**Aarambh Classes**

**Class X**

**SCIENCE WORKSHEET**

**Refraction of light**

**2 marks questions :**

1. The refractive indices of glass and water with respect to air are and respectively .If speed of light in glass is 2x 10m/s ,find the speed of light in water .
2. ‘ A ray of light incident on a rectangular glass slab immersed in any medium emerges parallel to itself ‘. Draw a labelled ray diagram to justify the statement .
3. The absolute refractive indices of glass and water are 1.5 and 1.33 respectively .In which medium does light travel faster ?Calculate the ratio of speeds of light in the two media .

**3 marks questions :**

1. (a) Water has refractive index 1.33 and alcohol has refractive index 1.36.Which of the two medium is optically denser ?Give reason for your answer.

(b) Draw a ray diagram to show the path of a ray of light passing obliquely from water to alcohol.

(C) State the relatioship between angle of incidence and angle of refraction in the above case .

5. the refractive index of a medium’ X’ with respect to medium ‘Y’ is and the refractive index of medium ‘Y; with respect to medium ‘z’ is .Fin dthe refractive index of medium ‘Z’ with respect to medium ‘X’. If the speed of light in medium ‘x’ IS 3 x10 m/s .Calculate the speed of light in medium ‘y’.

**5 Marks Question** :

6. (a)State Snell’s law of refraction of light .

(b) When a ray of light travelling in air enters obliquely into a glass slab ,it is observed that the light ray emerges parallel to the incident ray but it is shifted sideways slightly.Draw a labelled ray diagram to illustrate the phenomena .