

DCA CLASSES

CLASS VIII – SCIENCE– CHAPTER 16

LIGHT

Name:

Date:

01. The amount of light that is reflected depends on:
(a). the material of the surface (b). the length of the surface
(c). the nature of the surface (d). only a & c
02. Form of energy that gives us sensation of sight is:
(a). reflection (b). light (c). refraction (d). dispersion
03. Moon is a:
(a). non-luminous body (b). luminous body (c). semi-luminous body (d). black body
04. Which of the following is possible?
(a). sunlight (b). moonlight (c). earthlight (d). all the above
05. The most comfortable distance at which one can read with a normal eye is about:
(a). 20 cm (b). 22 cm (c). 25 cm (d). 30 cm
06. Impression of an image persists on retina for about:
(a). $1/12^{\text{th}}$ of a second (b). $1/16^{\text{th}}$ of a second (c). $1/10^{\text{th}}$ of a second (d). $1/15^{\text{th}}$ of a second
07. The visually impaired can also read with fingers using a special alphabet called:
(a). Bralle (b). Brialle (c). Brallie (d). Braille
08. Image formed on retina is/are:
(a). upside down (b). flat (c). reversed left to right (d). all the above
09. What will be the angle of incidence if a ray of light is reflected back at an angle of 30° :
(a). 60° (b). 75° (c). 30° (d). 15°
10. A person sees blurred images of all objects around him or her. That person is suffering from:
(a). myopia (b). hypermetropia (c). night blindness (d). cataract
11. The eye perceives an object as moving when images are flashed on the eye at a rate:
(a). faster than 10 per second (b). slower than 10 per second
(c). faster than 16 per second (d). slower than 16 per second
12. A triangular piece of glass that breaks up white light into spectrum is:
(a). presm (b). prism (c). mirror (d). convex lens
13. The earth's light can be seen from:
(a). sun (b). earth surface (c). another galaxy (d). None of these
14. If the angle of reflection is 55° then angle of incidence will be:
(a). 45° (b). 90° (c). 55° (d). 35°
15. If the angle between incident and reflected ray is 60° what will be angle of reflection?
(a). 60° (b). 30° (c). 50° (d). 10°
16. If a person has blue eyes that means:
(a). his iris is blue (b). his cornea is blue (c). his sclera is blue (d). his retina is blue

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Q01. Match the column:

- (A).** (a). smooth surface
(b). erect
(c). uneven surface
(d). spectrum
(e). Dispersion

- i) upright image
ii) diffused reflection
iii) splitting of light into colours
iv) regular reflection
v) band of colours

- (B).** (a). near sightedness
(b). farsightedness
(c). cataract
(d). blind spot
(e). yellow spot

- i) old age eye defect
ii) area of no vision
iii) plenty of cones
iv) hypermetropia
v) myopia

- (C).** (a). Owl's eye
(b). convex lens
(c). Eagle's eye
(d). Vitamin A
(e). concave lens

- i) good eye sight
ii) large number of rods
iii) corrects myopia
iv) large number of cones
v) corrects hypermetropia

- (D).** (a). Sclera
(b). Cornea
(c). Ciliary muscles
(d). Iris
(e). Pupil

- i) help to focus the image
ii) gives color to the eye
iii) outermost tough covering
iv) opening in the iris through which light enters
v) transparent outer layer that refracts light

Q02. Fill in the blanks:

- (a). Images are visible only on _____ surface.
(b). _____ is the light sensitive area in the eye.
(c). _____ spot is the area of no vision in eye.
(d). Sunlight is made up of seven different colors which make up the _____.
(e). A smooth and highly polished reflecting surface is called _____.
(f). The objects which shine in the light of other objects are called _____ objects.
(g). When a light ray falls on a mirror, it gets _____ along a particular direction.
(h). Brain interprets image signals from both eyes to provide a _____ dimensional image.
(i). Nerve fibres of rods and cones join to form _____ nerve.

Q03. State true or false:

- (a). The sunlight reflected from earth surface is called Earth light.
- (b). Red light travels fastest and violet light travels slowest out of VIBGYOR.
- (c). In any mirror, silver layer acts as the non-reflecting surface.
- (d). For a given incident ray of light falling on a mirror, there is only one reflected ray.
- (e). Spectrum of white light is formed due to refraction.
- (f). Blindness is always acquired never inborn.
- (g). A kaleidoscope contains only one mirror.
- (h). Periscope is used to see ships on water surface from a submarine.

Q04. What are the laws of reflection?

Q05. Through a well labelled figure show various terms related to reflection?

Q06. Differentiate between image formed by regular and diffused reflection?

Q07. Describe lateral inversion. Do you find any application of it in daily life?

Q08. Are cataract and glaucoma different from each – other?

Q09. What is meant by multiple reflection and what are its consequences?

Q10. Define persistence of vision in human eye?

Q11. Differentiate between sensations of still pictures and movies?

Q12. What does the following images show?

Q13. There is a mistake in each of the following ray diagrams given as Fig. 16.9 a, b, and c. Make the necessary correction (s).

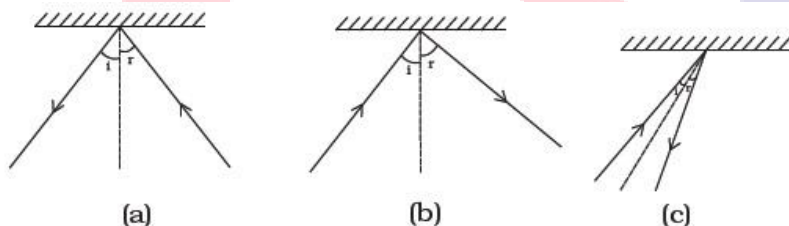


Fig. 16.9



Q14. Explain the process which enables us to perceive motion in a cartoon film.

Q15. How is the phenomenon of reflection used in making a kaleidoscope? What are the applications of a kaleidoscope?

Q16. Name the part of the eye which gives colour to the eyes.

Q17. Boojho while waving his hand very fast in front of his eyes, observes that his fingers appear blurred. What could be the reason for it?

Q18. How many times is a ray of light reflected by two plane mirrors placed parallel and facing each other?

Q19. The angle between incident ray and reflected ray is 60° . What is the value of angle of incidence?

Q20. The distance between the object and its image formed by a plane mirror appears to be 24 cm. What is the distance between the mirror and the object?

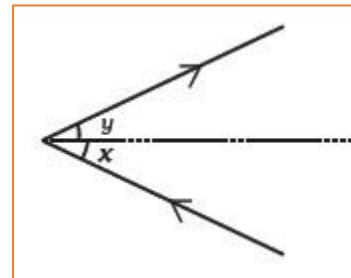
Q21. What happens to light when it gets dispersed? Give an example.

Q22. Eyes of the nocturnal birds have large cornea and a large pupil. How does this structure help them?

Q23. What kind of lens is there in our eyes? Where does it form the image of an object?

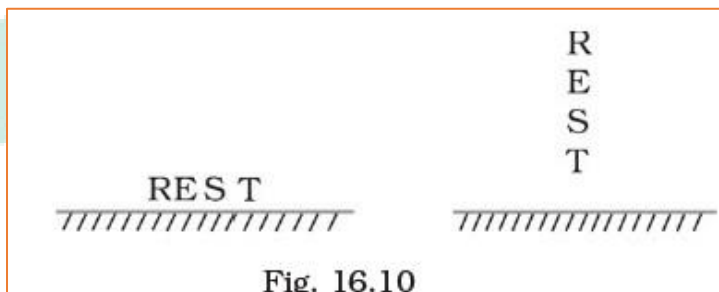
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Q24. Draw Fig.16.6 showing the position of the plane mirror. Also label the angle of incidence and angle of reflection on it.



Q25. Which part of the eye gets affected if someone is suffering from cataract? How is it treated?

Q26. Fig. 16.10 shows the word REST written in two ways in front of a mirror. Show how the word would appear in the mirror.



Q25. Look at Fig. Can the image of the child in it be obtained on a screen?

