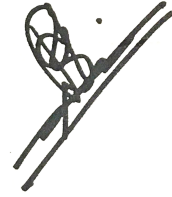


PHYSICS (GRADE-7)
Lesson - 34

MAGNETIC FIELDS



Mrs. Ruksana & Mrs. Farhana

1. Explain the properties of magnets.

Ans.

- i) Magnet can attract magnetic materials such as iron, steel, nickel and cobalt.
- ii) Magnet has two poles:
 - North pole (N)
 - South pole (S)
- iii) If a magnet can freely swing horizontally, it always points in a fixed direction.
- iv) Like poles repel and unlike poles attract.

2. Differentiate between soft magnetic materials and hard magnetic materials.

Ans.

- a) Soft magnetic materials: Iron can be magnetized easily and it also readily loses its magnetism (easily demagnetized). Iron is said to be a soft magnetic material.
- b) Hard magnetic materials: Magnetic materials like steel are difficult to magnetize but stay magnetized. These are hard magnetic materials.

3. What is meant by magnetic field?

Ans. The space surrounding a magnet where it produces a magnetic force is called a magnetic field. If a floating magnet is released near the north pole of a bar magnet, it is repelled to the south pole and moves along a curved path known as a line of force or field line. It moves in the opposite direction if the poles of the floating magnet is flipped. The magnetic field is stronger in regions where the field lines are closer together than where they are further apart.

4. State the law of magnetic poles.

Ans. If the north pole of a magnet is brought near the north pole of another magnet, repulsion takes place. Two south poles also repel. North and south poles always attract. The law of magnetic poles states that "like poles repel, unlike poles attract. The force between magnetic poles decreases as their separation increases."