**Refraction of light**

**Practice Assignment-2**

1. A transparent medium A floats on another transparent medium B. When a ray of light travels obliquely from A into B the reflected ray bends away from the normal. Which of the media A and B is optically denser and why?
2. A thin converging lens forms a
3. Real image
4. Virtual image

Of an object placed in front of it. The size of the image is three times the size of the object in each of the case. Draw labeled ray diagram to show the image formation in each case. How will the focal length of such a lens be affected on cutting it into two equal halves along the principal axis?

1. Draw ray diagram to show the use of a convex lens for the formation of images having following characteristics-
2. Real, inverted and diminished.
3. Virtual, erect and magnified.
4. (a) Draw a ray diagram to show passage of two rays of light through a rectangular slab of glass. When the angle of incidence is zero in one case and a little less than 900in the other case.

(b) Prove that if a ray enters a rectangular glass slab obliquely and emerges from the opposite face, emergent ray will be parallel to the incident ray.

1. It is required to get-
2. Magnified, erect and virtual image.
3. A diminished, erect and virtual image of a given object.

What type of lens should we use in each case and where should the object be kept? Draw ray diagrams to show the required image formation in each case. Which of these lenses could also form a magnified, real and inverted image? Also indicate the position of the object for which this could happen?

1. An object is kept at a distance of-
2. 2x b) (3/2)x

From a concave lens having a focal length of magnitude x.Draw ray diagram showing the formation of image in the two cases.

What is/are the point(s) of similarity/dissimilarity between the images formed in two cases?

1. a) What do you mean by a converging and a diverging lens? Which lens behaves as a converging lens and which lens behaves as a diverging lens?

b) In what S.I. unit is the power of lens stated?