

21 Lecture - PHY101

Important Mcqs

What type of waves are sound waves?

- A) Transverse waves
- B) Electromagnetic waves
- C) Longitudinal waves
- D) None of the above

Answer: C) Longitudinal waves

Which of the following is not a characteristic of a wave?

- A) Wavelength
- B) Amplitude
- C) Mass
- D) Frequency

Answer: C) Mass

Which of the following waves requires a medium to travel through?

- A) Transverse waves
- B) Electromagnetic waves
- C) Longitudinal waves
- D) All of the above

Answer: C) Longitudinal waves

What is the relationship between frequency and wavelength?

- A) They are inversely proportional
- B) They are directly proportional
- C) There is no relationship between them
- D) It depends on the type of wave

Answer: A) They are inversely proportional

What is the speed of light in a vacuum?

- A) 3×10^8 m/s
- B) 3×10^6 m/s
- C) 3×10^{10} m/s
- D) 3×10^2 m/s

Answer: A) 3×10^8 m/s

Which of the following waves has the highest frequency?

- A) Radio waves
- B) Microwaves
- C) X-rays
- D) Gamma rays

Answer: D) Gamma rays

What is the amplitude of a wave?

- A) The distance between two consecutive crests or troughs
- B) The distance between the highest and lowest points of a wave
- C) The number of waves that pass a point in one second
- D) The time it takes for one wave to pass a point

Answer: B) The distance between the highest and lowest points of a wave

Which of the following is an example of a mechanical wave?

- A) Radio wave
- B) Light wave
- C) Sound wave
- D) X-ray

Answer: C) Sound wave

What is the phenomenon of interference in waves?

- A) When two waves combine to form a larger wave
- B) When a wave bounces off a surface
- C) When a wave changes direction as it passes through a medium
- D) None of the above

Answer: A) When two waves combine to form a larger wave

What is the difference between a standing wave and a traveling wave?

A) A standing