

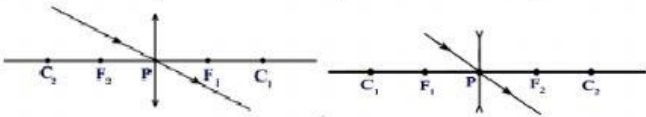
REFRACTION OF LIGHT AT CURVED SURFACES

$$\frac{n_1}{v} + \frac{n_2}{u} = \frac{n_2 - n_1}{R}$$

1. _____ in this curved surface formula R refers to [_____]
 A) Refractive index of first medium B) Refractive index of second medium C) both D) radius of curvature
2. If a bird flying in the sky looks vertically down and sees a fish in water. How does the fish appear to the bird ? [_____]
 A) At its actual position B) farther away than its actual distance
 C) Closer than its actual distance D) Can not be seen
3. Formula for refraction at plane surface [_____]
 A) $n_1/u = n_2/v$ B) $n_1/n_2 = u/v$ C) $n_1/v = n_2/u$ D) $n_1/n_2 = v/u$
4. A bird is flying down vertically towards the surface of water in a pond with constant speed. There is a fish inside the water. If that fish is exactly vertically below the bird, then the bird will appear to the fish to be: [_____]
 i. Farther away than its actual distance ii. Closer than its actual distance
 iii. Moving faster than its actual speed iv. Moving slower than its actual speed
 A) i is correct B) ii is correct C) iii is correct D) A and C are correct
5. A _____ is formed when a transparent material is bounded by two surfaces of which one or both surfaces are spherical or curved [_____]
 A) mirror B) lens C) prism D) NONE OF THESE
6. Match the following and choose the correct pair. [_____]
 1) Lens which is thick at the middle and thin at the edges. a) Bi - convex lens
 2) Lens which is bound by two spherical surfaces bent towards the same, Thin at the middle and thicker at the edges. b) Concavo - convex lens
 c) Convexo - concave lens
 A) 1-a, 2-b B) 1-a, 2-c C) 1-b, 2-c D) 1-b, 2-a
7. From below mentioned lenses, which one is not a converging lens ? [_____]
 A) Bi - convex lens B) Concavo convex lens C) Plano convex lens D) convexo concave lens
8. We represent convex lens with a symbol _____

9. We represent concave lens with a symbol

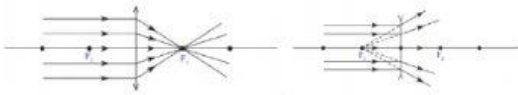
- A) $\updownarrow$ B) **I** C) $\leftrightarrow$ D) NONE OF THESE



10. Any ray passing through the optic centre is _____
A) deviates B) undeviates C) A and B D) none of these

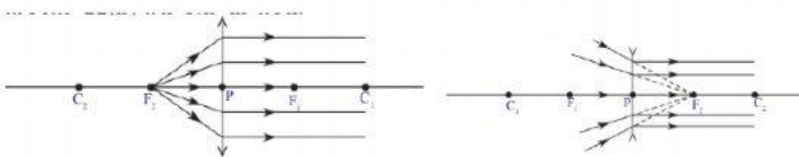
11. The line joining the two centres of curvature of a lens is called[]
A) Optic centre B) Principal axis C) Focus D) Focal length

12. Any ray passing through the optic centre of the lens.... []
- A) Will take a path parallel to the principal axis after refraction. B) Passes through focus after refraction.
- C) Passes through the centre of curvature. D) is undeviated, after refraction.



13.  or  light rays passing parallel to the principal axis converge at the _____

- appear to diverge from the _____. []
- A) Optic centre B) Principal axis C) Focus D) Centre of curvature



14.   the light rays passing through the focus will take a path _____ to principal axis after refraction. []
- A) Making some angle B) Parallel C) perpendicular D) none of these