

7) When a magnet is heated or hammered, the K.E of the molecules increases. So, the alignment of molecular magnets get disturbed and magnet become demagnetised.

Magnet : → Any material which attracts the iron fillings and on freely suspension aligns itself roughly in the Geography N-S direction is called a magnet

OR

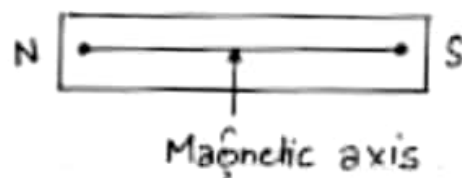
It is a piece of iron or some other material which can attract small piece of iron, cobalt, nickel etc.

Types : → There are two types of magnets

- 1) Natural Magnets
- 2) Artificial Magnets

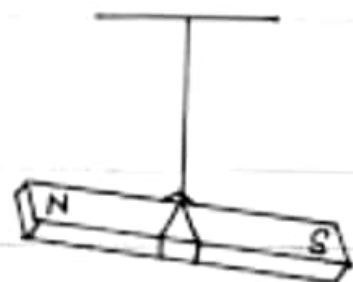
PROPERTIES OF A MAGNET : → A magnet attract small piece of magnetic substance like iron, cobalt, nickel etc

→ When a magnet is brought near a heap of iron fillings, the ends of the magnet show greatest attraction as shown in fig



→ When a magnet is suspended freely, it aligns itself in the geographical N-S direction

→ Like pole repel each other and unlike pole attract each other.

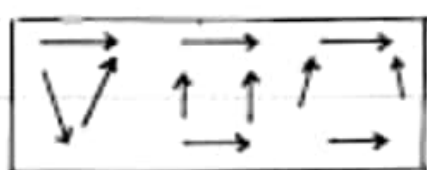


→ The magnetic force between

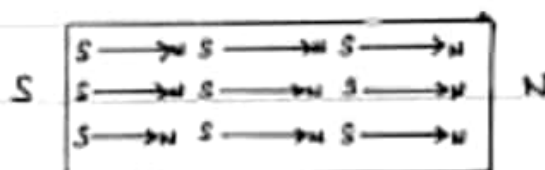
Or atomic magnet

The important points of this theory are

- 1) Each molecule of a magnetic material (whether magnetised or unmagnetised) is an independent tiny magnet or magnetic dipole.
- 2) In an unmagnetised substance, the molecular magnets are randomly oriented and form closed chain as shown in figure (1) So, they neutralize the effect of each other.
- 3) In a magnetised substance, the molecular magnets are so arranged that N-pole of each molecular magnet points in one direction and S-pole points in the opposite direction as shown in fig (2)



Unmagnetised



Magnetised

- 4) When a piece of iron is magnetised, the molecular magnets start setting themselves along straight chains and so the magnetic power of the piece increases.
- 5) When all the molecular magnets are set along the direction of an externally applied magnetic field, the magnetic substance is said to be saturated with magnetism and its magnetism cannot be increased further.
- 6) It also establishes that the strength of two poles are