

34 Lecture - PHY101

Important Mcqs

What is the speed of light in a vacuum?

- a. 3×10^5 m/s
- b. 3×10^7 m/s
- c. 3×10^8 m/s
- d. 3×10^{10} m/s

Answer: c. 3×10^8 m/s

Which of the following is NOT part of the visible spectrum?

- a. Infrared
- b. Ultraviolet
- c. Red
- d. Blue

Answer: a. Infrared

Which phenomenon of light explains the double-slit experiment?

- a. Reflection
- b. Refraction
- c. Interference
- d. Diffraction

Answer: c. Interference

What is the wave-particle duality of light?

- a. Light behaves only as a wave.
- b. Light behaves only as a particle.

- c. Light behaves as both a wave and a particle.
- d. Light does not have a wave-particle duality.

Answer: c. Light behaves as both a wave and a particle.

What is the angle of incidence?

- a. The angle between the normal and the reflected ray.
- b. The angle between the normal and the incident ray.
- c. The angle between the normal and the refracted ray.
- d. The angle between the reflected and refracted rays.

Answer: b. The angle between the normal and the incident ray.

Which of the following is NOT an application of light in medicine?

- a. X-ray imaging
- b. Fluorescence microscopy
- c. Laser surgery
- d. GPS technology

Answer: d. GPS technology

What is fluorescence?

- a. The emission of light by a material that has absorbed light of a different wavelength.
- b. The bending of light as it passes through a material with a different refractive index.
- c. The transfer of the energy of light to atoms or molecules within a material.
- d. The reflection of light by a smooth surface.

Answer: a. The emission of light by a material that has absorbed light of a different wavelength.

How does light behave when it is absorbed by a material?

- a. It is reflected back.
- b. It is transmitted through the material.
- c. Its energy is transferred to the atoms or molecules within the material.

d. It passes through the material without any interaction.

Answer: c. Its energy is transferred to the atoms or molecules within the material.

Which of the following is an example of an LED?

- a. A laser pointer
- b. A light bulb
- c. A computer screen
- d. A traffic light

Answer: d. A traffic light

What is an X-ray?

- a. A type of high-energy electromagnetic radiation used in medical imaging.
- b. A type of visible light.
- c. A type of infrared radiation.
- d. A type of ultraviolet radiation.

Answer: a. A type of high-energy electromagnetic radiation used in medical imaging.