EE211.02 FINAL EXAM REVIEW FALL 1997

Time and Location: M 12/15/97 at 1:30pm in MSEC 195

Materials: You may bring one 8.5"×11" sheet of paper with writing on one side.

Topics:

1. Circuit Analysis
   - passive sign convention
   - voltage, current, power, energy
   - KVL
   - KCL
   - voltage and current division
   - mesh-current analysis
   - node-voltage analysis

2. Circuit Elements
   - resistors
   - capacitors
   - inductors (self, mutual, and ideal transformers)
   - i-v relationships
   - parallel and series reduction

3. Sources
   - independent voltage and current
   - dependent voltage and current
   - i-v relationships
   - equivalent
   - Thevenin and Norton equivalent circuits
   - maximum power transfer

4. Operational Amplifiers and Circuits Containing Them
   - ideal assumptions
   - input resistance
   - output voltage
   - current supplied by op amp

5. Waveforms
   - sketch
   - determine expression from plot
   - peak-to-peak, peak, average, and root-mean-square values

6. RLC Circuits
   - determine differential equations for voltages and currents
   - determine initial and final conditions for voltages and currents
   - solve zero-input and step input differential equations