

Current Electricity

Chapter 9: Current Electricity · Topic 1

Key Concept

Electric current is measured in amperes (A) and represents the rate of flow of electric charge through a conductor.

Ohm's Law states $V=IR$, showing that voltage (V) equals current (I) multiplied by resistance (R), a fundamental relationship in circuits.

Resistors can be connected in series (same current, voltages add) or parallel (same voltage, currents add), affecting overall circuit behaviour.

Understanding current electricity is essential for designing and troubleshooting electrical circuits used in countless everyday devices.

Quick Revision Notes

- Current is measured in amperes (A).
- It's the rate of flow of electric charge.
- Ohm's Law: $V = IR$.
- V =voltage, I =current, R =resistance.
- Series resistors: same current, voltages add.
- Parallel resistors: same voltage, currents add.
- This affects circuit behaviour.
- Understanding this is essential for circuit design.

Practice Questions

- 1 Calculate voltage using Ohm's Law given current and resistance.
- 2 Draw a series circuit with two resistors.
- 3 Draw a parallel circuit with two resistors.
- 4 Discuss the difference between series and parallel circuits.
- 5 Research a device that uses current electricity.
- 6 Explain Ohm's Law in your own words.