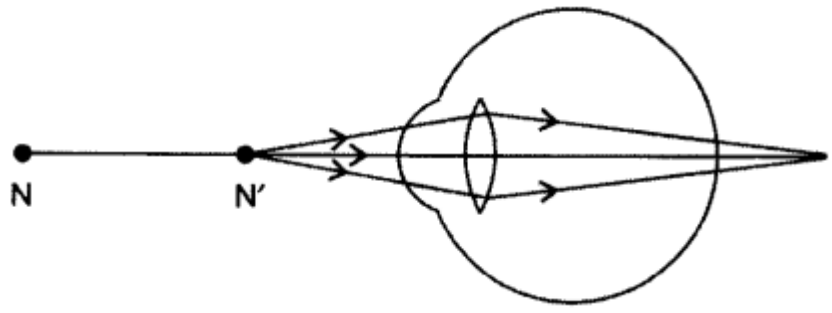
L-11 THE HUMAN EYE AND THE COLOURFUL WORLD

CLASS-X SCIENCE MODULE-2/4

WORKSHEET

1. What is short sight? How can it be corrected?
2. A person having a myopic eye used the concave lens of focal length 50cm. What is the power of the lens?
3. Define “least distance of distinct vision”.
4. How does the eye adjust itself to deal with light of varying intensity? When is a person said to have developed cataract in his eye? How is the vision of a person having cataract restored?
5. What are the common defects of vision that can be corrected by the use of suitable eyeglasses or spectacles?
6. Explain presbyopia
7. A person uses convex lens spectacles. What vision defect does he have? Draw a diagram
   (i) to show the defective eye
   (ii) to show the correction with the lens.
8. Explain the angle of prism.
9. A 14-year old student is not able to see clearly the questions written on the blackboard placed at a distance of 5 m from him.
   (a) Name the defect of vision he is suffering from.
   (b) With the help of labelled ray diagrams show how this defect can be corrected.
   (c) Name the type of lens used to correct this defect.
10. Study the diagram given below and answer the questions that follow it:

a) Which defect of vision is represented in this case? Give reason for your answer.
   (b) What could be the two causes of this defect?
   (c) With the help of a diagram show how this defect can be corrected by the use of a suitable lens.



11. Draw a ray diagram to show the refraction of light through a glass prism. Mark on it (a) the incident ray. (b) the emergent ray and (c) the angle of deviation.
12. What is myopia (near-sightedness)? Draw a ray diagram to show how it can be corrected using a lens.
13. What is hypermetropia (far-sighted-ness)? Draw a ray diagram to show how this defect can be corrected using a lens.