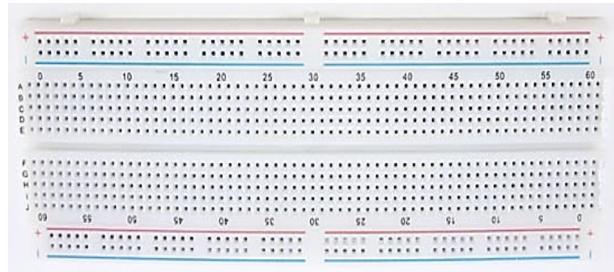
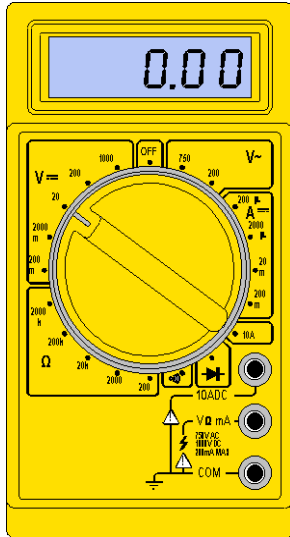


Experiment 1: Hands on Breadboard and Digital Multimeter

Circuit Diagram:



Theory

Digital Multimeter:

- 1- Digital Multimeter having a LCD display.
- 2- In Multimeter we can measure Current, voltage, and Resistance.
- 3- It is also used to check the continuity (complete path for current flow) between two points in an electrical circuit.

Breadboard:

Breadboard is a rectangular shape plastic board. In breadboard there are tiny holes in which we insert our component without any soldering (method to join metal components) to test the circuit and remove it if we made any mistake.

Concept Used:

Digital Multimeter:

- 1- Always put the black wire in common port.
- 2- Put black wire on negative terminal of the component and red wire on the positive terminal of the component.

Breadboard :

In breadboard we have to connect the components by checking the connection in rows and columns carefully.

Learning & Observations:

Learned how to measure and check

- 1- Voltage
- 2- Current
- 3- Resistance
- 4- Connectivity of a circuit
- 5- Potential drop of a diode and LED
- 6- Make the series and parallel circuits of LED using Breadboard.

Problems and troubleshooting:

If there is negative value is shown on display

Troubleshoot it by checking the terminals of the component.

Precautions:

- 1- Always off the multimeter before performing any activity on it.
- 2- Put the red wire in common port ,if you measure the current put the red wire in higher range.
- 3- Always start measuring the values from higher range.

Learning Outcomes:

- 1- Learned How To check the connectivity of the circuit.
- 2- Learned How To measure the voltage, current , resistance.
- 3- Learned How to connect the circuits in series and parallel on Breadboard.

