

Effects of Electric Current

Chapter 4: Effects of Electric Current · Topic 1

Key Concept

The heating effect of current occurs when current flows through a resistor, converting electrical energy to heat, used in heaters and bulbs.

The magnetic effect of current, discovered by Oersted, shows that current-carrying conductors create magnetic fields, used in electromagnets and motors.

The chemical effect of current, seen in electrolysis, causes chemical reactions when current passes through certain solutions or molten compounds.

These effects of electric current have numerous practical applications in everyday devices, industry, and technology.

Quick Revision Notes

- Heating effect: current through resistor generates heat.
- Used in heaters, bulbs.
- Magnetic effect: current creates magnetic field.
- Discovered by Oersted. Used in motors, electromagnets.
- Chemical effect: seen in electrolysis.
- Causes reactions in solutions, molten compounds.
- These effects have numerous applications.
- Used in everyday devices, industry, technology.

Practice Questions

- 1 Discuss an example of the heating effect of current.
- 2 Discuss an example of the magnetic effect of current.
- 3 Research electrolysis as a chemical effect.
- 4 Discuss how an electric heater works.
- 5 Discuss how an electromagnet works.
- 6 Explain the three effects of current in your own words.