

### (a) Gravitational forces:

The gravitational force is the force of mutual attraction between any two objects by virtue of their masses.

### Some of the important feature/properties of gravitational forces are:

1. Gravitational forces are universal attractive forces, i.e., they exist between microscopic as well as macroscopic objects irrespective of their size, shape, separation and intervening medium.
2. These are the weakest forces in nature.
3. They operate over very long distance especially when the bodies are massive. For example, rotation of earth around the sun is due to gravitational pull of sun on earth.
4. Gravitational forces obey inverse square law, i.e., they vary inversely as the square of the distance between the two bodies.
5. Gravitational forces are central forces, i.e., they act along the line joining the centers of two bodies.
6. Gravitational forces are conservative forces.
7. The field particle of gravitational force is called 'graviton'. The concept of exchange of field particle (gravitons) between two bodies, explain how the two bodies interact from a distance.