

***Physics Department***

***Physics 112***

**Preliminary Laboratory Questions sheet**

**IMPEDANCE AND REACTANCE**

1. The resistive reactance of the resistor is R. What is the capacitive reactance,and the inductive reactance.

The capacitive reactance is The inductive reactance

1. The frequency of a wave is 5000 HZ. What is the angular frequency ω of the wave.
2. Draw two sinusoidal waves with phase shift equal zero.
3. Suppose that the angular frequency(ω) of the signal generator is 10000 rad/s. calculate the phase shift between the voltage on the resistor and the input voltage. in an –RLC series circuit with R=1 KΩ, L=10 mH , C=0.1 µF.

When the phase shift is zero between the current and the driving voltage in the RLC series circuit in the previous question? What is the current at this