ꯃꯤꯇꯩꯂꯣꯟ ꯁꯤꯡꯂꯨꯞ ꯁꯦꯛꯈꯥ (ꯁꯦ)

DEPARTMENT OF EDUCATION (S)

Government of Manipur

CLASS X
PHYSICS
CHAPTER 11 – LIGHT

NOTES

1. **Light** always travels in straight line. This property is known as **rectilinear propagation of light**.
2. When the light (called incident ray) strikes a polished surface, it is bounced back in the same medium (forming reflected ray). This phenomenon is called **reflection of light.**
3. Types of images- **i) Virtual image -** It is formed by the intersection of actual rays when produced. It is always erect and cannot be focussed on the screen.

   ii) Real image - It is formed by the intersection of actual rays. It is always inverted and can be focussed on the screen.
4. **Nature of image formed by a plane mirror:** It is formed behind the mirror. It is **virtual, erect, laterally inverted** and of same size as object.
5. **Mirror formula :** $\frac{1}{v} + \frac{1}{u} = \frac{1}{f}$
6. **Magnification (for mirror) :** M $= \frac{\text{height of the image }(hi)}{\text{height of the object }(ho)} = -\frac{v}{u}$
7. When a ray of light passes from one medium to another medium, it bends. This phenomenon is called **refraction of light.**
8. Refraction of light is caused by the change in the speed of light as it passes from one medium to another.
9. **Total internal reflection:** When a ray of light enters a rarer medium from a denser medium with an angle of incidence greater than the critical angle, it is reflected back to the denser medium. This phenomenon is called total internal reflection.
10. **Lens formula :** $\frac{1}{v} - \frac{1}{u} = \frac{1}{f}$
11. **Magnification (for lens) :** m $= \frac{\text{height of the image }(hi)}{\text{height of the object }(ho)} = \frac{v}{u}$
12. Splitting of composite light into its constituent colours is known as **dispersion of light.**
13. **Rainbow is formed by dispersion, internal reflection and refraction of sunlight.**

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