

Board – CBSE

Class – 10<sup>th</sup>

Topic – Magnetic effect of electric current

1. State two properties of magnetic lines of force?
2. State the factors on which strength of the magnetic field at a point due to a current-carrying conductor depends?
3. What is the function of an earth wire? Why is it necessary to earth metallic casing of electric appliances?
4. What is the principle of electric motors? State the function of
  - (i) split ring
  - (ii) field magnet used in electric motors.
5. (a) What is short-circuiting?  
(b) What is overloading? How can you avoid overloading?
6. (a) Distinguish between A.C and D.C?  
(b) Which source produces alternating current?
7. (a) Define the term current rating of an electric fuse?  
(b) Name the material used to make an electric fuse?  
(c) Name two safety measures commonly used in electric circuits and appliances?
8. What precaution should be taken to avoid the overloading of a domestic electric circuit?
9. The current- time graph from two different sources are shown in the figure.
  - (a) Name the current shown by graphs (I) and (II)?
  - (b) Name any one source shown by (I) and (II)?
  - (c) What is the frequency of the current in case (II)?
  - (d) Write two differences between current shown by (I) and (II)?

Current

Current

10. Explain the principle, construction and working of an electric motor with the help of a labelled diagram?
11. Explain the underlying principle and working of an electric generator by drawing a labelled diagram. What is the function of brushes?
12. A coil of insulated copper wire is connected to a galvanometer. What will happen if a bar magnet is
  - (i) pushed into the coil.
  - (ii) Withdrawn from inside the coil
  - (iii) held stationary inside the coil?
13. An electric oven of 2 kW power rating is operated in a domestic electric circuit (220V) with a current rating of 5.A. What result do you expect? Explain.
14. State Fleming's left-hand rule.
15. List the properties of magnetic lines of force.
16. What is a solenoid? Draw magnetic field lines showing the magnetic field inside and outside the current-carrying solenoid?