

Name: _____ Date: _____

Electric Current and its Effects

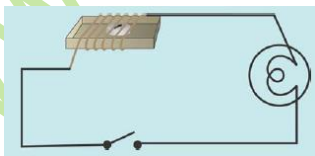
Q1. When the current is switched on through a wire, a compass needle kept nearby gets deflected from its north-south position. Explain.

Ans. _____

Q2. Write the key points about electric circuit.

Ans. _____

Q3. Will the compass needle show deflection when the switch in the circuit shown below is closed?



Ans. _____

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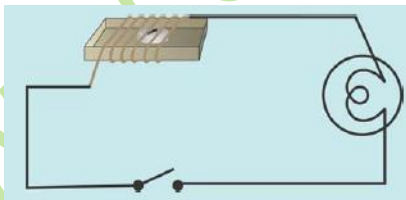
Ans. We know that the needle of a compass is a tiny magnet, which points in north-south direction. When we bring a magnet close to it, the needle gets deflected. We have also seen that compass needle gets deflected when the current flows in a nearby wire. This is so because when electric current passes through a wire, it behaves like a magnet. This is the magnetic effect of the electric current.

Q2. Write the key points about electric circuit.

Ans. Key Points

- i. Notice that the key or switch can be placed anywhere in the circuit.
- ii. When the switch is in the 'ON' position, the circuit from the positive terminal of the battery to the negative terminal is complete. The circuit is then said to be closed and the current flows throughout the circuit instantly.
- iii. When the switch is in the 'OFF' position, the circuit is incomplete. It is said to be open. No current flows through any part of the circuit.

Q3. Will the compass needle show deflection when the switch in the circuit shown below is closed?



Ans. No, the compass needle will not show deflection when the switch in the circuit shown above is closed because compass needle shows deflection only when current passes through the wire.