

**REVISION QUESTIONS FOR HALF YEARLY,2018-19**

**PHYSICS**

**CLASS-X**

1. Define principal focus of (i) concave mirror (ii) convex mirror.
2. A student is asked to obtain real image of a tree on a screen with the help of a suitable mirror. Name the mirror he should use.
3. An object is placed between pole and focus of concave mirror.  
(a) Where is the image formed? Can this image be taken on screen?  
(b) State the characteristics of the image formed.
4. State the nature and size of image formed by convex mirror when object is placed at infinity.
5. Why does a ray of light passing through centre of curvature of a concave after reflection, is reflected back Along the same path?
6. The magnification produced by a mirror is -1.5. Explain the meaning of the statement.
7. Name the mirror that –  
(a) can give real as well as virtual image of an object.  
(b) will always give virtual image of same size as the object.  
(c) will always give virtual and diminished image of an object.
8. What should be the position of the object when a concave mirror is to be used (a) as a shaving mirror, (b) in headlight of vehicles to produce parallel beam of light?
9. A lens X has focal length 20cm and a lens Y has focal length 40cm. Which lens will produce more convergent beam of light? Explain your answer.
10. Refractive indices of media A,B,C and D are 1.33, 1.44, 1.52 and 1.65 respectively. in which of these four media is the speed of light (i) maximum (ii) minimum?
11. For the given data showing object distance and focal length of 3 concave mirrors, answer the following questions:

Serial no	Object distance (cm)	Focal length (cm)
1	30	20
2	10	15
3	20	10

  - (a) Out of the 3 observations, in which case the mirror will form the image having same size as the object?
  - (b) Which mirror is being used as a make-up mirror?
  - (c) Draw the ray diagram for part (a) and part (b).
12. A concave mirror produces a real image 1cm tall of an object 2.5mm tall placed 5cm from the mirror. Find the position of the image and the focal length of the mirror.
13. The speed of light in a medium is 0.6 times the speed of light in air. Calculate the refractive index of the medium.
14. For what angle of incidence is lateral displacement caused by a glass zero?
15. A needle placed 45cm from a lens forms an image on a screen placed 90cm on the other side of the lens. Identify the type of lens. determine its focal length and power. What is the size of image, if the needle is 5cm in height?