

Physics - FSC Part 1 Physics Chapter 10 Short Questions Preparation

Q1. One can buy a cheap microscope for used by the children. The image seen in such a microscope has coloured edges. Why is this so?
Ans 1: It is due to the defects of lenses known a chromatic aberrations. This is because of the prism like formation of the lens which causes dispersion of white light.
Q2. Why would it be advantageous to use blue light with a compound microscope?
Ans 1:
Q3. What is the near point? Give its numerical value?
Ans 1: The minimum distance from the eye at which an object appears to be distinct is called near point or least distance of distinct vision. Its numerical value is 25 cm
The location of the near point, however, change with age.
Q4. Define total internal reflection.
Ans 1: For glass-air boundary, when a propagating wave strikes the boundary at an angle larger than critical angle with respect to the normal to the surface, all the light is reflected and none is refracted to the air. This phenomenon is called total internal reflection.
Q5.
Ans 1:
Q6. What do you understand by Linear Magnification?
Ans 1: Linear magnification is the ratio of the size of the image to the size of object. Angular magnification is the ratio of the angle subtended by the image as seen through the optical device to that subtended by the object at the naked eye placed at least distance of distinct vision.
Q7. Focal length of convex lens is 5 cm, calculate its magnification.
Ans 1:

Q8. Define Magnification.

- **Ans 1:** The size of the object goes on increasing, when the object brought from a far off point to the focus of the lens. This phenomenon of enlargement is called magnification. Its is the ration of size of image to the size of object.
- Q9. What is the function of collimator in a spectrometer?
 - Ans 1: Collimator is used to make the light rays parallel. It consists of a fixed metallic tube, a convex lens and an adjustable slit.
- Q10. Write the advantages of using light as transmission carrier wave over radio wave carriers.
 - **Ans 1:** The use of light as transmission carrier wave in fibre optics gas several advantages over radio wave carriers such as a much wider bandwidth capability and immunity from electromagnetic interference.