ONTARIO PHYSICS, GRADE 11, UNIVERSITY PREPARATION (SPH3U) · UNIT D · 25 QUESTIONS

Waves, Sound, and Electricity and Magnetism — Practice Test

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.

1 **A wave transfers**

- A matter from one place to another
- B energy without net transfer of matter
- C only sound
- D only light

Understand It with Pulse | Flag a mistake

2 **In a transverse wave, particles vibrate**

A parallel to wave travel

B perpendicular to wave travel

C in circles only

D not at all

Understand It with Pulse | Flag a mistake

3 **In a longitudinal wave, particles vibrate**

A perpendicular to wave travel

B in a vacuum only

C parallel to wave travel

D not at all

Understand It with Pulse | Flag a mistake

4 **Sound is an example of a**

A transverse wave only

B electromagnetic wave

C surface wave only

D longitudinal wave

Understand It with Pulse | Flag a mistake

5 **Light is an example of a**

A transverse electromagnetic wave

B longitudinal wave

C sound wave

D water wave only

Understand It with Pulse | Flag a mistake

6 **The amplitude of a wave is**

A distance between two crests

B maximum displacement from the rest position

C number of waves per second

D speed of the wave

Understand It with Pulse | Flag a mistake

7 **The wavelength of a wave is**

A time for one wave

B maximum displacement

C distance between two successive crests

D number of waves per second

Understand It with Pulse | Flag a mistake

8 **Frequency is**

A time for one wave

B distance travelled per second

C amplitude

D number of waves passing a point per second

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9 **The period of a wave is**

A time for one complete wave to pass a point

B number of waves per second

C wavelength

D amplitude

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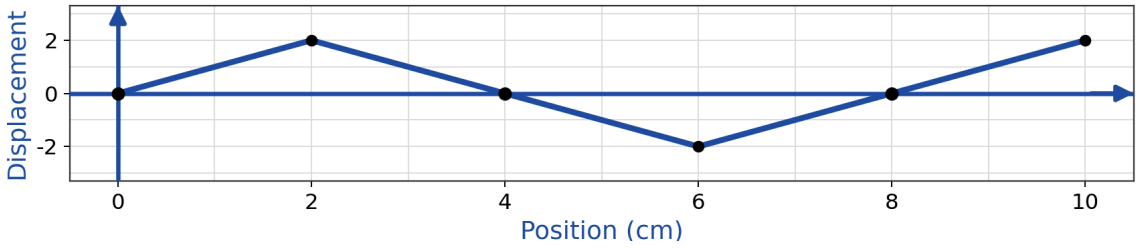
10 A wave has frequency 2 hertz. What is its period in seconds?

ANSWER

Understand It with Pulse | Flag a mistake

11 The graph shows displacement of a wave against position in centimetres. The peaks are at position 2 and position 10. What is the wavelength in centimetres?



ANSWER

Understand It with Pulse | Flag a mistake

12 A wave has frequency 4 hertz. What is its period in seconds?

ANSWER

Understand It with Pulse | Flag a mistake

13 A wave has frequency 5 hertz. What is its period in seconds?

ANSWER

Understand It with Pulse | Flag a mistake

14 **A wave has frequency 10 hertz. What is its period in seconds?**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A wave travels at 340 metres per second with wavelength 17 metres. What is its frequency in hertz?**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A wave travels at 300 metres per second with wavelength 15 metres. What is its frequency in hertz?**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A wave travels at 200 metres per second with wavelength 10 metres. What is its frequency in hertz?**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A wave travels at 600 metres per second with wavelength 20 metres. What is its frequency in hertz?**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **A wave has frequency 10 hertz and wavelength 20 metres. What is its speed in metres per second?**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **A wave has frequency 5 hertz and wavelength 30 metres. What is its speed in metres per second?**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A wave has frequency 20 hertz and wavelength 15 metres. What is its speed in metres per second?**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A wave has frequency 4 hertz and wavelength 25 metres. What is its speed in metres per second?**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Sound travels fastest in**

A a vacuum

B solids, because particles are close together

C gases

D empty space

Understand It with Pulse | Flag a mistake

24 **Sound cannot travel through a vacuum because it needs**

A light

B electricity

C a medium of particles to vibrate

D a large amplitude

Understand It with Pulse | Flag a mistake

25 **Higher frequency sound is heard as**

A louder sound

B softer sound

C lower pitch

D higher pitch

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	B	**10.**	0.5	**19.**	200
2.	B	**11.**	8	**20.**	150
3.	C	**12.**	0.25	**21.**	300
4.	D	**13.**	0.2	**22.**	100
5.	A	**14.**	0.1	**23.**	B
6.	B	**15.**	20	**24.**	C
7.	C	**16.**	20	**25.**	D
8.	D	**17.**	20		
9.	A	**18.**	30		

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