Waves: Wave Basics, Sound, and Light — 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 in a circle only
- C up and down only
- D parallel to its direction of travel

Understand It with Pulse | Flag a mistake

5

A transverse wave vibrates

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

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

- A crest only
- B trough only
- C rest position
- D wavelength

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

- A mirror
- B lens only
- C gap or around an edge
- D vacuum only

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

A second

B metre

C minute only

D kilometre

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

A higher pitch

B lower pitch

C louder sound

D softer sound

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10 **Larger amplitude sound is perceived as**

A higher pitched

B louder

C lower pitched

D faster

Understand It with Pulse | Flag a mistake

11 **Light travels as a**

A transverse electromagnetic wave

B longitudinal sound wave

C water wave

D seismic wave only

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12 **Period is the time for**

A two waves

B one complete wave

C half a wave

D a crest only

Understand It with Pulse | Flag a mistake

13 **Reflection is a wave**

A bending into a medium

B passing through a slit

C losing all energy

D bouncing off a surface

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

- A reflects off a mirror
- B stops moving
- C changes speed entering a new medium
- D doubles in frequency

Understand It with Pulse | Flag a mistake

15 **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

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

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **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

18 **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

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

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **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

21 **A wave has frequency 2 hertz and wavelength 10 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A wave has frequency 40 hertz. Its period, in seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A wave has wavelength 10 metres and speed 50 metres per second. Its frequency, in hertz, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A wave has frequency 15 hertz and wavelength 4 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25

A wave has frequency 25 hertz. Its period, in seconds, is

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 20
2. 0.1
3. 20
4. D
5. C
6. C
7. C
8. A
9. A
10. B
11. A
12. B
13. D
14. C
15. 20
16. 0.05
17. 30
18. 60
19. 0.02
20. 20
21. 20
22. 0.025
23. 5
24. 60
25. 0.04

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