

2. OPTICS

Learning Objectives

At the end of this lesson, students will be able to:

- State the laws of refraction.
- List the properties of light.
- Explain the scattering of light and its various kinds.
- Understand the images formed by concave and convex lens.
- Analyze the ray diagram of concave and convex lens.
- Understand the working of human eye and optical instruments
- Solve numerical problems

Important Points and Notes

- ❖ **Colloid** is a microscopically small substance that is equally dispersed throughout another material. Example: Milk, Ice cream, muddy water, smoke.
- ❖ The lens formula and lens maker's formula are applicable to only thin lenses. In the case of thick lenses, these formulae with little modifications are used.



S. No	Convex Lens	Concave Lens
1	A convex lens is thicker in the middle than at edges.	A concave lens is thinner in the middle than at edges.
2	It is a converging lens.	It is a diverging lens.
3	It produces mostly real images.	It produces virtual images.
4	It is used to treat hypermeteropia.	It is used to treat myopia.