BAL BHARATI PUBLIC SCHOOL, Pitampura

CLASS VIII UT 2

LIGHT

Assignment

1. Draw a diagram to show the reflection of light from a plane mirror. Label the following on the diagram:

    (a)   Plane mirror   (b)   Incident ray   (c)   Reflected ray
    (d)   Point of incidence   (e)   Normal   (f)   Angle of incidence
    (e)   Angle of reflection.

2. How many reflected rays can there be for a given single incident ray falling on a plane mirror?

3. State the Laws of Reflection of Light.

4. An incident ray makes an angle of 75^0 with the surface of a plane mirror. What will be the angle of reflection?

5. A ray of light is incident normally {perpendicularly} on a plane mirror. Where will this ray of light go after reflection from the mirror ?

6. What is the difference between regular reflection and diffuse reflection of light ?

7. State whether the following statement is true or false :
Diffuse reflection means the failure of the laws of reflection of light.

8. Draw a labeled diagram showing how a plane mirror forms an image of a point object placed in front of it.

9. If an object is placed at a distance of 7.5 cm from a plane mirror, how far would it be from its image ?

10. You see your image in a plane mirror? State two characteristics of the image so formed.

11. Name the phenomenon responsible for the following effect:

When we sit in front of a plane mirror and write with our right hand, it appears in the mirror that we are writing with the left hand.

12   Fill in the following blanks:
- If you touch your------ ear with right hand in front of a plane mirror, it will be seen in the mirror that your right ear is touched with -------

13   How are the two plane mirrors in a periscope arranged?
- With respect to one another?
- With respect to sides of the tube?

14   Explain how, a hair dresser makes you see hair at the back of your head after the hair cut is complete.

15   How many images of an object will be formed when the object is placed between two plane mirrors which are inclined at the following angles to one another?
{a} 120^0 {b} 45^0 {c} 180^0 {d} 60^0 {e} 90^0

16   What will be the number of images formed when an object is placed between two parallel plane mirrors facing each other?

17   Describe the construction of a kaleidoscope.

18   How many plane mirror strips are there in a kaleidoscope? How are they arranged?

19   State one use of kaleidoscope.

20   What is meant by "dispersion of light "? Name a natural phenomenon which is caused by the dispersion of sunlight in the sky.

21.   What are the functions of the following parts of the eye?
(a) Iris   (b) Ciliary muscles   (c) Retina   (d) optic nerve.

22   Name the cells on the retina of an eye:
(a)   which are sensitive to bright light.
(b)   which are sensitive to dim light.
©   which produces sensation of colours.

23.   Explain why, we cannot see our surroundings clearly when we enter a darkened cinema hall from bright sunshine but our vision improves after sometime.

24.   What happens to the size of the pupil of our eye:
(a)   in dim light?
(b)   in bright light?

25.   What is the range of vision of a normal human eye?

26.   Name the phenomenon which enables us to see movies in cinema hall.

27.   What is meant by 'persistence of vision'?

28   What are the various defects of eye? Explain them in brief? Also suggest the corrective measures of the defects.