Homework #11 - due Tuesday, 2 December 2008, at the beginning of class

1. Problem 6.8, p. 327 of Streetman-Banerjee, 6th edition. Note, it may be written unclearly in the problem description, but be sure to calculate the insulator (or oxide) capacitance $C_i$ (also known as $C_{ox}$), and the minimum capacitance $C_{min}$ that occurs by including the series capacitance $C_s$ of the semiconductor depletion layer (also called $C_d$) at its maximum width. In the “next” part, calculate the flat band voltage $V_{FB}$ using eqn (6-37) and the data in Fig. 6-17.

2. Calculate the open channel conductance $G_O$ for the transistor of problem 6.4, p. 327. Does the conductance of the open n-type channel include a contribution from the p-type gate region?

Homework assignments will appear on the web at:
http://www.ece.udel.edu/~kolodzey/courses/eleg340f08.html

Note: On each homework and report submission, please give your name, the due date, assignment number and the course number.