

**CBSE CLASS X**  
**Science (086)**QUESTION PAPER  
*AI-generated question paper*

Code: LC35R5

Questions: 14

Maximum Marks: 26

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**SELECTIONS USED**

Subject	Science
Lessons	10 The Human Eye and the Colourful World
Level of understanding	Initial understanding
Question selection	Curated chapter coverage (~3 questions per section)
Model	claude-sonnet-4-6

Composition — Difficulty: 7 straightforward · 6 medium · 1 deep | Types: 8 Short · 6 Very short

**Q1.** straightforward initial-understanding § Chapter Introduction [1]

What is the role of the crystalline lens in the human eye?

◆ The Human Eye and the Colourful World

**Q2.** medium initial-understanding § 10.1 THE HUMAN EYE [3]

What is the role of the ciliary muscles in enabling the eye to see both nearby and distant objects clearly?

◆ The Human Eye and the Colourful World

**Q3.** medium initial-understanding § 10.1.1 Power of Accommodation [2]

When you shift your gaze from a distant tree to a book held close to you, what change occurs in your eye lens, and which structure brings about this change?

◆ The Human Eye and the Colourful World

**Q4.** straightforward initial-understanding § 10.2 DEFECTS OF VISION AND THEIR CORRECTION [1]

A person can read a newspaper held at arm's length but struggles to read the name board of a shop across the street. Which defect of vision does this person have, and what type of lens corrects it?

◆ The Human Eye and the Colourful World

**Q5.** medium initial-understanding § 10.2 DEFECTS OF VISION AND THEIR CORRECTION [2]

A hypermetropic person cannot see nearby objects clearly. (i) Where does the image of a nearby object form in a hypermetropic eye? (ii) Name the type of corrective lens used and state how it helps the person see clearly.

◆ The Human Eye and the Colourful World

**Q6.** straightforward initial-understanding § 10.2 DEFECTS OF VISION AND THEIR CORRECTION [1]

What is presbyopia, and what structural changes in the eye cause it?

◆ The Human Eye and the Colourful World

**Q7.** medium initial-understanding § 10.2 DEFECTS OF VISION AND THEIR CORRECTION [2]

A myopic eye has the image of a distant object forming in front of the retina instead of on it. State TWO possible structural reasons why this happens in the eye.

◆ The Human Eye and the Colourful World

**Q8.** deep initial-understanding § 10.2 DEFECTS OF VISION AND THEIR CORRECTION [3]

An elderly person uses bi-focal lenses. (i) What are bi-focal lenses? (ii) Describe the function of each portion of a bi-focal lens. (iii) Which defect(s) of vision make bi-focal lenses necessary?

◆ The Human Eye and the Colourful World

**Q9.** straightforward initial-understanding § 10.3 REFRACTION OF LIGHT THROUGH A PRISM [1]

When white light passes through a glass prism, the emergent ray does not travel in the same direction as the incident ray. What is the name given to the angle between the emergent ray and the direction of the incident ray?

◆ The Human Eye and the Colourful World

**Q10.** straightforward initial-understanding § 10.4 DISPERSION OF WHITE LIGHT BY A GLASS PRISM [1]

What is the name given to the splitting of white light into its component colours when it passes through a glass prism?

◆ The Human Eye and the Colourful World

**Q11.** medium initial-understanding § 10.4 DISPERSION OF WHITE LIGHT BY A GLASS PRISM [3]

When white light passes through a glass prism and forms a spectrum, which colour bends the least and which bends the most?

◆ The Human Eye and the Colourful World

**Q12.** medium initial-understanding § 10.5 ATMOSPHERIC REFRACTION [3]

Stars twinkle but planets do not. Why?

◆ The Human Eye and the Colourful World

**Q13.** straightforward initial-understanding § 10.5 ATMOSPHERIC REFRACTION [1]

Due to atmospheric refraction, does the Sun appear to rise earlier or later than it actually does? Give a reason for your answer.

◆ The Human Eye and the Colourful World

**Q14.** straightforward initial-understanding § 10.6 SCATTERING OF LIGHT [2]

Why does the sky appear blue during the day?

◆ The Human Eye and the Colourful World

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