

Electricity and Magnetism

Chapter 7: Electricity and Magnetism · Topic 1

Key Concept

An electric current is the flow of electric charge through a conductor, like a wire, powering devices like bulbs and motors.

A magnetic field surrounds a magnet or a wire carrying electric current, exerting force on certain materials or other magnets.

An electromagnet is created by wrapping a wire (carrying current) around an iron core, creating a temporary, controllable magnet.

This close relationship between electricity and magnetism, called electromagnetism, is used in motors, generators, and many everyday devices.

Quick Revision Notes

- Electric current is the flow of electric charge.
- It powers devices like bulbs and motors.
- A magnetic field surrounds magnets or current-carrying wires.
- It exerts force on materials or other magnets.
- An electromagnet uses wire wrapped around an iron core.
- It's a temporary, controllable magnet.
- This relationship is called electromagnetism.
- It's used in motors and generators.

Practice Questions

- 1 Discuss how an electric current powers a device.
- 2 Research how an electromagnet is made.
- 3 Discuss a device that uses electromagnetism.
- 4 Explain the connection between electricity and magnetism.
- 5 Research how a simple motor works.
- 6 Draw a diagram of an electromagnet.