



Class 10 Science | The Human Eye And The Colourful World

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. The eye changes its focal length mainly by changing the shape of its:

- A. Crystalline lens
- B. Retina
- C. Optic nerve
- D. Cornea rapidly

2. For viewing a nearby object, the eye lens becomes:

- A. Opaque
- B. Flat with infinite focal length
- C. Thicker with shorter focal length
- D. Thinner with longer focal length

3. A myopic eye forms distant-object images:

- A. Behind the retina
- B. Exactly on the retina without correction
- C. In front of the retina
- D. On the cornea

4. Myopia is corrected with a:

- A. Prism only
- B. Concave lens
- C. Convex lens
- D. Plane glass only

5. A hypermetropic eye needs a convex lens mainly to improve:

- A. Hearing
- B. Only colour vision
- C. Near vision
- D. Night vision by widening pupil

6. The near point of a normal young adult is conventionally about:

- A. 25 cm
- B. 25 m
- C. 2.5 cm
- D. 250 m

7. Age-related loss of accommodation is called:

- A. Scattering
- B. Presbyopia
- C. Reflection
- D. Dispersion

8. The splitting of white light into colours by a prism is:

- A. Dispersion
- B. Magnetisation
- C. Total absorption
- D. Diffraction

9. In a glass prism, visible light of which colour is deviated least?

- A. Violet
- B. Red
- C. Indigo
- D. Blue

10. A second suitably inverted prism can recombine a spectrum into:

- A. Only violet light
- B. Only red light
- C. No light
- D. White light

11. Twinkling of stars is mainly due to:

- A. Changing atmospheric refraction
- B. Earth's magnetic field
- C. Reflection from the Moon
- D. Rapid burning and extinguishing of stars

12. Planets generally twinkle less than stars because they:

- A. Have no atmosphere
- B. Are stationary
- C. Appear as extended sources
- D. Emit no light toward Earth

13. The blue appearance of the clear sky is mainly due to:

- A. Preferential scattering of shorter visible wavelengths
- B. Reflection from blue oceans only
- C. Blue emission by nitrogen
- D. Absorption of all blue light

14. The Sun looks reddish near the horizon because:

- A. Red light scatters away most strongly
- B. Much shorter-wavelength light is scattered out along the longer path
- C. Atmosphere creates red photons only
- D. Sun's temperature drops sharply

15. A rainbow involves sunlight undergoing:

- A. Refraction, dispersion and internal reflection in droplets
- B. Only reflection from clouds
- C. Magnetic bending in air
- D. Only diffraction by dust

ANSWER KEY — check after completing all 15 questions

1.A 2.C 3.C 4.B 5.C 6.A 7.B 8.A 9.B 10.D 11.A 12.C 13.A 14.B 15.A

Original exam-style practice • Reference notes: www.physics.guru/cbse-practice-papers/ • Not an official paper