# SHREE VASISHTHA VIDHYALAYA

**Subject-Science**

**Chapter name- Electric current and its effects (Worksheet)**

**A. Multiple Choice Questions (MCQs)**

1. The device that converts electrical energy into mechanical energy is:
a) Electric bulb b) Electric motor c) Electric heater d) Battery

2. The heating effect of current is used in:
a) Electric iron b) Electric bulb c) Electric heater d) All of these

3. A safety device used to prevent damage due to overcurrent is:
a) Switch b) Fuse c) Generator d) Motor

4. The direction of conventional current is:
a) From negative terminal to positive terminal
b) From positive terminal to negative terminal
c) Both ways
d) None of these

5. The filament of an electric bulb is made of:
a) Copper b) Aluminium c) Tungsten d) Silver

6. Which of the following produces a magnetic effect of current?
a) Battery b) Electric bulb c) Electromagnet d) Switch

7. The coil of wire used in an electromagnet is called:
a) Filament b) Solenoid c) Fuse d) Circuit

8. Which metal is commonly used in electric fuse wires?
a) Iron b) Copper c) Aluminium d) Lead-tin alloy

9. An electric bell works on the principle of:
a) Heating effect b) Magnetic effect c) Chemical effect d) Radiation effect

10. The instrument used to detect current in a circuit is:
a) Voltmeter b) Ammeter c) Galvanometer d) Thermometer

**B. Fill in the Blanks**

1. The continuous flow of electric charge is called _____.
2. A _____ is a safety device that melts when excess current flows.
3. The magnetic effect of current was discovered by _____.
4. The process of converting electricity into heat is called _____.
5. The wire in the fuse is made of a material with _____ melting point.

**C. One Word Answers**

1. Name the effect of current used in an electric bulb.
2. Which device produces electricity using moving coils and magnets?
3. Name the instrument used to measure current.
4. What is the full form of MCB?
5. Name the device that works on the magnetic effect of current and is used in cranes.

**D. Short Answer Questions**

1. Define electric current. What is its SI unit?
2. State two uses of the heating effect of current.
3. What is the function of a fuse in an electric circuit?
4. Why is tungsten used in the filament of electric bulbs?
5. Differentiate between heating effect and magnetic effect of current with examples.

**E. Long Answer Questions**

1. Explain the working of an electric bell with a neat diagram.
2. Describe an experiment to show the magnetic effect of current (Oersted's experiment).
3. What is an electromagnet? Explain its construction and uses.

**F. Assertion and Reasoning Questions**

Direction: Choose the correct option:

(a) Both Assertion and Reason are true, and Reason is the correct explanation.
(b) Both Assertion and Reason are true, but Reason is not the correct explanation.
(c) Assertion is true, but Reason is false.
(d) Assertion is false, but Reason is true.

1. Assertion: Electric fuse protects electrical appliances.
Reason: Fuse wire has a low melting point and melts when current exceeds a limit.

2. Assertion: Electric current produces a magnetic effect.
Reason: Oersted discovered that current flowing in a conductor deflects a magnetic needle.

3. Assertion: The filament of a bulb is made of copper.
Reason: Copper has a very high melting point.

4. Assertion: Electromagnets are stronger than permanent magnets.
Reason: The strength of an electromagnet can be increased by increasing current and number of turns.

5. Assertion: Electric heaters use heating effect of current.
Reason: Current passing through a high resistance wire produces heat.