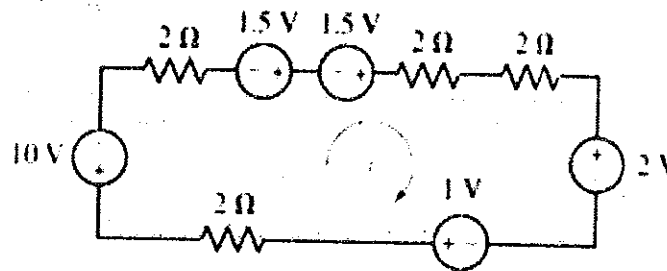


*Note: (a) All questions are compulsory.*

*(b) Marks are indicated against each question in square brackets.*

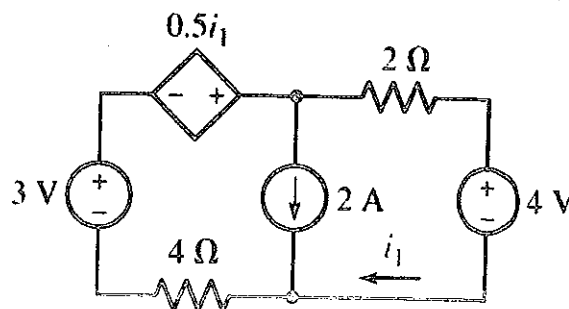
*(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems*

Q1. Obtain a numerical value for the current labeled  $i$  in the given circuit.



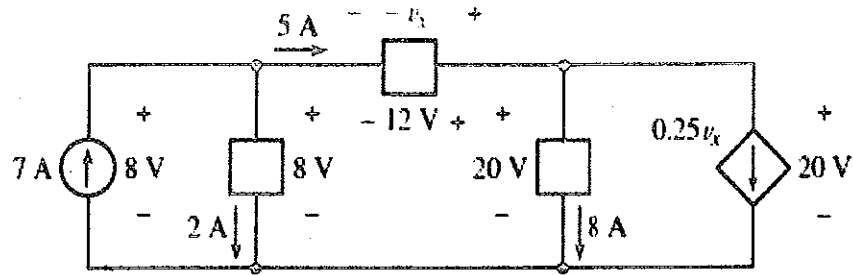
[3] (CO-2)

Q2. Write the nodal equations for the following circuit.



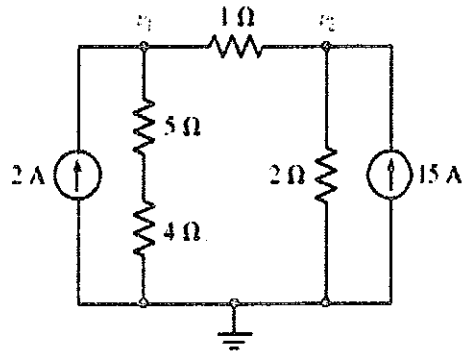
[3] (CO-2)

Q3. Find the power absorbed by each element in the given circuit. Also mention the dependent and independent sources.



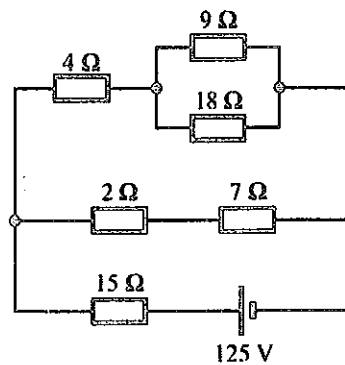
[3] (CO-1)

Q4. With the help of nodal analysis, determine node voltages  $v_1$  and  $v_2$  as shown on circuit diagram.



[3] (CO-2)

Q5. In the circuit shown in the given Figure, find (a) the current in 15-Ω resistance, (b) the voltage across 18-Ω resistance.



[3] (CO-1)