

CLASS - X	Physics	Worksheet -1	Human Eye
------------------	----------------	---------------------	------------------

Reasoning and Logical Questions

1. What eye defect is hypermetropia? Describe with a ray diagram how this defect of vision can be corrected by using an appropriate lens.
2. a) A star sometimes appears brighter and some other times fainter. What is this effect called? State the reason for this effect.
b) Why don't planets appear to be brighter or fainter like stars? Give reason.
3. a) A student cannot see a chart hanging on a wall placed at a distance of 3 m from him. Name the defect of vision he is suffering from. How can it be corrected?
b) Draw ray diagrams for the (i) defect of vision and also (ii) for its correction
4. Why is red color selected for danger signal lights?
5. (a) A person cannot read newspaper placed nearer than 50 cm from his eyes. Name the defect of vision he is suffering from. Draw a ray diagram to illustrate this defect. List its two possible causes. Draw a ray diagram to show how this defect may be corrected using a lens of appropriate focal length.
(b) We see advertisements for eye donation on television or in newspapers. Write the importance of such advertisement.
6. Explain giving reason why the sky appears blue to an observer from the surface of the earth? What will the color of the sky be for an astronaut staying in the international space station orbiting the earth? Justify your answer giving reason.
7. (a) List three common refractive defects of vision. Suggest the way of correcting these defects.
(b) About 45 lac people in the developing countries are suffering from corneal blindness. About 30 lac children below the age of 12 years suffering from this defect can be cured by replacing the defective cornea with the cornea of a donated eye. How and why can students of your age involve themselves to create awareness about this fact among people?
8. With the help of a labeled diagram, explain why the sun appears reddish at the sun-rise and the sunset.
9. (a) What is dispersion of white light? What is the cause of this dispersion? Draw a diagram to show the dispersion of white light by a glass prism.
(b) a glass prism is able to produce a spectrum when white light passes through it but a glass slab does not produce any spectrum. Explain why?