

### **(b) Weak Nuclear Forces:**

The weak nuclear forces are the forces of interaction between elementary particles of short life times.

- The weak nuclear force appears only in certain nuclear processes such as the  $\beta$ -decay of a nucleus.

Some of the important properties of weak nuclear forces are:

1. The weak nuclear forces are  $10^{25}$  times stronger than the gravitational forces.
2. The weak nuclear forces exist between leptons and leptons; leptons and mesons etc.

Other properties of weak nuclear forces are yet under investigation.

### **(c) Electromagnetic forces:**

The electromagnetic forces are the forces between charged particles. When the charges are at rest, the forces are called electrostatic forces.

The forces between unlike charges are attractive and the forces between like charges are repulsive. These forces are governed by Coulomb's Law.

**NOTE:** Some of the macroscopic forces are also explained in terms of electromagnetic forces. For example;

- (i) Forces between two surfaces in contact.
- (ii) Force of Friction.