

ACTIVITY- 2 (Assemble the Components)

AIM:

To assemble the components of a given electrical circuit.

APPARATUS:

Resistor, ammeter, (0-1.5A) voltmeter (0-5V), battery, one way key, rheostat, sand paper, connecting wires.

THEORY:

In an electrical circuit, an ammeter is always connected in series and a voltmeter is always connected in parallel to the two points of a circuit across which potential difference is to be measured. Two resistors may be joined in parallel in series combination in the circuit.

PROCEDURE:

1. Draw a circuit diagram as given.
2. Connect all electrical components as shown in figure.
3. Test connections by closing the key. You must note that current must enter at the positive terminal of the meter. The readings of the ammeter and the voltmeter should increase or decrease simultaneously if the connections are correct. Otherwise check the connections once again.

RESULT:

The components of the electrical circuit were assembled.

PRECAUTIONS:

1. The ends of the connecting wires should be cleaned properly with sandpaper.
2. Connections should be tight.

3. The positive terminal of the battery should be connected to the positive terminal of the ammeter and positive terminal of the voltmeter.
4. In the circuit, the ammeter should always be connected in series and voltmeter in parallel.

SOURCES OF ERROR:

1. Voltmeter/Ammeter may not be connected with correct polarity in the circuit.
2. Ammeter may be connected in parallel.
3. Voltmeter may be connected in series.

CIRCUIT DIAGRAM:

