Topics Covered by Test 3
Test will be Friday, Nov. 30th

Note: Anything from Exams 1 and 2 is fair game. You should not have forgotten KCL, KVL, Ohm’s Law, passive sign convention, voltage and current division and how to solve circuits using mesh and nodal analysis.

Chapter 6
- Given a current or voltage for a capacitor/inductor be able to calculate a current, voltage, and power.
- Given a plot of a current or voltage for a capacitor/inductor be able to calculate a current, voltage, and power. Be able to sketch a plot of the output.
- Be able to find an equivalent capacitance or inductance.
- Be able to apply these ideas to an op-amp

Chapter 7
- Be able to find the response to an unforced RC or RL circuit.
- Be able to find the response to a forced RC or RL circuit.
- Know how the find the time constant including a circuit with a dependent source.
- Be able to show where the time constant is on a plot of a response.
- Know how to find initial and final conditions.

Chapter 8
- Be able to find the response to an unforced RLC series or parallel circuit.
- Be able to find the response to a forced RLC series or parallel circuit.
- Know what types of responses are possible and how they are characterized.
- Know how to find initial (0+) and final conditions including derivatives.
- Know how to use the initial conditions to solve for constants.

Special Notes:
- The test will be closed notes and closed book. Equations for voltage and current relationships in capacitors and inductors will be given.
- Plan as though calculators will not be allowed.
  - The points awarded are based more on concepts than calculations – concentrate on getting the ideas/concepts correct.
  - I am tolerant of simple math mistakes (sign change errors in algebra manipulations) but not so much for major algebra no, no’s. so:
    - Please, please, please, be able to sum fractions by finding a common denominator, how to divide fractions and when terms can be legally canceled.
  - I never make the arithmetic very complicated, if it is, you are probably have made an error somewhere.