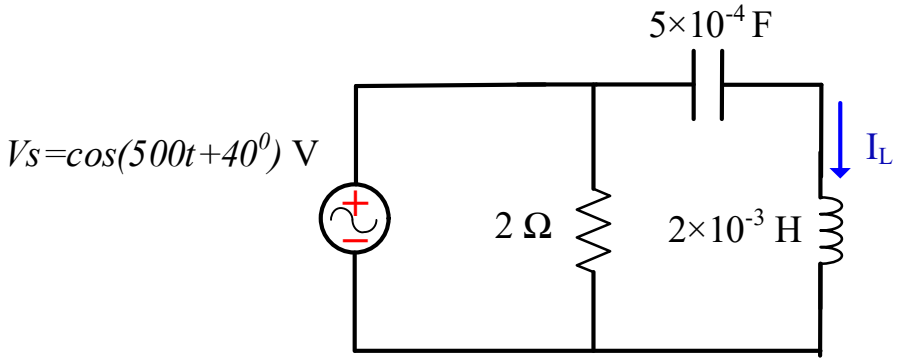
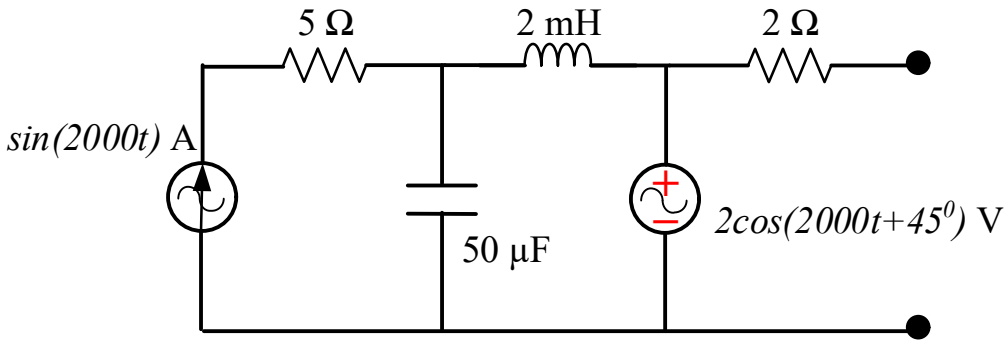
Q6 (20 marks) See the circuit below

1) Finding I_L in waveform. (14 marks)



2) What is the time period (T) of I_L? What is the value of I_L when t = 0 s ? (6 marks)

Q7 (30 marks?) See the circuit below:



1) Finding the Thevenin voltage (7 marks), Norton current (7 marks) and Thevenin impedance (7 marks) of this circuit.
2) Draw the Thevenin's and Norton's equivalent circuit. (4 marks)
3) If we put a load impedance Z_L (it can be a complex value) between the two terminals, what is the value of the load to ensure maximum power to be delivered to the load. (5 marks)