Physics - ICS Part 1 Physics Chapter 10 Short Questions Test

Q1.

Ans 1:

Q2. 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.

Q3. Find the magnifying power of a convex lens of 10 cm focal length.

Ans 1:

Q4. How light signals is transmitted through optical fibre?

Ans 1: The lights signal are transmitted through the optical on the principle of

- Total internal reflection
- Continuous refraction

In multimedia step index fiber, the signal is transmitted baby means of total internal reflection while in case of multimode graded index fiber, the signals transmitted by total internal reflection and continuous refraction.

Q5. 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.

Q6. What is resolving power in optical instrument? Write formula for grating.

Ans 1:

Q7. Define total internal reflection and continuous refraction.

Ans 1: Total Internal Reflection:When a light ray traveling from a denser medium towards a rare medium, makes an angle of incidence greater than critical angle of the medium, then the ray is totally reflected back into the same denser medium. This phenomenon is called total internal reflection.
Continuous Refraction: It is the mode of propagation of light in which light is continuously refracted inside the different graded index fibers which are used in fibre optics.

Q8. An astronomical telescope of long focal length and large aperture is considered to be a good telescope. Why?

Ans 1: Objective of long focal length and large aperture is used to collect a great amount of light from the astronomical objects.

Q9. Find magnifying power of a convex lens of 25 cm focal length act as a magnifying glass.

Ans 1:

Q10. What are different types of optical fibre?

Ans 1: There are three types of optical fibres.

1. Single mode step index fibre.
2. Multimode step index fibre.
3. Multimode graded index fibre.
