

ASSIGNMENT

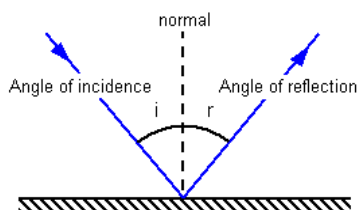
CLASS-VIII (CHAPTER- LIGHT)

ONE MARK QUESTIONS

1. What is light?
Light is a form of energy which produces the sensation of sight in our eyes.
2. Image of a plane mirror can't be obtained on a screen. What does it mean?
It means image is virtual.
3. What is lateral inversion?
In an image formed by a mirror, the left of the object appears on the right and the right appears on the left. This is known as lateral inversion.
4. What is dispersion of light?
The splitting of white light into its colours is known as dispersion. Rainbow is a natural phenomenon showing dispersion.
5. What is blind spot?
Blind spot is the junction between retina and optic nerve where there are no sensory cells, so no vision is possible at that point.
6. What is persistence of vision?
The impression of an image does not vanish immediately from the retina. It persists there for about $1/16$ th of a second. This is called persistence of vision.
7. What is least distance of distinct vision?
8. The minimum distance at which the eye can see objects clearly. it is about 25 cm for a normal eye.
9. Who discovered a system of reading for the visually challenged?
Louis Braille, himself a visually challenged person, developed a system for visually challenged persons and published it in 1821.

TWO MARKS QUESTIONS

10. What is reflection of light?
The phenomenon of sending the light back in the same medium by a surface is called reflection of light.



11. State the laws of reflection.

There are two laws of reflection-

- a. The angle of incidence and the angle of reflection are always equal.
- b. The incident ray, the normal at the point of incidence and the reflected ray all lie in the same plane.

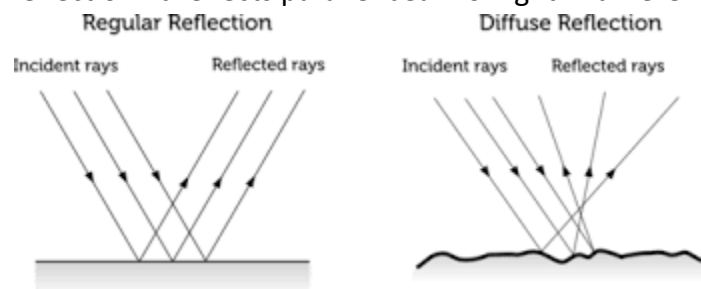
12. List the characteristics of the image formed of an object by a plane mirror.

- a. Image is erect.
- b. Image is of same size as the object.
- c. Image is formed at the same distance behind the mirror as the object is placed in front of it
- d. It is virtual.
- e. It shows lateral inversion.

13. Differentiate between Regular reflection and Irregular reflection.

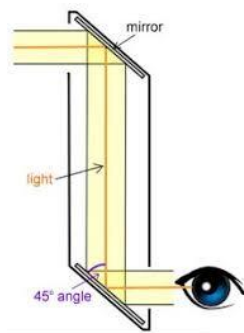
Regular reflection- Reflection from a highly polished surface is called regular reflection. It reflects parallel beam of light in one direction.

Irregular(Diffused) reflection- Reflection from a rough surface is called irregular reflection. It reflects parallel beam of light in different direction.



14. Define periscope.

Periscope is an application of multiple reflections which enables us to see those objects which are not visible directly. It is used in submarines and tanks to see outside.



15. Define kaleidoscope.

Kaleidoscope is an example of multiple reflections from plane mirrors, kept joint to each other at fixed angles. It shows beautiful patterns of small coloured objects due to multiple reflections.

16. What is myopia? How is it corrected?

It is an eye defect in which a person is unable to see distant object but nearby objects are easily visible. It is corrected by using concave lens.

17. What is hypermetropia? How is it corrected?

It is an eye defect in which a person is unable to see nearby objects but distant objects are easily visible. It is corrected by using convex lens.

18. What is cataract? How is it treated?

In old age, eyesight becomes foggy. It is due to eye lens becomes cloudy. When it happens person is said to have cataract.

Treatment – the opaque lens is removed and a new artificial lens is inserted using modern technology.

19. What are rods and cones?

These are two kinds of sensory cells in the eye-

RODS- they are sensitive to dim light.

CONES- they are sensitive to bright light.

20. Differentiate between Optical aids and Non-optical aids.

Resources are of two types

OPTICAL AIDS- These includes bifocal lens, contact lens, magnifiers and telescopic aids.

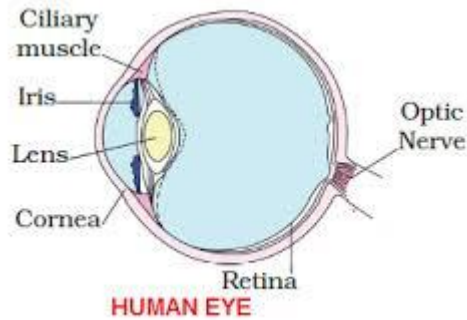
NON-OPTICAL AIDS- These includes visual aids, tactual aids, auditory aids and electronic aids.

THREE MARKS QUESTIONS

21. Explain the working and structure of human eye.

Our eye is spherical in shape. Its front part is transparent called the cornea. Behind the cornea, there is dark muscular structure called iris. The colour of the eye is actually the colour of its iris. The iris controls the amount of light entering the eye. There is small opening in the iris called pupil. The lens is present behind the pupil. It focuses light on a

layer called retina. The retina has nerve cells that transmit sensations to the brain



through the optic nerve.

22. How can we take care of our eyes?

- a. The eyes should be washed everyday with fresh and clean water.
- b. Never rub the eyes.
- c. Do not ever look at the very bright sources like sun directly.
- d. The needs vitamin A for proper functioning. Therefore, includes lots of natural vitamin A your diet.
- e. Always read at the normal distance for vision.

23. What is Braille system?

Braille system has 63 dot patterns or characters. Each character represents a letter, a combination of letters, a common word or a grammatical sign. Dots are arranged in cells of two vertical rows of three dots each. These patterns when embossed on a Braille sheets help visually challenged persons to recognize words by touching.

24. How are night birds different from day light birds?

Night birds (owl) can see very well in the night but not during the day. On the other hand, day light birds (kite, eagle etc) can see well during the day but not in night. The owl has large cornea and a large pupil to allow more light in its eyes. Also, it has on its retina a large number of rods and only a few cones. The day birds on the other hand, have more cones and a few rods