



# KALPAVRUKSHA MODEL SCHOOL

## Answers of Online Class Assignment-3

**Class: VII**

**Sub: Physics**

**Date: 2.9.2021**

**Topic: ELECTRIC CURRENT AND ITS EFFECTS**

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### **I. Answer the following questions:**

#### **1. What is the magnetic effect?**

ANS: A current carrying conductor can produce a magnetic field around it. This effect is known as the magnetic effect.

#### **2. Name two factors on which strength of an electromagnet depends?**

ANS: The strength of the electromagnet depends on the number of turns of the wire around the core and amount of current passing through it.

#### **3. Wire A has a lower melting point than wire B. Which wire would you choose to make a fuse to (a) allow more current to pass through and (b) allow less current to pass through? Give reasons for your answers.**

ANS: a) Wire B, the amount of heating caused depends on the amount of current flowing through the wire. The greater the current, the more is the heating caused. If the current exceeds a certain amount, the heating in the wire causes it to melt. So the wire having higher melting point will allow current to pass through.

b) Wire A. It has a lower melting point, hence it will allow less current to pass though.

#### **4. List the factors on which the amount of heat produced in an appliance in a closed circuit depends.**

ANS: The amount of heat produced in an appliance in a closed circuit depends on:

- a) material which wire is made up of
- b) the length and thickness of wire
- c) duration for which current is flowing
- d) amount of current passing through circuit

#### **5. What is a solenoid?**

ANS: A solenoid is a device which can be used as an electromagnet. It is made of a long wire that has been wound many times into a tightly packed coil; it has the shape of a long cylinder.

## 6. What are Miniature Circuit Breakers (MCBs)?

ANS: MCB stands for miniature circuit breaker. Nowadays MCBs are being used increasingly in household electric wiring in place of traditional fuses. MCB is a special kind of electrical switch which automatically turns off when the current in the circuit becomes too large, and cuts off the electricity supply.

## II. Choose the correct answer.

1. \_\_\_\_\_ is the most suitable material for making the core of an electromagnet.  
a. iron                      b. brass                      c. aluminium                      d. steel

ANS: a. iron

2. A \_\_\_\_\_ is a device that can be used as an electromagnet.  
a. Solenoid                      b. electric bulb                      c. immersion rod                      d. electric fuses

ANS: a. Solenoid

3. When an electric current flows through a wire, it \_\_\_\_\_.  
a) Cools down      b) melts easily                      c) behaves like a magnet                      d) it boils

ANS: c) behaves like a magnet

4. The electromagnet works on the principle of \_\_\_\_\_.  
a. chemical effect of electric current                      b. heating effect of electric current  
c. magnetic effect of electric current                      d. lighting effect of electric current

ANS: c. magnetic effect of electric current