



INDIAN SCHOOL DARSAIT
Class X -Physics
Topic: Magnetic effects of electric current

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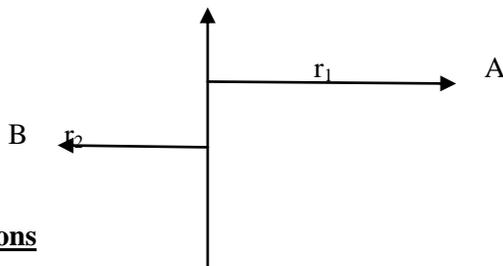
Name of the student :

Date :

Class : X

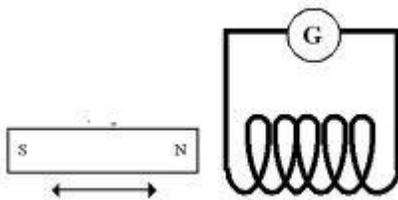
One mark questions

- How will the magnetic field produced in a current carrying circular coil change if we increase :
 - the number of turns of the coil
 - the distance from the coil
 - current through the coil
- State the rule to determine the direction of:
 - Magnetic field produced by a current carrying straight conductor.
 - Current induced in a coil due to its motion in a magnetic field.
- Give an example of uniform magnetic field.
- A stationary charge is placed in a magnetic field. Will it experience a force? Give reason.
- PQ is a current carrying conductor producing magnetic field around it. A and B are two points at a distance r_1 and r_2 respectively from it. If $r_1 > r_2$, Where is the magnetic strength greater and why?



Two mark questions

- List any four properties of magnetic field lines.
- Draw the pattern of magnetic field lines produced by a current carrying :
 - Circular loop
 - Solenoid.
- A coil of metallic wire is connected to a galvanometer as below. What do you observe if a bar magnet is:



- i) Pushed into the coil.
- ii) Pulled away from the coil
- iii) Held at rest inside the coil
- vi) Name the phenomenon responsible for the above observation

9. What do you mean by alternating current (AC)? What is its frequency in India?
10. Is it possible to change the polarity of an electromagnet? If so, how?
11. State the rule which gives the direction of force experienced by a current carrying conductor placed in a magnetic field.
- ii) On what factors do the force experienced by a conductor depends?
 - iii) Under what conditions the force experienced by a current carrying conductor in a uniform magnetic field is maximum?

Three mark question

12. With the help of neat labeled diagram, describe briefly the force experienced by a current carrying conductor in magnetic field. In this experiment. What happens when you reverse the terminals of battery.
13. a) Give the significance of the following in a domestic circuit:
 (i) Electric meter (ii) earthing
- b) List two precautions that should be taken to avoid overloading
14. a) What do you mean by electromagnetic induction?
 b) Two coils P and Q are wound over the same soft iron core . Coil P is connected to battery and key and the coil Q is connected to galvanometer. What happens when:
- i) Current in the coil P is started by closing the key
 - ii) Current continuous to flow in coil P
 - iii) current in coil P is stopped by removing the key.

Five Mark Questions

- 15 State the working principle of an ac generator. Explain its construction and working .
- 16 i) What are the functions of following parts in an dc motor.
 a) Split ring commutator b) strong magnetic field c) armature coil
- ii) with the help of a neat labeled diagram explain the working of dc motor.

