SUBJECT:- PHYSICS   CLASS:- XTH   DATE:16/07/XX

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 5. (LIGHT- REFRACTION) (BASED ON NCERT PATTERN)

LENS FORMULA:-

A lens formula may be defined as the formula which gives the relationship between the distance of image (v), distance of object (u), and the focal length (f) of the lens. It may be written as:

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

Where, v = Distance of image from optical centre of lens
u = Distance of object from optical centre of lens
and f = Focal length of lens

The lens formula is applicable both in convex lenses and concave lenses.

LINEAR MAGNIFICATION:-

Magnification

Magnification of a lens is defined as:

$$m = \frac{I}{O} = \frac{v}{u}$$

Note:

Sign convention must be followed while using formula for magnification. Hence, it can be positive or negative.

$|m| > 1 \implies$ image is magnified.

$|m| = 1 \implies$ image is same size as object.

$|m| < 1 \implies$ image is diminished.