

ASSIGNMENT

MAGNETIC EFFECTS OF CURRENT

1. A current-carrying straight conductor is placed in the east-west direction. What will be the direction of the force experienced by this conductor due to earth's magnetic field? How will this force get affected on?
 - (a) Reversing the direction of flow of current
 - (b) Doubling the magnitude of current.
2. An electron enters a magnetic field at right angles to it as shown in fig. The direction of the force acting on the electron will be:
 - (a) to the right (b) to the left (c) out of the page (d) into the page
3. A coil of insulated copper wire is connected to a galvanometer. What would happen if a bar magnet is (i) Pushed into the coil? (ii) Withdrawn from inside the coil? (iii) Held stationary inside the coil?
4. Under what conditions permanent electromagnet is obtained if a current carrying solenoid is used?
5. Meena draws magnetic field lines of field close to the axis of a current carrying circular loop. As she moves away from the center of the circular loop she observes that the lines keep on diverging. How will you explain her observation?
6. What does the divergence of magnetic field lines near the ends of a current carrying straight solenoid indicate?
7. What is the difference between a direct current and an alternating current? How many times does AC used in India change direction in one second?

8. What is the role of fuse, used in series with any electrical appliance?
Why should a fuse with defined rating not be replaced by one with a larger rating?
9. What is the principle behind the working of electric generator?
Explain its working with the help of well labeled diagram.
10. Explain the construction and working of electric motor?