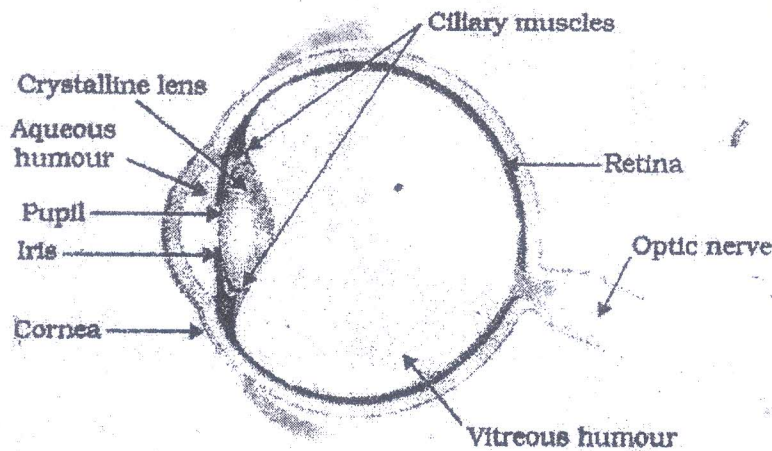


SHARJAH INDIAN SCHOOL, SHARJAH

Class : X (Boys Wing)

THE HUMAN EYE

The human eye is one of the most valuable and sensitive sense organs. It is almost a spherical ball with a slight bulge in the front part. The main parts of eye and their functions are given below:



01. CORNEA : It is the transparent bulging front portion of the eye. It allows the light to enter the eye.
02. IRIS - It is a dark muscular diaphragm behind the cornea. It controls the size of the pupil.
03. PUPIL - It is a tiny hole in the middle of the iris. It regulates and controls the amount of light entering the eye. It contracts in excess light and expands in dim light.
04. EYE LENS : It is a crystalline double convex lens made of transparent and flexible tissues. Its function is to form an inverted real image of the object on the retina.
05. CILIARY MUSCLES : These muscles hold the eye lens in position. Ciliary muscles controls the focal length of eye lens. So that the objects at various distances are clearly focused on the retina. Looking at near objects these muscles contracts the focal length decreases and eye lens becomes thicker, looking at far objects the muscles are relaxed, focal length increases and eye lens becomes thin.

06. RETINA : It is a delicate membrane which contain a number of light sensitive cells.. So it acts as a light sensitive screen to obtain the image of the object. It converts the optical image of the object into electrical signals which are sent to the brain through optic nerve.

07. OPTIC NERVE : It carries the electrical signals (optical messages) to the brain.

08. VITREOUS HUMOUR: it is a jelly like fluid filling the space between retina and eye lens.

09. AQUEOUS HUMOUR : It is a watery saline fluid filling the space between eye lens and cornea of the eye.

WORKING OF HUMAN EYE:

When we look towards an object light from the object enters the pupil of the eye and falls on the eye lens. The eye lens forms a real inverted image on the retina of the eye. Then the light sensitive cells of the retina get activated up on illumination and generate electrical signals. These signals are sent to the brain via optic nerves. The brain finally interprets the signal and hence we see the object.