

O P JINDAL SCHOOL, SAVITRINAGAR

CLASS TEST & PRACTICE

CLASS X PHYSICS

TOPIC : MAGNETIC EFFECT
OF CURRENT AND
MAGNETISM

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- 1 (a) Name the material which can be used to make-
- (i) Permanent magnet 3
 - (ii) Temporary magnet.
- (b) State two ways by which the strength of an electromagnet can be increased.
- 2 With the help of a diagram of experimental set-up describe an activity to show that the force acting on a current carrying conductor placed in a magnetic field increases with increase in field strength. 3
- 3 What happens to the force acting on current carrying conductor placed in magnetic field when:
- (a) Direction of magnetic field is reversed without changing the direction of current. 3
 - (b) Direction of the current is reversed without changing the direction of magnetic field.
 - (c) Direction of both the current and the magnetic field is reversed.
- 4 State one main difference between AC and DC. Why AC is preferred over DC for long range transmission of electric power? Name one source each of DC and AC. 3
- 5 State the consequences that can lead to a short circuit.
Or
One of the major cause of fire in office building is short circuiting. List three factors which may lead to the short circuit. 3
- 6 What is overloading? State the causes of overloading. 3
- 7 Give scientific reasons.
- (a) Wires carrying electricity should not be touched when bare-footed. 3
 - (b) We must not use many electrical appliances simultaneously.
 - (c) Electrical switches should not be operated with wet hand.
- 8 A student fixes a sheet of white paper on a drawing board. He place a bar magnet at the centre of it. He sprinkles some iron filings uniformly around the bar magnet. Then he taps the board gently and observes that the iron filings arrange themselves in a particular pattern.
- (a) Why do the iron filings arrange in a pattern? 5
 - (b) What is indicated by the crowding of iron filings at the end of the magnet?
 - (c) What do the lines along which the iron filings align represent?
 - (d) Draw a neat diagram to show the magnetic field lines around a bar magnet.
 - (e) Write any two properties of magnetic field lines.