

## Physics - 10th Class Physics English Medium Chapter 12 Preparation

Q1. Define optics.

**Ans 1:** The study of light behaviour is called optics.

Q2. Define the refractive index in terms of speed of light.

**Ans 1:** The refractive index ' $n$ ' of a medium is the ratio of the speed of light ' $c$ ' in the vacuum to the speed of light ' $v$ ' in the medium.

Q3. Define concave and diverging lens.

**Ans 1:** The lens which causes incident parallel rays of light to diverge from a point is called concave lens.  
Shape: This lens is thin at the centre and the thick at the edges.

Q4. What are geometrical optics.

**Ans 1:** The branch of optics that focuses on the creation of images is called geometrical optics, because it is based on relationship between angles and lines that describe light rays.

Q5. Give the uses of compound microscope;

**Ans 1:** It is used to study bacteria and other micro objects.  
i. It is used to research in several fields of science like microbiology, biology, geology and genetics etc.

Q6. What is Gastroscope.

**Ans 1:** the endoscope used to diagnose the stomach is called Gastroscope.

Q7. Define pole:

**Ans 1:** It is the midpoint of the curved surface of spherical mirror. It is also called vertex.

Q8. What is meant by principal concave lens?

**Ans 1:** The light rays travelling parallel to the principal axis of a concave lens after refraction appear to come from a point behind the lens is called principal focus. " $F$ "

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Q9. What is refraction of light?

**Ans 1:** the process of bending of light as it passes from air into glass and vice versa is called refraction of light.

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Q10. State and explain laws of reflection.

**Ans 1:** Reflection of light occurs according to following two laws called laws of reflection.

- i. The incident ray, reflected ray and normal at the point of incidence, all lie in the same plane.
- ii. The angle of incidence and the angle of reflection are equal. i.e.  $\angle i = \angle r$

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