SHREE VASISHTHA VIDHYALAYA

Subject-Science

Chapter name- Light (Worksheet)

A. Multiple Choice Questions (MCQs)

1. The bouncing back of light after striking a surface is called:
a) Refraction b) Reflection c) Dispersion d) Absorption

2. The angle between the incident ray and the normal is called:
a) Angle of deviation b) Angle of reflection
c) Angle of incidence d) Angle of refraction

3. The mirror used by dentists to see enlarged images of teeth is:
a) Plane mirror b) Convex mirror c) Concave mirror d) None of these

4. Which type of image is formed by a plane mirror?
a) Real, inverted, same size b) Virtual, erect, same size
c) Virtual, inverted, diminished d) Real, erect, magnified

5. The splitting of white light into seven colours is called:
a) Refraction b) Scattering c) Dispersion d) Diffusion

6. The mirror used as a rear-view mirror in vehicles is:
a) Plane mirror b) Concave mirror c) Convex mirror d) None of these

7. The eye defect in which distant objects cannot be seen clearly is:
a) Myopia b) Hypermetropia c) Cataract d) Astigmatism

8. Myopia can be corrected by using:
a) Convex lens b) Concave lens c) Plane mirror d) Prism

9. The ability of the eye lens to adjust its focal length is called:
a) Power of lens b) Persistence of vision
c) Accommodation d) Refraction

10. Which part of the eye controls the amount of light entering it?
a) Cornea b) Iris c) Retina d) Lens

B. Fill in the Blanks

1. The image formed by a plane mirror is always _____ and of the same size.
2. The splitting of white light into its seven colours is called _____.
3. A _____ lens is used to correct hypermetropia.
4. The phenomenon due to which we can see non-luminous objects is _____.
5. The least distance of distinct vision in humans is about _____ cm.

C. One Word Questions

1. Mirror used in headlights of vehicles.
2. Part of the eye where image is formed.
3. Lens used to correct myopia.
4. Shape of image formed by a plane mirror.
5. The coloured part of the eye.

D. Short Answer Questions

1. State the laws of reflection of light.
2. Why do we prefer convex mirrors in vehicles as rear-view mirrors?
3. Define persistence of vision with an example.
4. What is lateral inversion?
5. Differentiate between real and virtual images.

E. Long Answer Questions

1. Explain the formation of image by a plane mirror.
2. With the help of a neat labelled diagram, explain the human eye.
3. Define myopia and hypermetropia. How can they be corrected?
4. What is dispersion of light? Explain with a prism diagram.
5. Explain how multiple reflections are used in devices like periscopes and kaleidoscopes.

F. Assertion–Reason Questions

Choose the correct option:
(A) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.
(B) Both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
(C) Assertion is true but Reason is false.
(D) Assertion is false but Reason is true.

1. Assertion: A concave mirror can form a real and inverted image.
Reason: Real images can be formed on a screen.

2. Assertion: The image formed by a plane mirror is always virtual.
Reason: The reflected rays actually meet at a point to form the image.

3. Assertion: Convex lenses are used to correct hypermetropia.
Reason: Convex lenses converge the light rays to focus on the retina.

4. Assertion: Light always travels in a straight line.
Reason: Reflection and refraction are due to bending of light rays.

5. Assertion: The rainbow is an example of dispersion of light.
Reason: White light is split into different colours due to refraction and dispersion by water droplets.