

# Science

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(Chapter 13)(Magnetic Effects of Electric Current)

Class - 10

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## Question 1:

Which of the following property of a proton can change while it moves freely in a magnetic field? (There may be more than one correct answer.)

- |              |              |
|--------------|--------------|
| (a) Mass     | (b) Speed    |
| (c) Velocity | (d) Momentum |

## Answer 1:

(c) Velocity and (d) Momentum

## Question 2:

In Activity 13.7, how do we think the displacement of rod AB will be affected if (i) current in rod AB is increased; (ii) a stronger horse-shoe magnet is used; and (iii) length of the rod AB is increased?

## Answer 2:

- (i) If current in rod AB is increased, the displacement will also increase.
- (ii) If we use a stronger horse-shoe magnet then the displacement of rod AB will increase.
- (iii) If length of the rod is increased, force acting on it will increase and, hence, displacement of the rod increases.

## Question 3:

A positively-charged particle (alpha-particle) projected towards west is deflected towards north by a magnetic field. The direction of magnetic field is

- |                   |                  |
|-------------------|------------------|
| (a) towards south | (b) towards east |
| (c) downward      | (d) upward       |

## Answer 3:

(d) upward

In accordance with Fleming's left-hand rule, the direction of magnetic field is vertically upward.

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