**Karan Arora** **R.L. Chemistry Classes M: 99968-68554**

**Max Time : 1 hr** **Class = 10th Science Test**  **Max Marks : 25**

**Refraction**

1. Define Refraction. [ 1 ]
2. A ray of light travelling in air enters obliquely into water. Does the light ray bend towards the normal or away from the normal? Why? [ 1 ]
3. What is an optically denser medium? [ 1 ]
4. What is relative refractive index? [ 1 ]
5. What is the cause of refraction of light? [ 1 ]
6. If the refractive indices of water and alcohol are 1.33 and 1.36 respectively, which of the two is optically denser medium ? [ 1 ]
7. The refractive index of glycerine is 1.2. What is the speed of light in air if its speed in glycerine is 1.5 x 108m/s ? [ 2 ]
8. The refractive index of glass is 1.6 and that of diamond is 2.4. Calculate refractive index of diamond with respect to glass. [ 2 ]
9. A water tank appears to be 6 m deep when viewed from the top. If refractive index of water is 4/3, what is the actual depth of the tank ? [ 2 ]
10. What is the real depth of a swimming pool when its bottom appears to be raised by 1 m? Given refractive index of water is 4/3. [ 2 ]
11. The absolute refractive indices of two media ‘A’ and ‘B’ are 2.0 and 1.5 respectively. If the speed of light in medium ‘B’ is 2 x 108 m/s, calculate the speed of light in: [ 3 ]

(a) Vacumm (b) Medium ‘A’.

1. Explain laws of refractions. [ 3 ]
2. Explain refraction of light through a rectangular glass slab. [ 5 ]