**QUESTIONS TO HAND IN – EXPERIMENT 8**

**NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LAB INSTRUCTOR\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_LAB DAY/TIME\_\_\_\_\_\_\_\_\_\_ \_ \_\_**

**1.** Show that the product of resistance times capacitance has units of time.

**2.** A 1 M resistor is placed in a series circuit with a 9 V battery, a switch, and a 0.01 F capacitor. What is the time constant of this combination?

**3.** How long after the switch is closed does it take the charge on the 0.01 F capacitor to rise to 63% of its final value?

**4.** What will the current be in the circuit after 1 second?

**5.** When is the current in the circuit the largest?