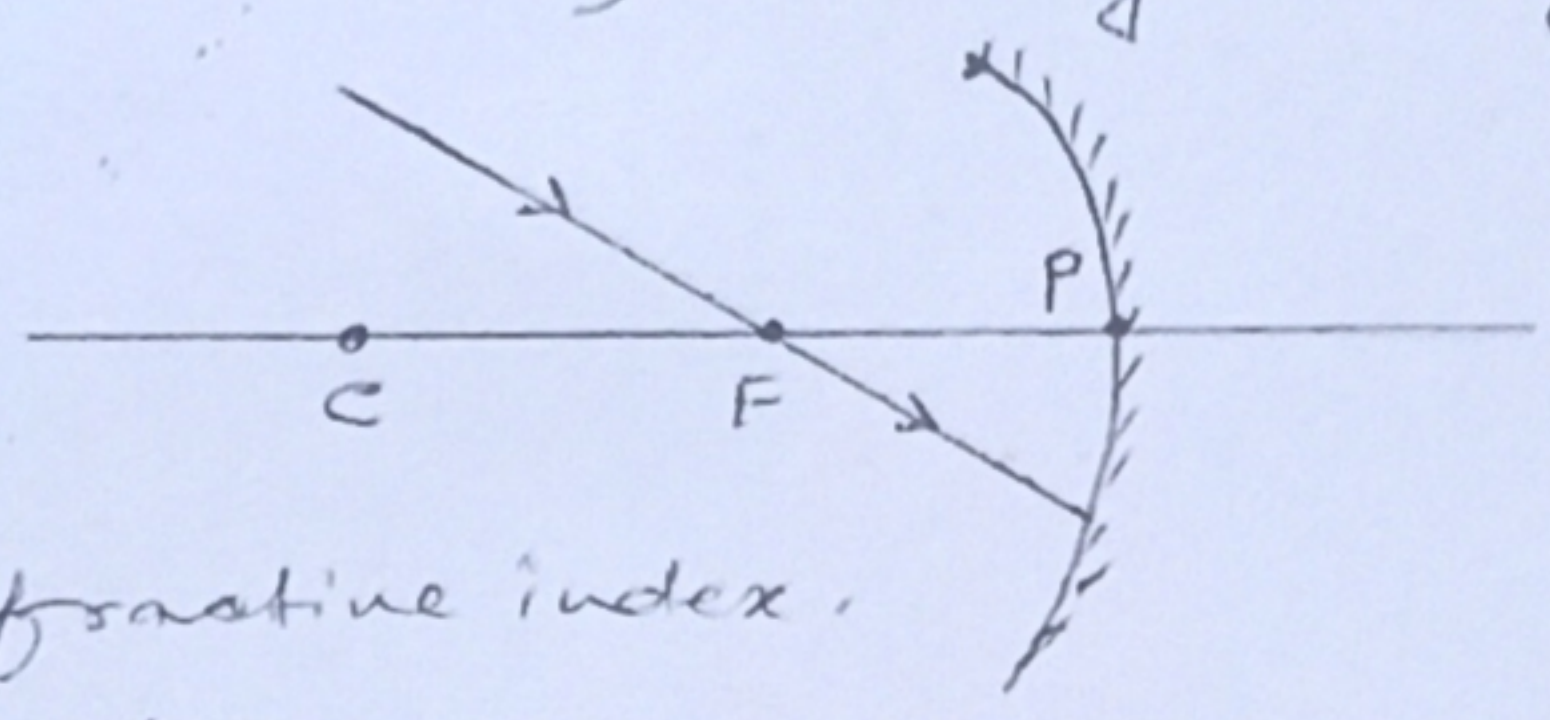


CHAPTER : LIGHT

Section-A (Objective type questions)

- Q1. Why do we prefer a convex mirror as a rear-view mirror in vehicles?
- Q2. Light enters from air to glass having refractive index 1.50. What is the speed of light in the glass?
- Q3. The refractive index of diamond is 2.42. What is the meaning of this statement?
- Q4. Define the power of a lens (In SI).
- Q5. Name the type of mirror used in the following situations:  
 (a) Headlights of a car (b) Side/rear-view mirror of a vehicle  
 (c) Solar furnace. (Explain why?)
- Q6. The magnification produced by a plane mirror is +1. What does this mean?
- Q7. Find the focal length of a lens of power -2.0D. What type of lens is this?
- Q8. Show the direction of the light-ray after reflection!



- Q9. Define refractive index.
- Q10. State Snell's law.

Section-B

- Q11. Distinguish between — (i) Real & virtual image  
 (ii) Reflection & Refraction  
 (iii) convex lens & concave lens.
- Q12. What do you mean by total internal reflection? Mention its conditions. State the laws of reflection.
- Q13. Why does a diamond sparkle? Define critical angle.
- Q14. An object of size 7.0 cm is placed at 27 cm in front of a concave mirror of focal length 18 cm. At what distance from the mirror should a screen be placed so that a sharp focussed image can be obtained? Find the size and the nature of the image.
- Q15. A pencil when dipped in water in a glass tumbler appears to be bent at the interface of air and water. Will the pencil appear to be bent to the same extent, if instead of water we use liquids like, Kerosene or turpentine. Support your answer with reason.
- Q16. The size of image of an object by a mirror having a focal length of 20 cm is observed to be reduced to  $\frac{1}{3}$ rd of its size. At what distance the object has been placed from the mirror? What is the nature of the image and the mirror?