

## 10. Solar system, Planets and Satellites!

A Solar system is composed of a star (such as the sun) and objects called planets which revolves around it.

The star is an object that emits its own light while planets do not emit light but can reflect it. In

addition there may be objects revolving about the planets. These

are called satellites. In our solar system the moon is a satellite of

the Earth. In addition, there are artificial or man made satellites which can revolve about the planets or their moons.

The path of a planet or satellites is called its orbit. The largest and smallest distances of a planet from the sun are called ~~at~~ the aphelion and

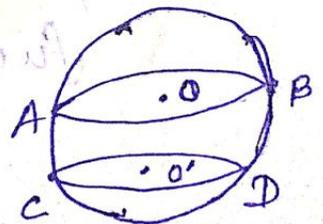
perihelion respectively. The largest and smallest distances of satellite around a planet about which it revolves are called apogee and perigee respectively.

The time for one complete revolution of a body in an orbit is called its period. This is sometimes called sidereal period to distinguish it from other periods such as the period of Earth's motion about its axis etc.

11. Section of the surface of a sphere made by any plane is a circle.

12. Great and small circles.

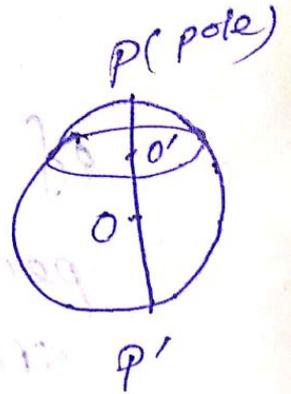
Section of a sphere, cut by a plane passing through its centre is called great circles. Section AB is a great circle. The radius of a great circle is the same as that of the sphere



If the plane does not pass through the centre of the sphere, the section is called ~~sa~~ small circle, section  $cd$  is small circle.

### 13. Axis and poles:

The Axis of any circle of a sphere is that diameter



of the sphere which is perpendicular to the plane of the circle. The extremities of the axis

are called the poles of the circle. These poles are equidistant from the plane of a great circle, If the

circle is not a great circle then the pole nearest to the plane of the circles is called nearest pole or the pole and the other pole is called further pole.

