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 x 10^8 m/s

B) 3 x 10^6 m/s

C) 3 x 10^10 m/s

D) 3 x 10^2 m/s

Answer: A) 3 x 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