

Historical Milestones in Optics

History Of Optics · Answer Key · 8 Questions

1. Which 11th-century polymath authored the 'Book of Optics' (Kitab al-Manazir), which correctly argued that vision occurs when light reflects off objects into the eye?

A) Ibn al-Haytham

B) Avicenna

C) Al-Farabi

D) Al-Biruni

2. In 1676, who became the first person to measure the speed of light by observing the eclipses of Jupiter's moon, Io?

A) Christiaan Huygens

B) Ole Rømer

C) Isaac Newton

D) Galileo Galilei

3. The concept of 'Fresnel diffraction' was developed in 1818 to support which theory of light?

A) Corpuscular theory

B) Emission theory

C) Wave theory

D) Quantum theory

4. Which scientist conducted the 1850 experiment that measured the speed of light in water, proving it traveled slower than in air and thus refuting Newton's corpuscular theory?

A) Hippolyte Fizeau

B) Léon Foucault

C) Augustin-Jean Fresnel

D) Thomas Young

5. Who received the 1921 Nobel Prize in Physics specifically for his discovery of the law of the photoelectric effect, a cornerstone of quantum optics?

A) Max Planck

B) Niels Bohr

C) Albert Einstein

D) Philipp Lenard

6. In 1907, which physicist was awarded the Nobel Prize for his invention of the 'interferometer' and the subsequent precision optical measurements of the speed of light?

A) Albert A. Michelson

B) Edward W. Morley

C) Hendrik Lorentz

D) William Thomson

7. In 1801, Thomas Young performed a landmark experiment that demonstrated the interference of light, providing strong evidence for which property of light?

A) Particle duality

B) Rectilinear propagation

C) Diffraction

D) Wave superposition

8. The invention of the 'Achromatic Doublet' lens, which significantly reduced chromatic aberration, is historically attributed to which 18th-century optician?

A) Chester Moore Hall

B) John Dollond

C) Jesse Ramsden

D) Joseph von Fraunhofer