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# Light

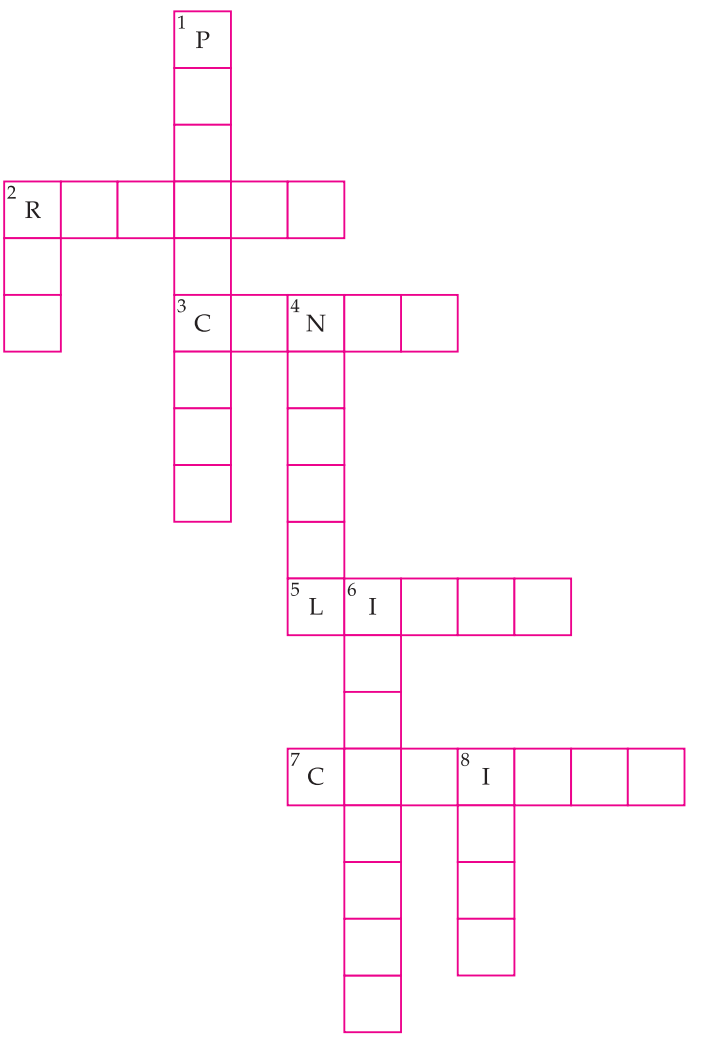
## ORAL QUESTIONS

**A. Answer these questions orally.**

1. Name the muscles which hold the eye lens in the eye ball.
2. What is the bouncing back of light in the same medium called?
3. What is the speed of light in vacuum?
4. Give one example of a very smooth surface.
5. Is cornea transparent or opaque?

## PUZZLE/QUIZ

**B. Complete the following word ladder with the help of the given clues.**



DOWN:
1. A device used to detect objects at different heights.
2. These cells present in the eye are sensitive to intensities of light.
4. A perpendicular to the surface of reflection, at the point of incidence.
6. The ray of light that falls on a surface.
8. This controls the size of the pupil.

ACROSS:
2. The inner part of the eye ball which behaves as a screen for image formation.
3. These cells present in the eye help in perceiving colours.
5. A form of energy.
7. The muscles that hold the eye lens in the eye ball.

## CLASS TEST

### C. MCQ– Tick (✓) the correct option.

1. Light as it comes from the sun, consists of how many different colours?
   (a) 17 ☐ (b) 71 ☐
   (c) 7 ☐ (d) 9 ☐
2. The bouncing back of light in the same medium is called
   (a) Dispersion ☐ (b) Deflection ☐
   (c) Accommodation ☐ (d) Reflection ☐
3. Which of the following statements is incorrect?
   (a) Cataract is a defect of eye. ☐
   (b) The iris can contract or expand to change the size of the pupil. ☐
   (c) The image formed by a plane mirror is real and inverted. ☐
   (d) Rays of light are reflected, when they fall opaque objects. ☐
4. For what fraction of a second does any object we see, leaves its impression on our retina?
   (a) 1/61 ☐ (b) 1/14 ☐
   (c) 1/18 ☐ (d) 1/16 ☐
5. Which part of the eye lacks photo receptors?
   (a) Retina ☐ (b) Blind spot ☐
   (c) Pupil ☐ (d) Cornea ☐

## D. Unscramble the jumbled words to make meaningful words. Take help from the clues given in the bracket.

1. | C | P | I | O | T | _____

(this nerve is a bundle of fine nerves which carry message of the image formed at the retina)

2. | T | E | P | E | R | R | H | A | M | O | P | I | Y | _____

(also known as far sightedness)

3. | R | A | T | T | C | A | A | C | _____

(an eye defect in which a person sees blurred images of all objects around him or her)

4. | I | E | C | E | S | P | D | L | O | K | O | A | _____

(a device which shows beautiful patterns due to multiple reflections)

5. | R | R | O | M | I | R | _____

(an example of a very smooth surface)

## E. Very short answer questions.

1. Name three common defects of eye.

_____

2. Which vitamin is required for proper functioning of the eyes?

_____

3. What is the minimum distance at which a normal human eye can read or see without any strain?

_____

4. What maintains the bulging shape of the cornea?

_____

5. What keeps the retina attached to the wall of the eye ball?

_____

6. What is the opening at the centre of the iris called?

_____

7. Why can cornea allow the light to enter the eye?

8. What are the seven colours of which light is made of?

## F. Short answers questions.

1. State the laws of reflection.

2. How is Braille produced?

3. What do you understand by 'blind spot'?

4. What do you understand by accommodation of eye?

5. What is Phaco Emulsification?

## G. Long answer questions.

1. What is cataract? How is it caused? How can it be cured?

2. Write a note on ‘Braille language’.

3. Explain the working of the human eye. Draw a labelled diagram also.

4. What precautions should be followed to maintain healthy eyes for a long time.

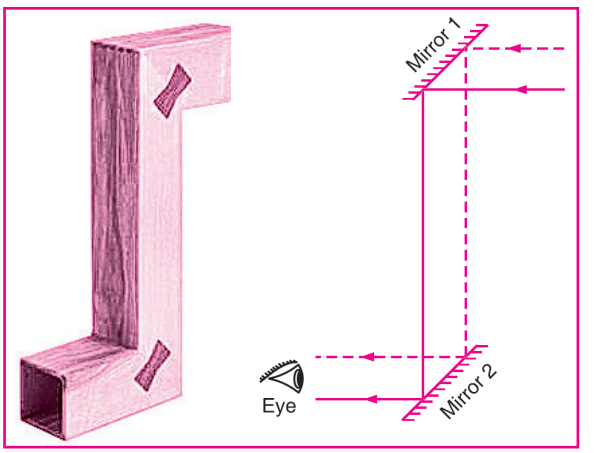
## HOME ASSIGNMENT

### H. Think and answer.

1. Look at the figure shown below and answer the questions that follow:
   (a) What is the name of the device shown here?

   (b) On what principle is it based?

   (c) At what angles are the two plane mirrors fitted?




2. You see object lying very close and extremely far with the same eye and the eye lens, without changing or adjusting any part. What makes this possible?

3. When you visit a barber's shop or a beauty saloon to get a hair cut, how are you shown the look of your hair from your back, in the front mirror?

## WORKSHEET

**I. Give reasons for the following.**

1. When we suddenly go out in the sun or the light in a room is switched on, the eyes blink.

2. We cannot see our surroundings clearly when we enter a darkened cinema hall.

3. We should include lots of vitamin A in our diet.