Wave

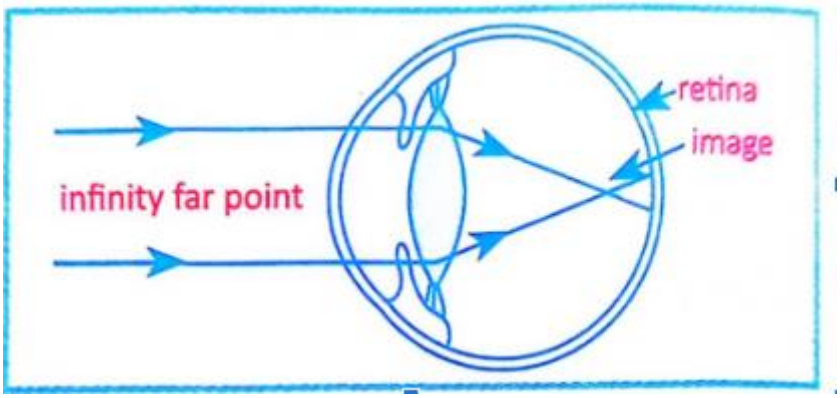
1. Explain the dispersion of light in a prism in brief with a labeled diagram.
2. Mention the condition required for the total internal reflection.
3. Do sound waves show the properties of light waves? Justify your answer by giving examples.
4. State the laws of refraction of light.
5. Define dispersion of light.
6. What is the relation between the refractive index and the speed of light in a medium?
7. Enlist any four events that are caused by the refraction of light.
8. Describe in short the use of optic fibers in the information and communication sector.
9. A ray of light is incident in air on the surface of a glass block. The angle of incidence is 300. calculate the angle of refraction. (R.I. of glass w.r.t. Air = 1.5)
10. The refractive index of glass is 1.5 and the speed of light in a vacuum is 3 ×108 m/s. Find the speed of light in the glass.

11. With what angles should a ray strike the surface of water to make an angle of refraction of 200 in water? The refractive index of water is 1.33.
12. What is myopia?
13. Which lens is used to correct hypermetropia?
14. Define spectrum.
15. What is the ray found above the red color in the spectrum?
16. What are myopia and hypermetropia? How is it corrected?
17. Write the formula for the power of the lens and magnification of the lens each.
18. Sheetal wears a lens of power +2D. Answer the following questions.

i. What is the defect of Sheetal's version called?
ii. How is it corrected by using a lens? Show with the help of a suitable diagram.
iii. What causes this type of defect?
iv. How does she manage a newspaper while reading without using the lens? Why?

19. Why a person with hypermetropia cannot see the closest object?

20. What is the defect of vision in the eye shown in the given figure? What is to be done to correct this defect of vision? Explain.



21. Nishu uses the spectacles of power +1D. Calculate the focal length of the lens. What type of defect is he suffering from?