

Short Answer Questions

Q.1. What are electric fuses? Why are they important?

Ans. A fuse is a safety device in an electric circuit. It is made by inserting a short wire into an insulating material. Fuses are used so that if a fault occurs and too much current flows, the fuse wire melts before anything else is damaged.

Q.2. On what factors does the heat produced in a wire depend?

Ans. The heat produced in a wire depends on the current flowing in the wire and the resistance of the wire.

Q.3. On what factors does the strength of an electromagnet depend?

Ans. The strength of an electromagnet depends on the current passing through the coil and the number of coils around the core.

Q.4. Write four uses of electromagnets.

Ans. (a) Used in cranes in steelworks and scrapyards.

(b) Used to remove foreign bodies like iron filings from a patient's body.

(c) Used in electric bells, loudspeakers, etc.

(d) Used in modern trams and trains.

Q.5. How do short circuits occur?

Ans. Short circuits occur when the positive and negative terminals of a battery are connected by a low resistance wire, leading to the flow of large amount of current and in turn larger energy which the wire cannot carry and result in an explosion.