Second Term Grade 7

Physics Notes

Book 2

Chapter 4

"Magnets and Electromagnets"

DEFINE :

Induced Magnetism

When a piece of iron or steel is placed near to a magnet, the magnetic domains line up and it becomes magnetized. This is called induced magnetism.

Electromagnets

An electromagnet is a magnet that runs on electricity. Unlike a permanent magnet, the strength of an electromagnet can easily be changed by changing the amount of electric current that flows through it. The poles of an electromagnet can even be reversed by reversing the flow of electricity

Differentiate between Permanent magnet and Temporary Magnet

Permanent Magnet	Temporary Magnet
A permanent magnet is a magnet made from a material that is once magnetized retains its induced magnetism and creates its own persistent magnetic field	A temporary magnet is a magnet that loses its induced magnetism when taken away from the magnet or electricity.
They are made up of Hard magnetic material. E.g. Steel	They are made up of Soft magnetic material. E.g. Iron

Q a) Describe the field pattern caused by a current flowing in a wire?
The field pattern are concentric circles around the carrying current wire.

b) Where is the magnetic field strongest?
The field is strongest close to the wire and gets much weaker as you move further away.

c) what happens to the magnetic field if

i) the size of the current is increased.

Magnetic field becomes stronger

ii) The current is reversed.

The magnetic field also reverses.

Answers of multiple choice questions (textbook page no:57-book2)

1. **a**
2. **c**
3. **b**
4. **a**
5. **d**