

Optics and the Human Body

Optics · Practice Test · 10 Questions

1. What is the primary refractive surface of the human eye, responsible for most of the light bending?

- A) The lens
- B) The iris
- C) The cornea
- D) The retina

2. Which part of the eye contains photoreceptor cells (rods and cones) that convert light into electrical signals?

- A) The vitreous humor
- B) The choroid
- C) The sclera
- D) The retina

3. The condition where the eye's lens becomes cloudy, impairing vision, is known as:

- A) Glaucoma
- B) Astigmatism
- C) Cataract
- D) Myopia

4. What is the name for the condition where light is not focused evenly on the retina, causing blurred vision at all distances?

- A) Presbyopia
- B) Astigmatism
- C) Hyperopia
- D) Color blindness

5. Which eye structure controls the amount of light entering the eye by adjusting the size of the pupil?

- A) The ciliary body
- B) The conjunctiva
- C) The iris
- D) The optic nerve

6. The bending of light as it passes from one medium to another (e.g., from air to cornea) is called:

- A) Diffraction
- B) Reflection
- C) Refraction
- D) Dispersion

7. What is the term for the eye's ability to change the focal length of its lens to focus on objects at different distances?

- A) Accommodation
- B) Convergence
- C) Adaptation
- D) Binocular vision

8. A common cause of 'red eye' in photographs is the reflection of light off of which part of the eye?

- A) The iris
- B) The retina
- C) The pupil
- D) The cornea

9. Which type of vision disorder results from increased pressure within the eye that can damage the optic nerve?

- A) Macular degeneration
- B) Diabetic retinopathy
- C) Glaucoma
- D) Conjunctivitis

10. The spectral range of light visible to the human eye is approximately:

- A) 300-700 nanometers
- B) 400-700 nanometers
- C) 500-800 nanometers
- D) 200-500 nanometers