

Introduction to Optics

Optics · Answer Key · 15 Questions

1. What is the primary source of light for the Earth?

- A) The Moon
- B) The Sun**
- C) Street lights
- D) Fireflies

2. Which material allows light to pass through it clearly?

- A) Wood
- B) Metal
- C) Clear glass**
- D) Cardboard

3. What happens when light bounces off a shiny surface like a mirror?

- A) Reflection**
- B) Absorption
- C) Refraction
- D) Dissipation

4. Which color of light has the longest wavelength in the visible spectrum?

- A) Blue
- B) Green
- C) Red**
- D) Violet

5. What is the bending of light as it passes from one medium to another called?

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

6. Which part of the human eye acts like a camera lens to focus light?

- A) Pupil
- B) Iris
- C) Cornea
- D) Lens**

7. What do we call an object that does not allow any light to pass through it?

- A) Transparent
- B) Translucent
- C) Opaque**
- D) Reflective

8. Which instrument uses lenses to make distant objects appear closer?

- A) Microscope
- B) Telescope**
- C) Periscope
- D) Kaleidoscope

9. What is the center dark part of the eye that controls how much light enters?

- A) Pupil**
- B) Sclera
- C) Eyelid
- D) Retina

10. When white light passes through a prism, it separates into colors. What is this range of colors called?

- A) A glow
- B) A spectrum**
- C) A shadow
- D) A reflection

11. What is created when an opaque object blocks the path of light?

- A) A reflection
- B) A color
- C) A shadow**
- D) A vacuum

12. Which of these is a natural phenomenon where sunlight interacts with water droplets to create a multi-colored arc?

- A) Eclipse
- B) Aurora
- C) Rainbow**
- D) Mirage

13. Light travels in which type of path?

- A) Zig-zag
- B) Straight lines**
- C) Circles
- D) Wavy lines

14. What is the speed of light in a vacuum approximately?

- A) 300,000 kilometers per second**
- B) 100 kilometers per second
- C) 1,000 kilometers per second
- D) 5,000 kilometers per second

15. Which tool uses mirrors to allow someone to see around a corner?

- A) Magnifying glass
- B) Periscope**
- C) Prism
- D) Camera