

Chapter 10

REFLECTION AND REFRACTION

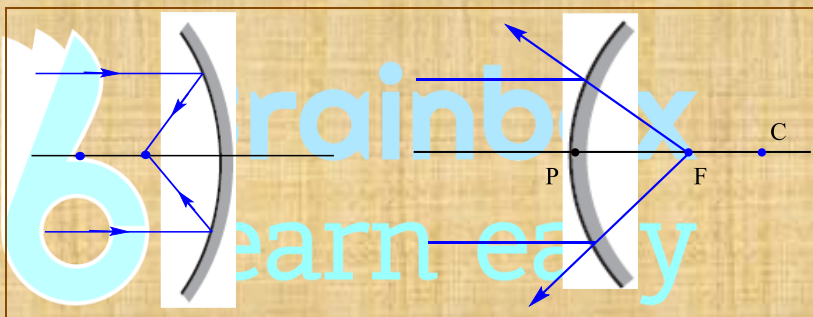
REFLECTION AT SPHERICAL SURFACE:

A mirror which is a part of a sphere with one surface silvered is called spherical mirror. There are two types of spherical mirrors.

(a) **Concave mirror**

(b) **Convex mirror**

If the reflecting surface of the mirror is towards the centre of the spherical surface, then it is called concave mirror.



If the reflecting surface of the mirror is away from its centre, then it is called convex mirror.

Terminology:

- Centre of curvature(c) is the centre of sphere of which the mirror is a part.
- Pole(P) is the midpoint of the mirror
- Radius of curvature(R) is the radius of sphere of which the mirror is a part.
- Principal axis is the line joining the pole and centre of curvature.

- e) Principal focus(F) is a point on the principal axis of a concave mirror at which a parallel beam, after reflection converges (or) It is a point on the principal axis of a convex mirror at which a parallel beam after reflection appears to diverge from that point.
- f) Focal length (f) is the distance between pole and principal focus.

