ENGLAND GCSE PHYSICS OCR GATEWAY FOUNDATION · UNIT 5 · 25 QUESTIONS

Waves in Matter — 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 wristwatch ticks every second. How many ticks in a minute?**

- A 30
- B 100
- C 60
- D 12

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2 **A set square measures angles. What is a right angle?**

- A 45 degrees
- B 90 degrees
- C 180 degrees
- D 360 degrees

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3 **A passenger aeroplane flies at a steady speed and height. What is the resultant force on the aeroplane?**

- A 10000 N
- B 1000 N
- C 5000 N
- D 0 N

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4 **Glass marbles are used to model atoms. What is a limitation of the model?**

- A marbles are too small to see properly
- B marbles cannot be counted accurately at all
- C marbles are the wrong colour for atoms
- D marbles are much bigger than atoms

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5 **A kite is held by a string. What force does the string exert?**

- A tension
- B gravity
- C friction
- D air resistance

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6 **A thermometer is placed in hot water. What happens to the liquid inside the thermometer?**

- A it contracts
- B it expands
- C it freezes
- D it evaporates

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7 **A calculator uses a battery. What energy is stored in the battery?**

A kinetic energy of motion

B chemical energy

C light energy from the Sun

D thermal energy from heat

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8 **A wave has a frequency of 2 Hz and a wavelength of 3 m. What is the wave speed?**

A 11 m/s

B 6 m/s

C 12 m/s

D 3 m/s

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9 **A Ferris wheel turns slowly. A person on the wheel moves in a circle. What is the person's speed like?**

- A decreasing speed
- B increasing speed
- C zero speed
- D steady speed

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10 **A guitar is plugged into an amplifier. What flows through the cable?**

- A electric current
- B sound waves travelling along it
- C water
- D light

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11 **Which type of radiation is used in a TV remote control?**

A infrared

B X-rays

C gamma rays

D ultraviolet

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12 **A wave has a frequency of 10 Hz and a wavelength of 4 m. What is its speed?**

A 20 m/s

B 40 m/s

C 80 m/s

D 14 m/s

Understand It with Pulse | Flag a mistake

13 **Silver coins are made of a metal. Which property do metals have?**

A they are brittle

B they do not conduct electricity at all

C they dissolve in water

D they conduct electricity

Understand It with Pulse | Flag a mistake

14 **Light travels from glass into air at a steep angle and does not leave the glass. What is this called?**

A diffraction

B absorption

C total internal reflection

D refraction, bending into the air

Understand It with Pulse | Flag a mistake

15 **A wave travels at 10 m/s with a wavelength of 5 m. What is its frequency?**

- A 1 Hz
- B 4 Hz
- C 2 Hz
- D 50 Hz

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16 **Hardcover books are stacked on a table. What force pulls them down?**

- A air resistance
- B tension
- C friction
- D gravity

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17 **What does the frequency of a sound wave decide?**

A its colour

B its speed in air

C its loudness

D its pitch

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18 **Which electromagnetic wave has the longest wavelength?**

A radio waves

B X-rays

C gamma rays, which are the shortest

D ultraviolet

Understand It with Pulse | Flag a mistake

19 **What does a concave lens do to parallel rays of light?**

A it brings them together

B it reflects them back

C it spreads them apart

D it stops them

Understand It with Pulse | Flag a mistake

20 **What is the speed of sound in air?**

A 150 m/s

B 1000 m/s

C 300000000 m/s

D 340 m/s

Understand It with Pulse | Flag a mistake

21 **A wave has a frequency of 10 Hz and a wavelength of 3 m. What is the wave speed?**

- A 35 m/s
- B 30 m/s
- C 15 m/s
- D 60 m/s

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22 **What is the wavelength of a wave?**

- A the number of waves per second
- B the height of the wave
- C the time for one wave
- D the distance between two peaks

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23 **Which of these has the highest frequency?**

- A microwaves
- B gamma rays
- C infrared
- D radio waves

Understand It with Pulse | Flag a mistake

24 **A wave has a frequency of 20 Hz and a wavelength of 3 m. What is its speed?**

- A 60 m/s
- B 30 m/s
- C 120 m/s
- D 23 m/s

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What happens when light passes from air into glass?

A it speeds up and bends

B it slows and bends

C it reflects back only

D it stops

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

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