

Wavelength Quiz Answer Key PDF

Wavelength Quiz Answer Key PDF

Disclaimer: The wavelength quiz answer key pdf was generated with the help of StudyBlaze AI. Please be aware that AI can make mistakes. Please consult your teacher if you're unsure about your solution or think there might have been a mistake. Or reach out directly to the StudyBlaze team at max@studyblaze.io.

Which waves are used in medical imaging? (Select all that apply)

- A. Radio waves
- B. X-rays ✓**
- C. Gamma rays ✓**
- D. Sound waves ✓**

Which part of the electromagnetic spectrum has the shortest wavelength?

- A. Radio waves
- B. Microwaves
- C. Ultraviolet
- D. Gamma rays ✓**

Which type of wave requires a medium to travel through?

- A. Light waves
- B. Radio waves
- C. Sound waves ✓**
- D. Gamma rays

Which of the following waves is part of the electromagnetic spectrum?

- A. Sound waves
- B. Ocean waves
- C. Radio waves ✓**
- D. Seismic waves

What is the speed of light in a vacuum?

- A. 3×10^6 m/s
- B. 3×10^8 m/s ✓**
- C. 3×10^{10} m/s
- D. 3×10^{12} m/s

What is the relationship between wavelength and frequency?

- A. Directly proportional
- B. Inversely proportional ✓**
- C. Unrelated
- D. Equal

What does the amplitude of a wave measure?

- A. The distance between wave crests
- B. The height of the wave ✓**
- C. The speed of the wave
- D. The frequency of the wave

Which of the following are types of electromagnetic waves? (Select all that apply)

- A. X-rays ✓**
- B. Sound waves
- C. Microwaves ✓**
- D. Infrared ✓**

Which of the following statements are true about light waves? (Select all that apply)

- A. They require a medium to travel
- B. They can travel through a vacuum ✓**
- C. They are part of the electromagnetic spectrum ✓**
- D. They have a constant speed in a vacuum ✓**

What are characteristics of waves? (Select all that apply)

- A. Wavelength ✓**
- B. Mass

C. Frequency ✓

D. Amplitude ✓

What is the unit of measurement for wavelength?

A. Hertz

B. Meters ✓

C. Joules

D. Seconds

Which of the following are true about the electromagnetic spectrum? (Select all that apply)

A. It includes visible light ✓

B. It consists only of waves that can be seen by the human eye

C. It ranges from radio waves to gamma rays ✓

D. It includes sound waves

Who is known for the wave-particle duality theory?

A. Isaac Newton

B. Albert Einstein ✓

C. Niels Bohr

D. James Clerk Maxwell

What factors affect the speed of a wave? (Select all that apply)

A. Medium through which it travels ✓

B. Wavelength ✓

C. Frequency ✓

D. Amplitude