NOVA SCOTIA ADVANCED PHYSICS 11 · UNIT E

Simple Harmonic Motion, Waves, Light and Sound — Practice Test

Nova Scotia Advanced Physics 11 • 25 questions

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 18 hertz and wavelength 4 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A wave has wavelength 6 metres and speed 240 metres per second. Its frequency, in hertz, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **An advanced wave experiment uses frequency 12 hertz and wavelength 5 metres. The wave speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A source vibrates at 500 hertz. Its period, in seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A tuning fork vibrates at 120 hertz. Its period, in seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A converging lens brings parallel rays to a**

A virtual image only

B straight line

C mirror

D focal point

Understand It with Pulse | Flag a mistake

7 **A microwave oven uses electromagnetic waves to heat food by exciting**

A metals

B glass

C air only

D water molecules

Understand It with Pulse | Flag a mistake

8 **A node in a standing wave is a point of**

A maximum displacement

B zero displacement

C maximum speed only

D zero frequency

Understand It with Pulse | Flag a mistake

9 **A pendulum of length such that its period is 2 seconds completes 30 swings. The time taken, in seconds, is**

ANSWER

Understand It with Pulse | Flag a mistake

10 **A real image can be projected onto a**

A mirror only

B lens only

C eye only

D screen

Understand It with Pulse | Flag a mistake

11 **A sound wave in air is a series of compressions and**

- A reflections
- B refractions
- C rarefactions
- D nodes only

Understand It with Pulse | Flag a mistake

12 **A standing wave forms when two waves of the same frequency travel in**

- A opposite directions and interfere
- B the same direction only
- C a vacuum only
- D different media only

Understand It with Pulse | Flag a mistake

13 **A virtual image cannot be projected onto a**

A screen

B mirror

C lens

D eye

Understand It with Pulse | Flag a mistake

14 **A wave on a string travels faster when tension is**

A increased

B decreased

C zero

D constant only

Understand It with Pulse | Flag a mistake

15 **An ambulance siren sounds higher pitched as it approaches because wavefronts are**

- **A** stretched ahead
- **B** compressed ahead of the source
- **C** absent ahead
- **D** reflected

Understand It with Pulse | Flag a mistake

16 **An antinode in a standing wave is a point of**

- **A** zero displacement
- **B** zero energy
- **C** maximum displacement
- **D** zero frequency

Understand It with Pulse | Flag a mistake

17 **Interference that decreases amplitude is called**

- A constructive interference
- B reflection
- C destructive interference
- D polarisation

Understand It with Pulse | Flag a mistake

18 **A wave has frequency 50 hertz and wavelength 6 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **A wave has wavelength 8 metres and speed 320 metres per second. Its frequency, in hertz, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **An advanced wave experiment uses frequency 40 hertz and wavelength 3 metres. The wave speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A source vibrates at 1000 hertz. Its period, in seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A tuning fork vibrates at 250 hertz. Its period, in seconds, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A wave has frequency 24 hertz and wavelength 5 metres. Its speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A wave has wavelength 5 metres and speed 150 metres per second. Its frequency, in hertz, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **An advanced wave experiment uses frequency 15 hertz and wavelength 8 metres. The wave speed, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 72
2. 40
3. 60
4. 0.002
5. 0.0083
6. D
7. D
8. B
9. 60
10. D
11. C
12. A
13. A
14. A
15. B
16. C
17. C
18. 300
19. 40
20. 120
21. 0.001
22. 0.004
23. 120
24. 30
25. 120

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