

Science

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(Chapter 13)(Magnetic Effects of Electric Current)

Class - 10

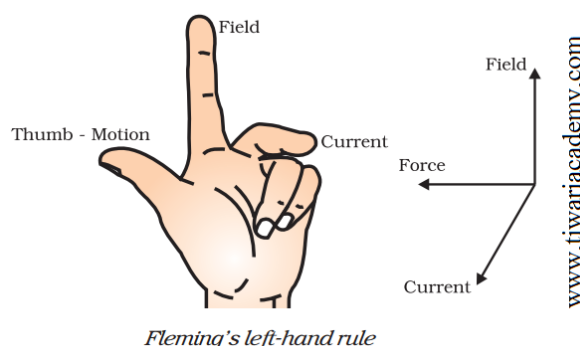
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Question 1:

State Fleming's left-hand rule.

Answer 1:

According to Fleming's left-hand rule, stretch the thumb, forefinger and middle finger of your left hand such that they are mutually perpendicular. If the first finger points in the direction of magnetic field and the second finger in the direction of current, then the thumb will point in the direction of motion or the force acting on the conductor.



Question 2:

What is the principle of an electric motor?

Answer 2:

The working principle of an electric motor is based on the magnetic effect of current. A current-carrying loop experiences a force and rotates when placed in a magnetic field. The direction of rotation of the loop is given by the Fleming's left-hand rule.

Question 3:

What is the role of the split ring in an electric motor?

Answer 3:

The split ring in the electric motor acts as a commutator. The commutator reverses the direction of current flowing through the coil after each half rotation of the coil. Due to this reversal of the current, the coil continues to rotate in the same direction.

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