EXPERIMENT

AIM**:** Understanding breadboard and Multimeter.

CIRCUIT DIAGRAM:





THEORY:

A breadboard is a rectangular plastic board with a bunch of tiny ports in it. These ports are used for connection of the electronic devices.

* In Breadboard, the rows on top and bottom are connected in series whereas in middle the connections in column wise.
* No soldering is required when you are using breadboard.
* Connections in breadboard are not permanent and can be easily removed in case of mistake.
* Electrical components with leads are held in place by the holes of the breadboard.

A multimeter is a device used to measure voltage, resistance and current in electronics & electrical equipment. It is also used to test continuity between to 2 points to verify if there are any breaks in circuit or line.

If circuit is continuous, buzzing in the multimeter can be heard.

**Learning & Observations**:

* Here we have learned how to connect the Breadboard with the components of the electronic device, as it is very useful and easy method to simplify the circuit.
* Also the series and parallel connection of the device.
* Using multimeter we have learned how to check voltage, current, resistance and also the continuity of the circuit.

PROBLEMS AND TROUBLESHOOTING:

* Sometime series and parallel connections did not work due to a misunderstanding of the way rows and columns were connected.
* Calculating the resistance using a higher range but it gave vague results.

PRECAUTION:

* Shorten the leads — particularly of connector or jumper wires — so that they are not going to cross into a component's leads.
* Avoid crowding breadboard space because it will make reconnections a simpler prospect.
* Always connect the power supply to the breadboard last.
* Use the appropriate range to measure the parameters using multimeter.

LEARNING OUTCOMES

Here we have about the connection of the breadboard and the how to use multimeter.