = 554 kHz, f_Z = 11.2 GHz

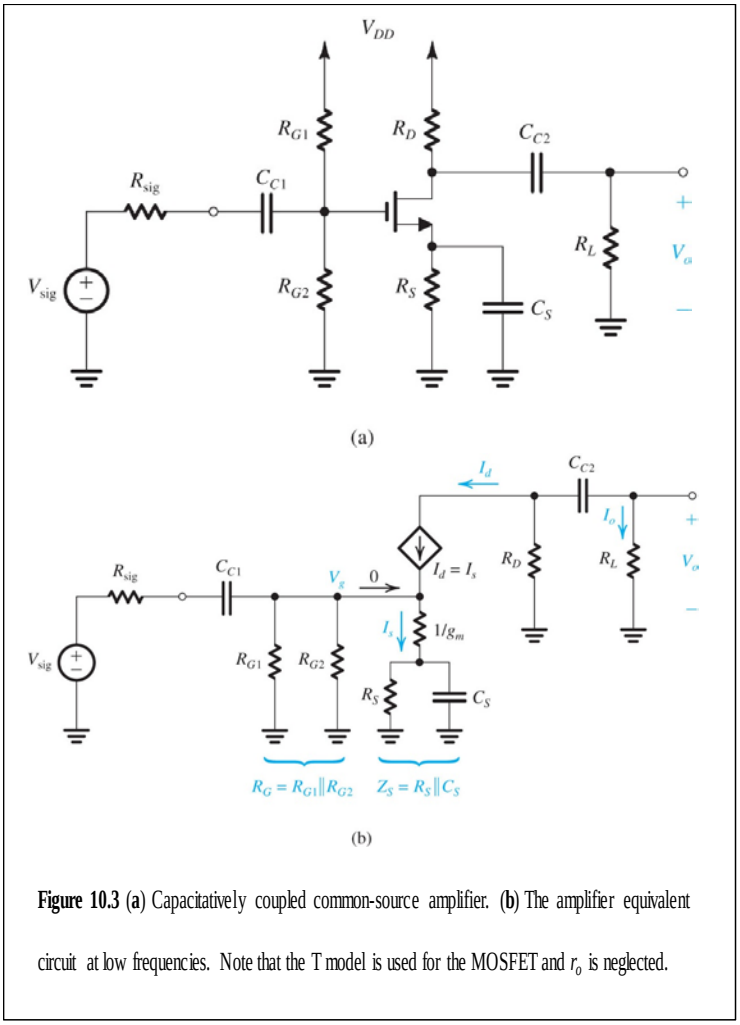

Figure 10.3 (a) Capacitatively coupled common-source amplifier. (b) The amplifier equivalent circuit at low frequencies. Note that the T model is used for the MOSFET and r_o is neglected.

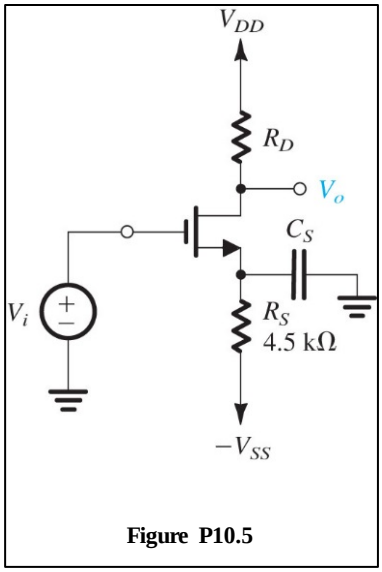

Figure P10.5

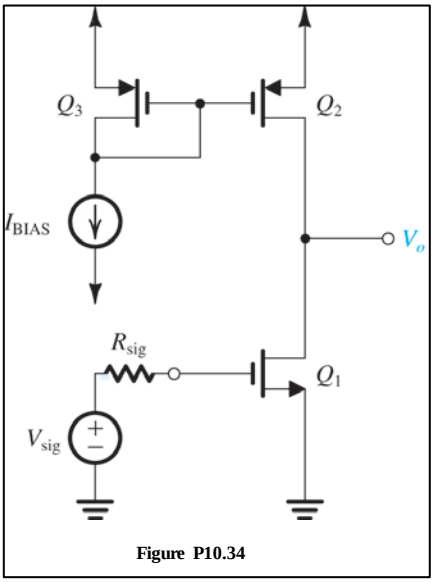

Figure P10.34

EE381 HOMEWORK FORMAT GUIDELINES

Things to remember

1) Re-Draw the Circuit on your homework sheet.
2) Show all work.
3) Final answer should be in decimal form.
4) Final answers should be boxed.
5) Your name should be on every page.