

Lab Session 07

Analyze and implement Thevenin's

Thevenin's Theorem:

Objective:

- Verify Thevenin's theorem theoretically and practically for a given circuit

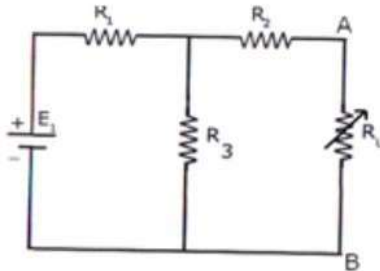
Equipments and Components Required:

- DC Power supply
- Ammeter
- Voltmeter
- Single dial decade resistance box
- Connecting wires

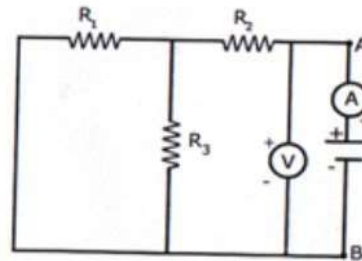
Statement:

Any linear, bilateral network having a number of voltage, current sources and resistances can be replaced by a simple equivalent circuit consisting of a single voltage source in series with a resistance, where the value of the voltage source is equal to the open circuit voltage and the resistance is the equivalent resistance measured between the open circuit terminals with all energy sources replaced by their ideal internal resistances.

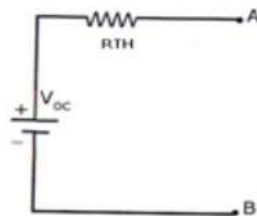
Circuit Diagram:



Measurement of V_{TH} or V_{OC}



Measurement of R_{TH}



Measurement of I_L ($I_L = V_{TH}$ or $V_{OC} / R_{TH} + R_L$)

