

One mark questions

- Q1. What is meant by magnetic field?
- Q2. How is the direction of magnetic field at a point determined?
- Q3. What is the direction of magnetic field lines outside a bar magnet?
- Q4. State Fleming's right hand rule.
- Q5. State the rule used to determine the direction of magnetic field produced around a straight conductor carrying current.
- Q6. Draw the magnetic field lines through and around a single loop of wire carrying electric current.
- Q7. State one advantage of A.C. over D.C.
- Q8. Name the material generally used to make electric fuse?
- Q9. Mention the colour convention for live, neutral and earth wires.
- Q10. In a domestic electric circuit, mention the potential difference between live wire and neutral wire and frequency of A.C.

Two marks questions

- Q1. State the factors on which the strength of magnetic field at a point due to a current carrying conductor depends. State the rule which gives the direction of magnetic field.
- Q2. How does the strength of the magnetic field at the centre of a circular coil of a wire depends on a) radius of the coil and b) number of turns of the wire of the coil?
- Q3. What is the basic difference between AC generator and DC generator?
- Q4. An electric fuse of rating 3A is connected in a circuit in which an electric iron of power 1kW is connected which operates at 220V. What would happen?
- Q5. What is an electromagnet? Mention any two uses of an electromagnet.
- Q6. List two safety measures commonly used in electric circuits. Explain the main function of each.
- Q7. What is over loading? How can you avoid overloading?
- Q8. What is the function of an earth wire in a domestic electric circuit?
- Q9. What is electric motor? What is the principle of electric motor?

Q10. A coil of insulated wire is connected to a galvanometer. What would be seen if a bar magnet with its south pole towards one face of the coil is a) moved quickly towards it b) moved quickly away from it.

Three marks questions

Q1. 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?

Q2. 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?

Q3. How does a solenoid behave like a magnet? Can you determine the North and South poles of a current-carrying solenoid with the help of a bar magnet? Explain

Q4. Draw a labeled diagram of an electric motor. Explain its principle and working. What is the function of split rings in an electric motor?

Q5. A copper coil is connected to a galvanometer. What would happen, if a bar magnet is a) pushed into the coil with its North pole entering first? b) held at rest inside the coil? c) pulled out again?

Five marks questions

Q1. What are magnetic field lines? How is the direction of a magnetic field at a point determined? List any four properties of magnetic field lines. Draw two field lines around a bar magnet along its length on its two sides and mark the field direction on them by arrow marks.

Q2. Why is pure iron not used for making permanent magnets? Name one material used for making permanent magnets. Describe how permanent magnets are made electrically. State two examples of electrical appliances made by using permanent magnets.

Q3. State Fleming's left-hand rule. With a labeled diagram, describe the working of an electric motor. What is the function of split-ring commutator in a magnet?

Q4. Draw the pattern of magnetic field lines of a current-carrying solenoid. What does the pattern of field lines inside the solenoid indicate? Write an application of magnetic field of current carrying solenoid.

Q5. . a) State the rule to determine the direction of a i) magnetic field produced around a straight current – carrying conductor. ii) Force experienced by a straight current carrying conductor placed in magnetic field. iii) Current induced in a coil due to its rotation in magnetic field.

b) How will the magnetic force get affected on i) doubling the magnitude of current?

ii) Reversing the direction of current flow?

Q6. a) Draw magnetic lines of force around a straight current-carrying conductor. Which rule is used to detect the direction of field? State the rule.

b) How does the strength of magnetic field due to a current-carrying conductor depend upon?

i) distance from the conductor? ii) Current flowing through the conductor?

