



## SUMMARY



## REFLECTION OF LIGHT

Light is a form of energy which can be reflected either by a plane mirror or spherical mirror. Depending upon the type of mirror used for reflection of light the use of reflecting surface also varies.

## LIGHT:

Light is an external cause responsible for sensation of vision.

## REFLECTION

The phenomenon by which a ray of light changes the direction of propagation when it strikes a boundary between different media through which it cannot pass is described as the reflection of light.

## LAWS OF REFLECTION

The incident ray, the reflected ray and the normal at the point of incidence lie in the same plane.

The angle of incidence is equal to the angle of reflection.

## CONCAVE MIRROR

Concave mirror is a spherical mirror whose reflecting surface is towards the centre of the sphere of which the mirror is a part.

## CONVEX MIRROR

Convex mirror is a spherical mirror whose reflecting surface is away from the centre of the sphere of which the mirror is a part.

## CENTRE OF CURVATURE (C)

Centre of curvature (C) is the centre of the sphere of which the spherical mirror forms a part.

## RADIUS OF CURVATURE (R)

Radius of curvature (R) is the radius of the sphere of which the mirror is a part.

## LINEAR APERTURE

Linear aperture is the distance between the extreme points on the periphery of the mirror.

## POLE

Pole is the mid point of the aperture of the spherical mirror.

## PRINCIPAL AXIS

Principal axis is the straight line passing through the pole and the centre of curvature of a spherical mirror.

## PRINCIPAL FOCUS

The rays of light parallel to the principal axis of a mirror after reflection, either pass through a point (in the case of a concave mirror) or appear to diverge from a point (in the case of a convex mirror) on the principal axis and this point is referred to as the principal focus of the mirror.

## FOCAL LENGTH

Focal length is the distance between the pole and the focus of a mirror.

Focal length of a mirror is equal to half the focal length of the mirror or  $f = R/2$ .

## MIRROR FORMULA

$$\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$$

## MAGNIFICATION

Magnification is the ratio of the height of the image to the height of the object.

$$m = \frac{\text{height of the image}}{\text{height of the object}} = \frac{v}{u}$$