NOVA SCOTIA PHYSICS 11 · UNIT E · 25 QUESTIONS

Simple Harmonic Motion, Waves, Light and Sound — 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 has frequency 10 hertz and wavelength 2 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A wave has wavelength 5 metres and speed 100 metres per second. Its frequency, in hertz, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A longitudinal wave vibrates**

- A perpendicular to its direction of travel
- B parallel to its direction of travel
- C up and down only
- D not at all

Understand It with Pulse | Flag a mistake

5 **A transverse wave vibrates**

- A perpendicular to its direction of travel
- B parallel to its direction of travel
- C in a circle only
- D not at all

Understand It with Pulse | Flag a mistake

6 **Amplitude is the maximum displacement from the**

A crest only

B trough only

C wavelength

D rest position

Understand It with Pulse | Flag a mistake

7 **An echo is a reflected**

A light wave only

B sound wave

C water wave only

D radio wave only

Understand It with Pulse | Flag a mistake

8 **Diffraction is the spreading of a wave as it passes through a**

A gap or around an edge

B mirror

C lens only

D vacuum only

Understand It with Pulse | Flag a mistake

9 **Frequency is the number of waves passing a point per**

A metre

B second

C minute only

D kilometre

Understand It with Pulse | Flag a mistake

10 **Higher frequency sound is perceived as a**

A lower pitch

B louder sound

C higher pitch

D softer sound

Understand It with Pulse | Flag a mistake

11 **Larger amplitude sound is perceived as**

A higher pitched

B lower pitched

C faster

D louder

Understand It with Pulse | Flag a mistake

12 **Light travels as a**

A longitudinal sound wave

B transverse electromagnetic wave

C water wave

D seismic wave only

Understand It with Pulse | Flag a mistake

13 **Period is the time for**

A two waves

B half a wave

C one complete wave

D a crest only

Understand It with Pulse | Flag a mistake

14 **Reflection is a wave**

A bending into a medium

B passing through a slit

C bouncing off a surface

D losing all energy

Understand It with Pulse | Flag a mistake

15 **Refraction is the bending of a wave when it**

A reflects off a mirror

B changes speed entering a new medium

C stops moving

D doubles in frequency

Understand It with Pulse | Flag a mistake

16 **Simple harmonic motion repeats with a period that for a pendulum depends mainly on**

A mass

B amplitude for small swings

C colour

D length

Understand It with Pulse | Flag a mistake

17 **Sound needs a medium to travel through, while light can travel through a**

A vacuum

B solid only

C liquid only

D gas only

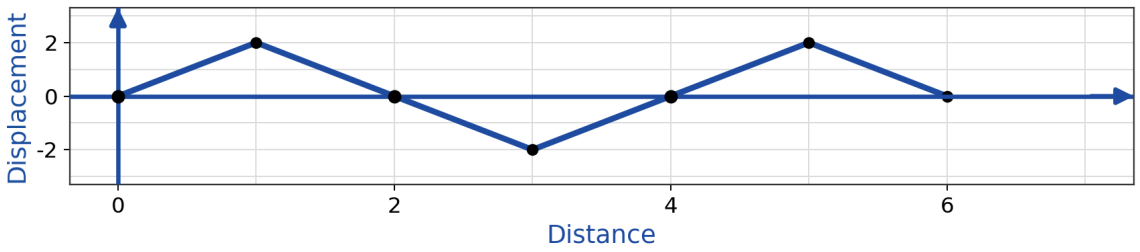
Understand It with Pulse | Flag a mistake

18 **Sound travels as a**

- **A** longitudinal wave
- **B** transverse wave only
- **C** surface wave only
- **D** standing wave only

Understand It with Pulse | Flag a mistake

19 **The graph shows a wave repeating every 4 units of distance. The wavelength of the wave is**



- **A** 2
- **B** 8
- **C** 1
- **D** 4

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A wave has frequency 20 hertz. Its period, in seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A wave has wavelength 2 metres and speed 60 metres per second. Its frequency, in hertz, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A wave has frequency 20 hertz and wavelength 3 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A wave has frequency 50 hertz. Its period, in seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **A wave has wavelength 4 metres and speed 80 metres per second. Its frequency, in hertz, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 20
2. 0.1
3. 20
4. B
5. A
6. D
7. B
8. A
9. B
10. C
11. D
12. B
13. C
14. C
15. B
16. D
17. A
18. A
19. D
20. 20
21. 0.05
22. 30
23. 60
24. 0.02
25. 20

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