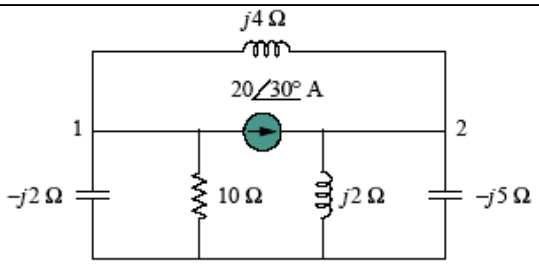
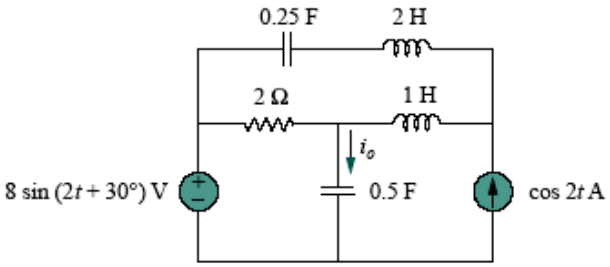
Electrical Engineering Department
Faculty of Engineering at Shoubra
Banha university

Subject: Electrical Circuit
1st semester, 2015/2016
Sheet No. 3

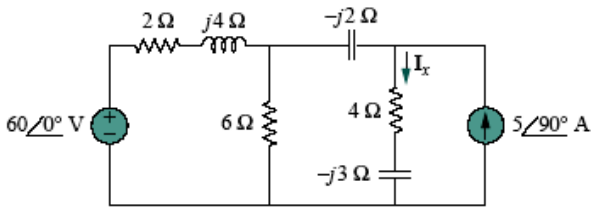
(1) Use nodal analysis to find V_1 and V_2 in the circuit.



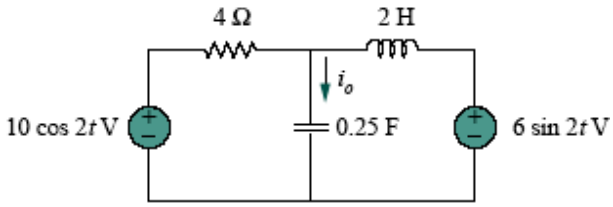
(2) Use nodal analysis to find $i_o(t)$ in the circuit.



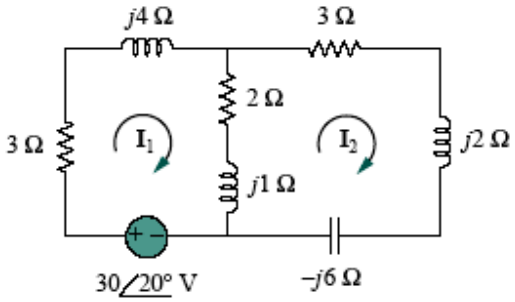
(3) Solve for the current I_x in the circuit using nodal analysis.



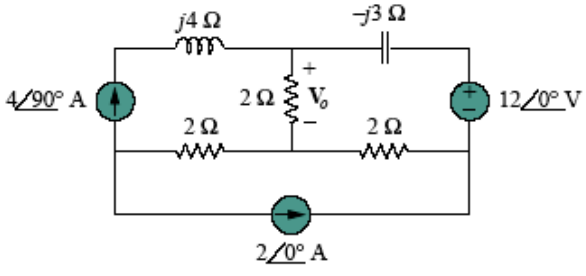
(4) Solve for i_o using mesh analysis.



(5) By using mesh analysis, find I_1 and I_2

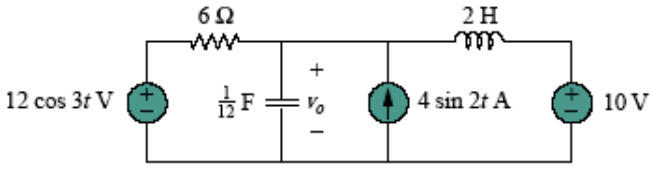


(6) Compute V_o in the circuit using mesh analysis.

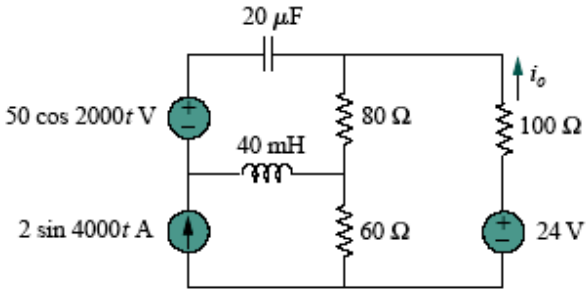


Sheet No. 3

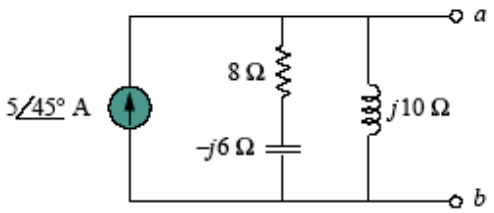
(7) Solve for $v_o(t)$ in the circuit using the superposition principle.



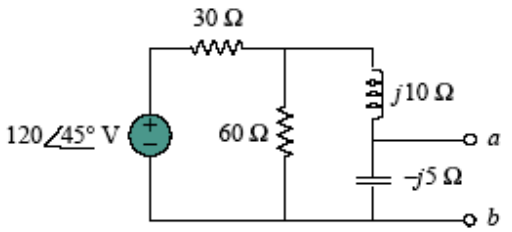
(8) Find i_o in the circuit using superposition.



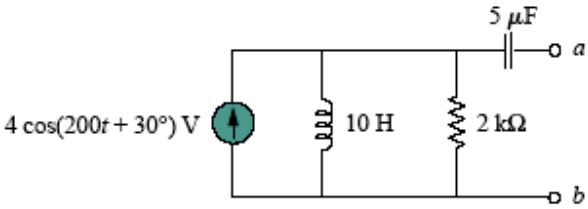
(9) For the circuit shown, find the Thevenin equivalent circuit at terminals a-b



(10) For the circuit shown obtain Thevenin and Norton equivalent circuits at terminals ab



(11) Obtain the Norton equivalent of the circuit shown at terminals ab



(12) For the circuit shown, find the Norton equivalent circuit at terminals ab