# Class 10 Science · Chapter 10: The Human Eye and the Colourful World

**Worksheet** · 20 marks · about 40 minutes · based on NCERT

Name _____ Class and section _____ Date _____

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**1.** Most of the refraction of light entering the human eye takes place at the [1]

(a) crystalline eye lens
(b) outer surface of the cornea
(c) pupil
(d) vitreous humour

**2.** Rohan looks up from his book at a hill far away. To see the hill clearly, his ciliary muscles [1]

(a) relax, the lens becomes thinner and its focal length increases
(b) contract, the lens becomes thicker and its focal length decreases
(c) relax, the lens becomes thicker and its focal length increases
(d) contract, the lens becomes thinner and its focal length increases

**3.** In a hypermetropic eye, light from a nearby object is focussed behind the retina. One reason for this is that the [1]

(a) eyeball has become elongated
(b) eye lens is too strongly curved
(c) eyeball has become too small
(d) pupil has become too large

**4.** The part of the human eye that controls the size of the pupil is the [1]

(a) cornea
(b) iris
(c) ciliary muscles
(d) retina

**5.** In a myopic eye, the image of a distant object is formed [1]

(a) on the retina
(b) behind the retina
(c) in front of the retina
(d) on the cornea

**6.** Objects seen through the air just above a bonfire appear to waver. Explain why. [2]

**7.** State the function of the ciliary muscles. Name the ability of the eye that results from it. [2]

**8.** Name (i) the transparent membrane through which light enters the eye, and (ii) the watery fluid between it and the eye lens. [2]

**9.** Distinguish between myopia and hypermetropia on the basis of (i) the point of vision that shifts from its normal position, (ii) where the image forms, and (iii) the lens used for correction. [3]



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**10.** A narrow beam of white light falls on one face of a glass prism held with its base down, and the emergent light is caught on a white screen. (i) Name the phenomenon. (ii) Which colour appears nearest the base end of the band, and which nearest the top? (iii) Why do the colours separate? [3]

**11.** (i) Why does a clear sky look blue while clouds look white? (ii) Name the phenomenon that also gives the water of the deep sea its colour. [3]