Name-	ID-

1) What is the phase relationship between the sinusoidal waveforms of the following set:
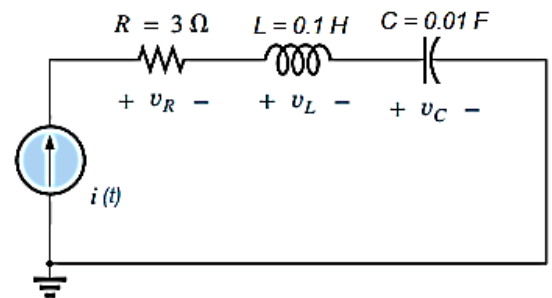
$$v = -4 \cos(\omega t + 90°)$$
$$i = -2 \sin(\omega t + 10°)$$

Comment on the lead/lag relation between v and i. (3 marks)

2) Consider the series RLC circuit. The current source is given as:

$$i(t) = 7 \sin 10t$$

Find the voltage across each element and plot v_R, v_L and v_C in time domain. (9 marks)

3) For the circuit: (8 marks)

a. Find the current I_1.
b. Calculate the voltage V_C using the voltage divider rule.
c. Find the voltage V_{ab}.