



BRAIN INTERNATIONAL SCHOOL

SESSION 2024-25

CLASS: X

TERM 1 REVISION SHEET

SUBJECT: PHYSICS

Chapter: Light- Reflection and Refraction

1. An optical device forms an erect image of an object placed in front of it. If the size of the image is one half that of the object, the optical device is a
 - (a) concave mirror
 - (b) convex mirror
 - (c) plane mirror
 - (d) convex lens.
2. When an object is kept within the focus of a concave mirror, an enlarged image is formed behind the mirror. This image is
 - (a) real
 - (b) virtual and inverted
 - (c) inverted
 - (d) virtual and erect
3. The magnification produced when an object is placed at a distance of 20 cm from a spherical mirror is $+1/2$. Where should the object be placed to reduce the magnification to $+1/3$?
4. A student has focused the image of an object of height 3 cm on a white screen using a concave mirror of focal length 12 cm. If the distance of the object from the mirror is 18 cm, find the values of the following:
 - (i) distance of the image from the mirror.
 - (ii) height of the image.
5. A concave mirror has a focal length of 20 cm. At what distance from the mirror should a 4 cm tall object be placed so that it forms an image at a distance of 30 cm from the mirror? Also calculate the size of the image formed.

For question numbers 6 and 7, two statements are given- one labeled Assertion (A) and the other labeled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

- a) Both A and R are true, and R is correct explanation of the assertion.
 - b) Both A and R are true, but R is not the correct explanation of the assertion.
 - c) A is true, but R is false.
 - d) A is false but R is true.
6. **Assertion:** Convex mirrors can produce both real and virtual images.
Reason: Plane mirror always forms virtual image.
 7. **Assertion:** The SI unit of power of lens is 'diopetre'.
Reason: The power of a concave lens is positive and that of a convex lens is negative.

Chapter: Human Eye and Colourful World

1. A person went for a medical check-up and found that the curvature of his eye lens was increasing. Which defect is he likely to suffer from?
 - (a) Myopia
 - (b) Cataract
 - (c) Presbyopia
 - (d) Hypermetropia
2. A person gets out in the sunlight from a dark room. How does his pupil regulate and control the light entering the eye?
 - (a) The size of the pupil will decrease, and less light will enter the eye
 - (b) The size of the pupil will decrease, and more light will enter the eye
 - (c) The size of the pupil will remain the same, but more light will enter the eye
 - (d) The size of the pupil will remain the same, but less light will enter the eye
3. When light rays enter the eye, most of the refraction occurs at the
 - (a) Crystalline lens
 - (b) The outer surface of the cornea
 - (c) Iris
 - (d) Pupil
4. State one function of the crystalline lens in the human eye.
5. Define the term power of accommodation. Write the modification in the curvature of the eye lens which enables us to see the nearby objects clearly?
6. State the function of each of the following parts of human eye:
 - (i) Cornea
 - (ii) Iris
 - (iii) Pupil

Chapter: Electricity

1. Work of 14 J is done to move 2 C charge between two points on a conducting wire. What is the potential difference between the two points?
 - (a) 28 V
 - (b) 14 V
 - (c) 7 V
 - (d) 3.5 V
2. Electrical resistivity of a given metallic wire depends upon
 - (a) Its length
 - (b) Its thickness
 - (c) Its shape
 - (d) Nature of the material
3. A current of 10 A flows through a conductor for two minutes.
 - (i) Calculate the amount of charge passed through any area of cross section of the conductor.
 - (ii) If the charge of an electron is 1.6×10^{-19} C, then calculate the total number of electrons flowing.
4. State and explain Ohm's law. Define resistance and give its SI unit. What is meant by 1 ohm resistance? Draw V-I graph for an ohmic conductor and list its two important features
5. **Assertion (A):** The metals and alloys are good conductors of electricity.
Reason (R): Bronze is an alloy of copper and tin and it is not a good conductor of electricity.