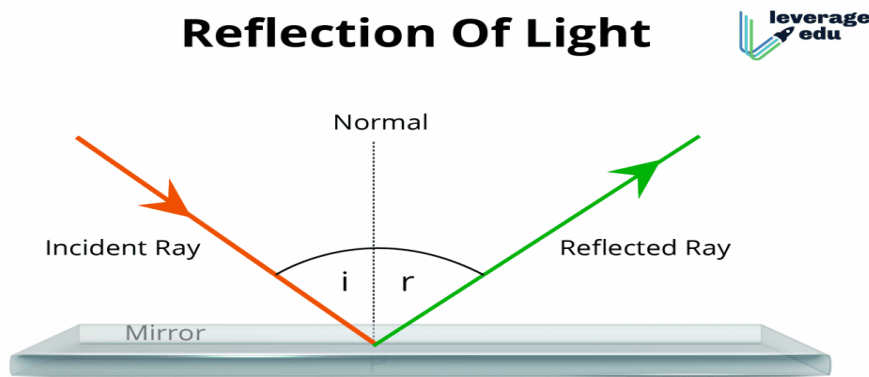


CHAPTER 2. (LIGHT- REFLECTION) (BASED ON NCERT PATTERN)

(REVISION)

Light is a form of energy that produces in us the sensation of sight.

What is Reflection of Light? To begin with, the reflection of light occurs whenever a ray of light falls on a smooth polished surface and bounces back. In other words, the ray of light approaching any surface results in the reflection of the light. Further, the ray of light which falls on the surface is known as **Incident ray** while the ray of light which gets reflected back is called **Reflected ray**. Also, if a perpendicular is to be drawn between the two rays on the reflecting surface, it is known as a **Normal**.



Incident Ray= It is the ray which falls on the surface

Reflected Ray= The ray which is reflected from the surface

Normal = Perpendicular on the polished surface

P= Point of reflection

i= Angle of Incidence

r= Angle of Reflection

Laws of Reflection

After understanding the meaning of reflection, you must also understand its two imperative laws. Using these laws, the reflection of the incident ray on various surfaces like a plane mirror, water, metal surfaces, etc can be determined. For instance, if we consider a plane mirror, here are the laws of reflection:

- The incident ray, the normal and the reflected ray must lie in the same plane.
- The angle of incidence (i) = The angle of reflection (r).

Types of Reflection

While exploring the basics of the reflection of light, it is also important to go through the different types of reflection. Whenever we change the basic elements or the form of basic elements involved in this phenomenon, the result also varies. Following are the main three types of reflection:

- Regular Reflection
- Diffused Reflection
- Multiple Reflection

Diffused Reflection

To explore the meaning of diffused reflection, let us consider reflective surfaces other than mirrors. The common surfaces which can be used for diffusion of light are comparatively rough as they are made up of different material than glass and contain some marks, scratches, dust or dents. All these things hamper the quality and brightness of reflection. Thus, the comparison of both the angles of reflection on such rough surfaces is completely distorted. In diffused reflection, the incident ray falls on different points and gets reflected in an entirely different direction and hence, we see non-shiny objects.

