

**CLASS VII**  
**G. SCIENCE**  
**SUMMATIVE ASSESSMENT NO. – 1**  
**LIGHT**  
**Assignment No. 6**

Q.1 Fill in the blanks:-

- (i) Light always travels in a \_\_\_\_\_.
- (ii) Change in direction of light after striking a polished surface is called \_\_\_\_\_.
- (iii) The phenomenon of left appearing right and right appearing left on reflection from a mirror is called \_\_\_\_\_.
- (iv) Real images are always \_\_\_\_\_ while virtual images are always \_\_\_\_\_.  
(erect/inverted)
- (v) The reflecting side of a concave mirror curves \_\_\_\_\_ while the reflecting side of a convex mirror curves \_\_\_\_\_ (inwards/outwards)
- (vi) Concave mirrors form \_\_\_\_\_ and \_\_\_\_\_ images whereas the image formed by a convex mirror is always \_\_\_\_\_ (real/virtual)
- (vii) \_\_\_\_\_ mirrors are used as rear/side view mirrors and \_\_\_\_\_ mirrors are used as reflectors of headlights of vehicles.
- (viii) A \_\_\_\_\_ lens converges rays of light falling on it hence it is also called a \_\_\_\_\_ lens.
- (ix) A concave lens always forms a \_\_\_\_\_ (real/virtual) image which is \_\_\_\_\_ (erect/inverted) and \_\_\_\_\_ (smaller/bigger) than the object.
- (x) Formation of shadows suggest that light travels in \_\_\_\_\_ lines.
- (xi) A \_\_\_\_\_ lens is thicker in the middle and tapering at the edges.

Q.2 Multiple choice questions (Choose the correct option)

- (A) A virtual image formed by a plain or a spherical mirror
  - (a) is always inverted (b) is always erect (c) is erect or inverted depending on the distance of the object from the mirror
- (B) which of the following images can a convex lens not produce?
  - (a) Real, Magnified (b) Virtual, magnified (c) erect, virtual (d) erect, diminished
- (C) which of the following is true for a convex mirror?
  - (a) It can only form virtual images (b) It can only form real images (c) It can form real or virtual images depending on the distance of the object from the mirror (d) It can form real or virtual images depending on the size of the object.
- (D) which of the following can not split light into its seven colours?
  - (a) diamond cut in a special way (b) Prism (c) Convex Lens (d) Water droplets suspended in the air.

- (E) Sodium chloride will turn  
(a) Blue Litmus Red (b) Methyl orange yellow (c) Red Litmus blue (d) None of these

1. How does a plane mirror differ from a spherical mirror?
2. State the law of reflection.
3. How many reflected rays can be for a given incident ray falling on a plane mirror?
4. Two plane mirrors are placed  $90^{\circ}$  to each other. An incident ray AB falls on one of the mirrors at  $45^{\circ}$ . Draw the path of the reflected ray.
5. Write down five English alphabets which do not show lateral inversion on reflection from a plane mirror.
6. You are standing at a distance of 1m. from a plane mirror (a) What is the distance between you and your image (b) By how much distance does your image move from you if you had walked 2m away from the original position.
7. Under what conditions should a concave mirror, a plane mirror, a convex mirror form virtual images?
8. (a) What type of mirror is used in the following and why?  
(1) In a search light (2) as a side view mirror in a car (C) as a shaving mirror (4) vigilance mirror in a big shop.  
(b) Why is light not visible through a bent pipe?  
(c) If we want to make fire with the help of a lens using the rays of the Sun, what kind of lens should be used and why?  
(d) What kind of mirrors do the two surfaces of a spoon act as?

#### HOTS QUESTIONS

- Q.1 What will be the difference in the size of the image (of the same object) formed by a small and a large plane mirror?
- Q.2 Identity three letters of the English alphabet or of your mother tongue whose mirror 3.
- Q.3 Car rear view mirrors carry a warning message that 'objects in the rear view mirror are closer than they appear'. Why do you think this is so?
- Q.4 How many images do you think will be formed if an object is kept between two plane mirrors parallel to each other?