EECS 211 – Electrical Engineering II (Fall’01)
Problem set #4, Issued: Sept. 28, 2001
Due: Oct. 5, 2001, at beginning of lecture

Reading: Sedra & Smith 3.1-3.4 will be included in the topics for the next week.

Problems:
#1 Sedra and Smith # 3.32.
#2 Sedra and Smith # 3.34.
#3 Sedra and Smith # 3.39.
#4 A variable capacitance diode with $C_{j0} = 20$ pF and $V_o = 0.75$ V is used to tune a resonant LC circuit as shown in the figure below. The impedance of the RFC (radio frequency choke) can be considered infinite. What are the resonant frequencies ($f_o = \frac{1}{2\pi\sqrt{LC}}$) for $V_{DC} = 1$ V and $V_{DC} = 10$ V?

#5 Find the current through and voltage across each of the diodes in the three circuits below. Use the ideal diode model.

#6 Sedra & Smith # 3.10.
#7 Sedra & Smith # 3.59.
#8 Sedra & Smith # 3.58 (a)
#9 Sedra & Smith #3.55.