
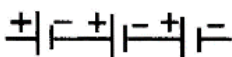






Electric Current and Its Effects

Synopsis

- The path of electric current when it flows through wires, cells (source of electricity), a key (switch) and a bulb (fuse) without a break is called a circuit. A simple electric circuit consists of a source of electricity (electric cell) /connectors (wire) and utilizers of electricity. e.g., bulb.
- While drawing circuit diagrams, the electric components are represented by certain symbols. Some of them are shown in the chart given below.

Components	Symbols
Cell	
Battery	
Tap Key / Switch	
Resistor	
Fuse	
Bulb	

- A cell is made of chemicals which react when the two terminals are connected and the electric charges which start flowing is called electricity.
- A battery is a combination of many cells with the positive terminal of one cell connected to the negative terminal of the next cell.
- Electric current flows through a circuit only when there is a continuity in the circuit without any break. Such a circuit is called 'closed' circuit. Whenever there is any break in the circuit/current stops flowing. This kind of circuit is called an 'open' circuit.
- A key or a switch used in the circuit usually breaks the circuit when it is in the OFF position while it allows electric current to flow when it is in the ON position.

- ◆ When electric current flows through a substance it offers some resistance. This resistance varies with the material, thickness and the length of the substance. Due to resistance, some of the electrical energy gets converted into other forms of energy like heat and light.
- ◆ Substances that allow electricity to pass through (having less resistance) are called conductors.
- ◆ Substances that do not allow electricity to pass through (having high resistance) are called poor conductors or insulators.
- ◆ Electricity can also produce magnetic effects. Electromagnets are made based on this principle. Electromagnets are very widely used in fans, motors, radio, T.V., electric bells, etc.