

CLASS-X  
PHYSICS WORKSHEET  
CHAPTER-9

LIGHT-REFLECTION AND REFRACTION

1. The diameter of the reflecting surface of a spherical mirror is called its
  - (a) Centre of curvature
  - (b)  $R=2f$
  - (c) Aperture
  - (d) Principal focus.
2. In a concave mirror an erect and virtual image is formed when the object is placed
  - (a) Between C and F
  - (b) Beyond C
  - (c) Between P and F
  - (d) At C
3. As light travels from a rarer to a denser medium it will have
  - (a) increased velocity
  - (b) decreased velocity
  - (c) decreased frequency
  - (d) both
4. A divergent lens will produce
  - (a) always real image
  - (b) always virtual image
  - (c) both real and virtual image
  - (d) none of these
5. A convex lens of focal length 20 cm can produce a magnified virtual as well as real image. Is this a correct statement? If yes, where shall the object be placed in each case for obtaining these images?
6. Refractive index of diamond with respect to glass is 1.6 and the absolute refractive index of glass is 1.5. Find out the absolute refractive index of diamonds.
7. Draw a ray diagram showing the path of rays of light when it enters with oblique incidence (i) from air into water; (ii) from water into air.
8. Draw ray diagrams showing the image formation by a convex mirror when an object is placed (a) at infinity (b) at finite distance from the mirror.
9. What is the nature of the image at a distance of 80 cm and the lens?
10. Define power of a lens. What is its unit? One student uses a lens of focal length 50 cm and another of  $-50$  cm. What is the nature of the lens and its power used by each of them?