PHYSICS 3204 · NEWFOUNDLAND AND LABRADOR

Physics 3204

Practice Test

Unit E: Waves

25 Questions

Original practice test based on the Newfoundland and Labrador curriculum. Work through each question, then check your answers at the end.

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

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Question 1

Wave speed equals frequency times

A) amplitude

B) wavelength

C) period

D) energy

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Question 2

Frequency is the number of waves passing a point per unit

A) distance

B) time

C) mass

D) energy

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Question 3

Period is the time for one complete wave cycle and equals 1 divided by

A) wavelength

B) amplitude

C) frequency

D) speed

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Question 4

Amplitude of a wave is the maximum displacement from the

A) wavelength

B) frequency

C) crest only

D) equilibrium position

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Question 5

In a transverse wave, particles vibrate at right angles to the direction of wave

A) travel

B) amplitude

C) frequency

D) reflection

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Question 6

In a longitudinal wave, particles vibrate parallel to the direction of wave

A) amplitude

B) travel

C) reflection

D) refraction

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Question 7

Sound is an example of a longitudinal wave that needs a

A) vacuum

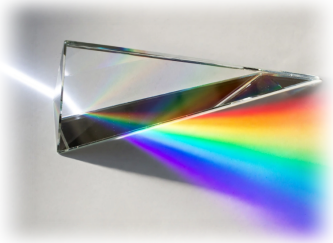
B) mirror

C) medium

D) lens

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Question 8

Light is an example of a transverse wave that can travel through a

A) medium only

B) solid only

C) liquid only

D) vacuum

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Question 9

When a wave passes from one medium to another, its frequency stays the same but its speed and wavelength

A) change

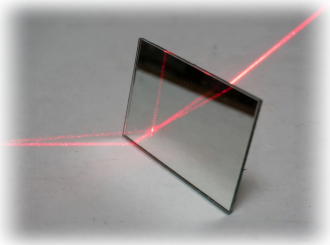
B) stay the same

C) become zero

D) double always

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Question 10

Reflection of a wave is the bouncing of a wave off a

A) medium only

B) surface

C) lens

D) vacuum

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Question 11

Refraction of a wave is the bending of a wave when it changes

A) frequency in a vacuum

B) amplitude only

C) speed in a new medium

D) direction in air only

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Question 12

Diffraction is the spreading of a wave as it passes through a gap or around an

A) mirror

B) lens only

C) vacuum

D) obstacle

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Question 13

Interference of two waves can be constructive when crests meet crests, giving a larger

A) amplitude

B) frequency

C) wavelength

D) speed

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Question 14

Destructive interference occurs when a crest meets a trough, giving a smaller

A) frequency

B) amplitude

C) wavelength

D) speed

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Question 15

The Doppler effect is the change in observed frequency when a wave source moves relative to an

A) medium

B) mirror

C) observer

D) lens

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Question 16

A wave has frequency 5 hertz and wavelength 4 metres. Its speed in metres per second is

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Question 17

A wave has speed 340 metres per second and frequency 170 hertz. Its wavelength in metres is

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Question 18

A wave has frequency 10 hertz. Its period in seconds is

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Question 19

A wave has period 0.25 seconds. Its frequency in hertz is

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Question 20

A wave has frequency 20 hertz and wavelength 15 metres. Its speed in metres per second is

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Question 21

A wave travels 600 metres in 2 seconds. Its speed in metres per second is

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Question 22

A string vibrates with fundamental frequency 100 hertz. Its second harmonic frequency in hertz is

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Question 23

A string vibrates with fundamental frequency 120 hertz. Its third harmonic frequency in hertz is

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Question 24

A wave has speed 1500 metres per second and wavelength 3 metres. Its frequency in hertz is

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Question 25

A wave has frequency 50 hertz and period 0.02 seconds. The product of frequency and period is

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ANSWER KEY

1.	B	**10.**	B	**18.**	0.1
2.	B	**11.**	C	**19.**	4
3.	C	**12.**	D	**20.**	300
4.	D	**13.**	A	**21.**	300
5.	A	**14.**	B	**22.**	200
6.	B	**15.**	C	**23.**	360
7.	C	**16.**	20	**24.**	500
8.	D	**17.**	2	**25.**	1
9.	A				

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