CASE STUDY

The retina of our eye is the back part of the eye. It contains certain special types of cells called photoreceptors. The photoreceptors are of two types - rod cells and cone cells. Rod cells are very sensitive to light changes, shape and movement. In dim light, we see with the help of rod cells. Thus, rod cells are almost entirely responsible for night vision. Nocturnal animals like bats, galago, etc. have theirretina packed with rod cells. Hence, they can see in dark. There are about 120 million rod cells in our eyes. The cone cells are not as sensitive to light as the rod cells. They are most sensitive to one of the
three different colours, i.e. red, green or blue. Signals from the cone cells are sent to the brain which then
translate these messages into the perception of colour. Cone cells work only in bright light. That is why we cannot see different colour in dark. Human eye has about 6 million cone cells in its retina.

Read the above passage and answer the following questions by choosing the correct options given below:

1. Which of the following cells is sensitive to colour?

(a) Rod cells
(b) Cone cells
(c) Both of these
(d) None of these

2. Which of the following statement is false?

(a) Our retina contains photoreceptor cells
(b) Nocturnal animals have more number of rod cells
(c) Cone cells are colour sensitive
(d) Only cone cells are photoreceptor cells

3. We cannot see different colours in dark because

(a) rod cells do not work in dark
(b) rod cells and cone cells work only in light
(c) cone cells work only in bright light
(d) all of these

4.The amount of light entering the eye is controlled by

(a) Eye- lens
(b) Cornea
(c) Iris
(d) Ciliary muscle

5.A person gets out in the sunlight from a dark room. How does his pupil regulate and control the light entering the eye?

(a) The size of the pupil will decrease, and less light will enter the eye
(b) The size of the pupil will decrease, and more light will enter the eye
(c) The size of the pupil will remain the same, but more light will enter the eye
(d) The size of the pupil will remain the same, but less light will enter the eye