

Physics Study Chapter 19/20

A type of wave in which the particles of the medium move parallel to the direction of energy movement _____

A type of wave in which the particles of the medium move perpendicular to the direction of energy movement _____

Sound moves by means of _____ waves; electromagnetic energy moves by means of _____ waves

On a sine wave the "rest" position (essentially the "x" axis) is called _____

The maximum displacement of the curve to either side of equilibrium is _____

The maximum displacement of the curve to positive side of equilibrium is _____; to negative _____

The distance successive identical parts of a wave _____

The points where the curve crosses equilibrium traveling in either a positive or negative direction _____

The relation $v = f\lambda$ is referred to as _____

Through wave motion _____ is transferred from place to place without transfer of _____ between points

Longitudinal waves consist of areas of higher particle density called _____ alternating with areas of lower particle density called _____

The unit of frequency _____

BOUNDARY BEHAVIOR

Medium fixed at boundary:

Reflected pulse: amplitude _____, Speed _____, wavelength _____, character _____

Medium free at boundary:

Reflected pulse: amplitude _____, Speed _____, wavelength _____, character _____

Medium denser beyond boundary:

Reflected pulse: amplitude _____, Speed _____, wavelength _____, character _____

Transmitted pulse: amplitude _____, Speed _____, wavelength _____, character _____

END 19-4

When two waves meet while traveling along the same medium it is called _____. When more than one wave occupies the same space at the same time the displacements add at every point defines the _____

Stable regions of constructive & destructive interference produced when two sets of waves of equal amplitude and λ pass through each other as they travel in opposite directions the _____

Change in frequency due to motion of the source (and/or the receiver) is called _____

END 19-5

The study of sound is called _____

Sound is really tiny fluctuations of _____

Because air molecules are not physically attached to one another, sound is transmitted when _____

The frequency of sound is referred to as _____

Sounds with frequencies below 20 Hz are called _____ ; those above 20000 Hz _____

End 20-1

The hair-like structures in the inner ear which if damaged/lost will have a permanent negative effect on hearing are called _____

The snail-like structures in the inner ear where various pitches are sorted before being sent by the auditory nerve to the brain are called _____

The large eardrum of the middle ear along with the very small bones of the middle and inner ear aid hearing through a kind of _____

End 20-2

Sound can be transmitted by _____

The denser a medium the _____ sound will travel

The reflection of sound is called _____

Bending of sound waves is called _____

An important tool of modern medicine that uses of sound waves is called _____

The decrease in energy in a wave caused by the medium through which the wave is moving is called _____

High frequency sound dissipates to _____ more rapidly than low frequency sound which therefore has _____

An object is made to vibrate by another vibrating object is example of _____

A frequency at which an elastic object naturally tends to vibrate _____

The response of a body when a forcing frequency matches its natural frequency is called

Two tones of slightly different frequency produce a fluctuation in loudness called _____

In the case of sound waves the pitch is _____proportional to the frequency