

## CHAPTER 13

# Electromagnetism

### Introduction:

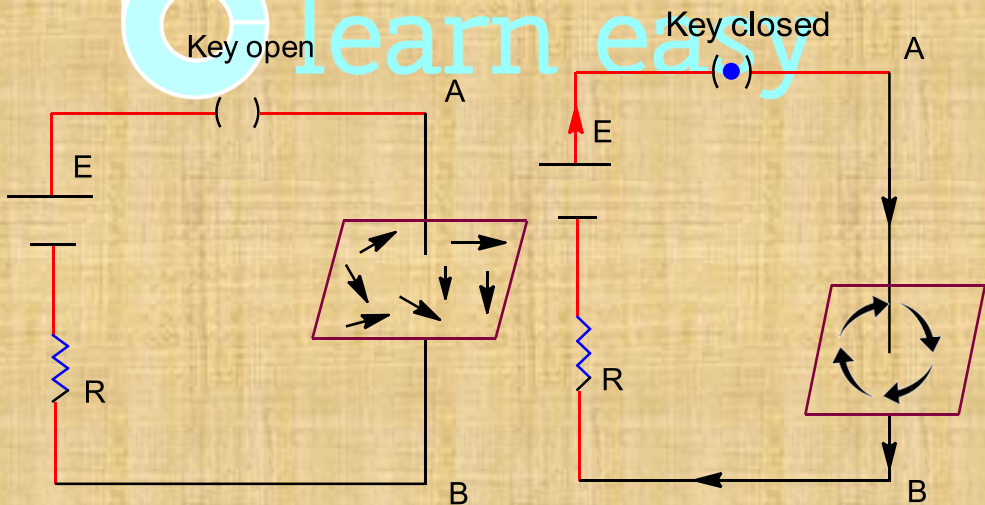
The branch of physics that deals with the inter relationship between electricity and magnetism is called "Electromagnetism".

In this branch, we discuss about two phenomena.

- (1) Production of magnetic fields from electric current.
- (2) Induce electric fields from varying magnetic fields.

Let us look at magnetic effects of electric current.

Here we look at Oersted's experiment, which clearly shows a magnetic field produced by a current carrying conductor.



When no current flows iron, filings are randomly aligned but when current flows through a conductor filings align themselves in a circular path indicating a magnetic field around it.

The direction of magnetic field can be given by right thumb rule.

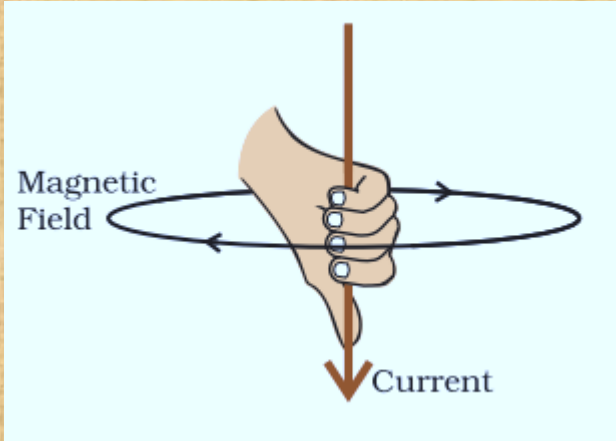


**Fig.** Right-hand thumb rule

