

**Class-X**  
**PRACTICE QUESTIONS,2017-2018**  
**PHYSICS**

(Light)

1. State the laws of reflection of light. Are these laws applicable for both regular and diffused reflection?
2. What are spherical mirrors? What is a convex mirror? Draw it.
3. Is centre of curvature a part of a spherical mirror? If not where does it lie for a concave and convex mirror?
4. A concave mirror produces a real image 1 cm tall of an object 2.5 mm tall placed 5 cm from the mirror. Find the position of the image and the focal length of the mirror.
5. An object of 5 cm size is placed at a distance of 20 cm from a converging mirror of radius of curvature 30 cm. At what distance from the mirror should a screen be placed to get a sharp image? Also, calculate the size of the image.
6. State the laws of refraction of light. What do you understand by refractive index of a medium?
7. The speed of light in vacuum and in two different glasses is given in the table below

Medium	Speed of light
Vacuum	$3 \times 10^8$ m/s
water	$2.25 \times 10^8$ m/s
Glass	$2 \times 10^8$ m/s

- a) Calculate the absolute refractive index of glass and water.
  - b) Calculate the relative refractive index for light going from glass to water.
8. Draw a diagram to show the lateral displacement of light while emerging from a rectangular glass slab.
  9. Definition of all the important terms related to lens.
  10. A person having a myopic eye uses a lens of focal length 50 cm. Mention the type of lens used and find its power.
  11. The power of a lens is  $-0.5$  dioptre. What is your interpretation?
  12. What happens to the image distance in the eye when we increase the distance of an object from the eye?
  13. What is short-sightedness and long-sightedness? State two causes of these defects. With the help of ray diagrams show the defects and the corrections. How does the far point and near point of the eye change?
  14. What is presbyopia? How to rectify this defect?
  15. The refractive index of glass w.r.t. air is  $3/2$  and R.I. of water w.r.t. air is  $4/3$ . What will be the R.I. of glass w.r.t. water?