

Accommodation of the Eye: The process by which the ciliary muscles change the focal length of an eye lens to focus distant or near objects clearly on the retina is called the accommodation of the eye.

Power of Accommodation: The ability of the eye to focus objects lying at different distances is called the power of accommodation of the eye.

Near point or Least Distance of Distinct Vision: Near point or least distance of distinct vision is the point nearest to the eye at which an object is visible distinctly. For a normal eye the least distance of distinct vision is about 25 centimetres. However, it varies with age of the person. For example, for infants it is only 5 to 8 cm.

Far Point: Far point of the eye is the maximum distance up to which the normal eye can see things clearly. It is infinity for a normal eye.

Range of Vision: The distance between the near point and the far point is called the range of vision.

Refractive Errors or Defects of Vision: The abnormalities in the normal vision of the eye due to the change in focal length of the lens or due to the deformation of cornea are known as refractive errors or defects of vision.

Myopia: Myopia is an eye defect due to which the eye is not able to see distant objects clearly. This occurs when the light rays entering the eye converge in front of the retina in the vitreous body.

Hypermetropia: Hypermetropia or hyperopia is an eye defect in which distant vision is clear while near vision is blurred. This occurs when the light rays entering the eye converge behind the retina.

Presbyopia: Presbyopia is caused when the centre of the eye lens hardens making it unable to accommodate near vision.

Astigmatism: Astigmatism is the most common vision problem resulting in distorted images, as light rays are prevented from meeting at a common focus.

Dispersion: The phenomenon by which, a ray of light splits into its constituent colours, when passed through a transparent medium, is known as dispersion. The band of colours obtained due to the dispersion of light is called the spectrum.

Atmospheric Refraction: Atmospheric refraction is the shift in apparent direction of a celestial object caused by the refraction of light rays as they pass through Earth's atmosphere.

Scattering: Scattering is a general physical process whereby some forms of radiation, such as light or moving particles, for example, are forced to deviate from a straight trajectory by one or more localized non-uniformities in the medium through which it passes.

Tyndall Effect: Tyndall effect is the visible scattering effect of light on particles along the path of a beam of light passing through a colloid system.