Set D (CA 1) **BASIC ELECTRICAL AND ELECTRONICS ENGINEERING (ECE 131)**

NOTE: Attempt ALL Questions **Max Marks: 30 (Each Question carries 5 Marks)**

Name:	Section:
Reg. No.:	Roll No.:
Date of Test:	

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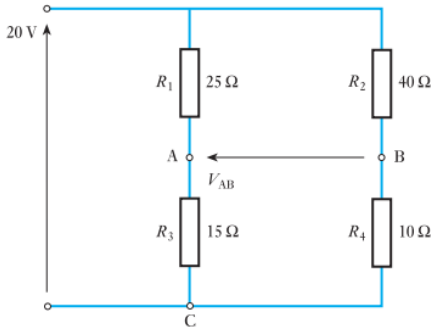
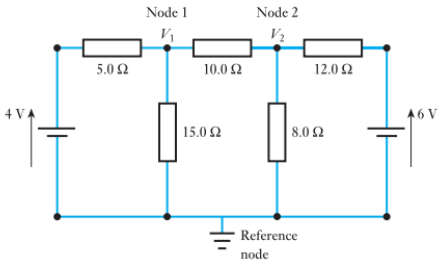
Believe you can and you are halfway there.

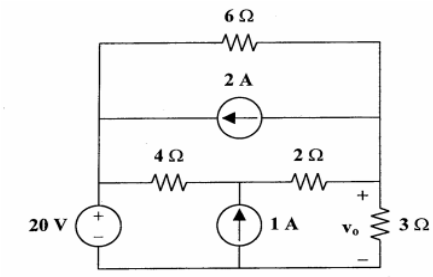
1. Find V_{AB} in the given network:



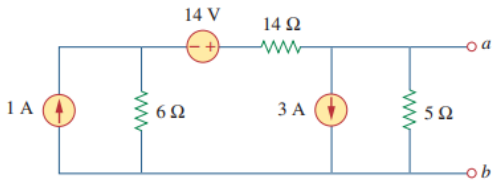
2. Find $V_1 and\ V_2$ in the circuit using **Nodal Analysis**. Also find the current across 8 ohm resistor:



3. Find v_0 using **Superposition** in the circuit:



4. Find **Norton equivalent** circuit across a and b terminals in the given circuit?



5. A series circuit with a resistor of 100 Ω capacitor of 25 μF and inductance of 0.15 H is connected across 220-V, 60-Hz supply. Calculate (i) current (ii) power and (iii) power factor in the circuit.

6. Find i in the circuit when the source voltage Vs = 50 cos 200t volts.