Section

## Extra Credit #5

1. Draw the equivalent circuit of any standard battery. Indicate the reference you used to determine this information.

2. Draw the circuit diagram for a simple passive circuit that blocks frequencies near 2000 Hz but passes frequencies below and above this frequency. Plot the transfer function of this circuit.

3. What are the golden rules for op-amps? Under what conditions can you expect an opamp to at least come close to obeying these rules?

- 4. What is the slew rate for an op-amp? That is, what does this parameter tell us about how an op-amp works? Which of the two op-amps used in this course (the 741 and the 1458) have the highest slew rate?
- 5. Give one example of some practical advice you would give to someone building a simple inverting op-amp amplifier. Why is it better to use an inverting op-amp than a non-inverting op-amp? What is better about a non-inverting op-amp?