**QUESTIONS TO HAND IN – EXPERIMENT 9**

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

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

**1.** A 1 mH inductor is connected in a series circuit to a 0.001 F capacitor, and has a total resistance of 100 . Find the resonant frequency *fo* of the circuit.

**2.** Find the capacitive reactance *XC* in the circuit at the resonant frequency.

**3.** Find the inductive reactance *XL* in the circuit at the resonant frequency.

**4.** What is the impedance *Z* of the circuit at the resonant frequency?

**5.** Make a sketch of the dependence of the impedance *Z* as a function of frequency *f*.