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**SUBJECT:-** PHYSICS

**CLASS:-** XTH

**DATE:**15/11/XX

**SUBJECT TEACHER:- MR. NEEL NIRANJAN**

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

**(REVISION)**

**Question 1.** What is the difference between a real image and a virtual image ? Give one example of each type of image.

**Solution :** Real image can be obtained on a screen because light rays actually pass through a real image but virtual image cannot be formed on screen because light rays do not actually pass through a virtual image.

Example:-

The image formed on a cinema screen is an example of real image.

The image formed by a plane mirror is a virtual image.

**Question 2.** A ray of light strikes a plane mirror such that its angle of incidence is  $30^\circ$ . What angle does the reflected ray make with the mirror surface ?

**Solution :** According to the second law of reflection, angle of incidence is equal to the angle of reflection.

Given angle of incidence= $30^\circ$

Therefore, angle of reflection= $30^\circ$

Angle made by the reflected ray with mirror surface= $90^\circ-30^\circ=60^\circ$

**Question 3.** (a) A wall reflects light and a mirror also reflects light. What difference is there in the way they reflect light ?

(b) Which type of reflection of light leads to the formation of images ?

**Solution :** (a) A wall has a rough surface, so the reflection by a wall is a diffuse reflection. A parallel beam of light incident on it is reflected in different directions.

A mirror surface is smooth, so the reflection by a mirror is a regular reflection. A parallel beam of light incident on it, gets scattered by making reflected rays in different directions.

(b) Regular reflection