

## Practical 5: Electrical circuits (4 hours)

**Learning Outcomes:** To determine the advantages and disadvantages of series and parallel circuits.

**Materials:** Battery holder, battery, several insulated wires, ammeter, voltmeter and light bulbs.

### Activity 1: Building a simple series and parallel circuits.

#### Procedure:

1. Build the circuit given below using conductors using ordinary wires. In building, ensure conductors are not exposed for safety reasons.



Circuit A



Circuit B

2. All wires are connected and the light bulbs are covered.
3. The ammeter and voltmeter is connected with the above circuit. It makes sure a current is flowing through the circuit.
4. One bulb is open circuit is introduced. The readings of the ammeter and voltmeter and the readings of both the ammeter and voltmeter through circuit are recorded down.
5. Another bulb is connected in series to circuit A, the following table is observed and the readings of both the ammeter and voltmeter is recorded down.
6. Another bulb is connected in parallel to circuit B. The readings of both the ammeter and voltmeter through circuit are recorded down.