

1. Name the layer of the eye on which image is formed.
2. Name the 2 types of light sensitive cells.
3. What is accommodation of human eye?
4. To see an object comfortably and distinctly, you must hold it about 25 cm from the eyes. Justify.
5. Explain why, we cannot see our surroundings clearly when we enter a darkened cinema hall from a bright sunshine but our vision improves after some time.
6. The far point of a myopic person is 80 cm in front of the eye. What is the nature and power of the lens required to correct the defect?
7. The near point of a hypermetropic eye is 1 m. What is the nature and power of the lens required to correct this defect? (Assume that the near point of the normal eye is 25 cm).
8. What is atmospheric refraction?
9. In an experiment to study the scattering of light by passing a beam of white light through colloidal solution of sulphur in a transparent glass tank:
  - (a) which colour is observed from the sides of the glass tank?
  - (b) which colour is observed from the front of the glass tank?
10. Out of blue light and red light, which one is scattered more easily?
11. Give the meaning of the term 'VIBGYOR'. With which phenomenon is it connected?
12. In a YDSE, if  $D = 2 \text{ m}$ ;  $d = 6 \text{ mm}$  and  $\lambda = 6000 \text{ A}$ , then
  - (a) find the fringe width
  - (b) find the position of the 3rd maxima
  - (c) find the position of the 2nd minima
13. White light is used to illuminate the two slits in a Young's double slit experiment. The separation between the slits is  $d$  and the screen is at a distance  $D \gg d$  from the slits. At a point on the screen directly in front of one of the slits find the missing wavelengths.
14. How to find fringe shift?
15. In a YDSE  $\lambda = 6000 \text{ A}$   $D = 2 \text{ m}$ ,  $d = 6 \text{ mm}$ . When a film of refractive index 1.5 is introduced in front of the lower slit, the third maxima shifts to the origin.
  - (A) find the thickness of the film
  - (B) find the positions of the fourth maxima