ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY FOUNDATION · UNIT 13 · 25 QUESTIONS

Radiation and Waves — 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 so it can be fixed.

1 **Hardcover books have mass. What is mass measured in?**

- A watts
- B kilograms
- C joules
- D newtons, the unit of force

Understand It with Pulse | Flag a mistake

2 **A sunflower makes glucose in its leaves. Which gas does it take in for photosynthesis?**

- A hydrogen gas from the air
- B carbon dioxide
- C oxygen gas from the air
- D nitrogen gas from the air

Understand It with Pulse | Flag a mistake

3 **A guitar string vibrates to make a sound. What type of wave is the sound wave?**

- A longitudinal
- B transverse
- C electromagnetic
- D standing

Understand It with Pulse | Flag a mistake

4 **A cup of coffee cools down. Energy is transferred to the surroundings. What type of change is this?**

- A a chemical change
- B a neutralisation
- C a reversible reaction
- D an energy transfer

Understand It with Pulse | Flag a mistake

5 **Glass marbles in a tray are used as a model for particles in a solid. What do the marbles show?**

- A particles move freely through space
- B particles vibrate in fixed positions
- C particles are far apart from each other
- D particles flow past each other easily

Understand It with Pulse | Flag a mistake

6 **A thermometer measures temperature in degrees Celsius. What is the freezing point of water on this scale?**

- A 10
- B 32
- C 100
- D 0

Understand It with Pulse | Flag a mistake

7 **A wave has a frequency of 4 Hz and a wavelength of 3 m. What is its speed?**

- A 12 m/s
- B 7 m/s
- C 24 m/s
- D 6 m/s

Understand It with Pulse | Flag a mistake

8 **Which part of the electromagnetic spectrum can our eyes detect?**

- A visible light
- B infrared, which is heat
- C ultraviolet
- D microwaves

Understand It with Pulse | Flag a mistake

9 **What are ultrasound waves?**

A light waves

B radio waves

C sound above human hearing

D sound waves below human hearing

Understand It with Pulse | Flag a mistake

10 **A wave travels at 30 m/s with a wavelength of 5 m. What is its frequency?**

A 12 Hz

B 3 Hz

C 6 Hz

D 150 Hz

Understand It with Pulse | Flag a mistake

11 **Carbon dioxide levels rose from 280 ppm to 400 ppm. What is the increase?**

A 120 ppm

B 160 ppm

C 100 ppm

D 140 ppm

Understand It with Pulse | Flag a mistake

12 **Why does light bend when it enters a different material?**

A its colour changes

B it becomes sound

C its speed changes

D it loses energy

Understand It with Pulse | Flag a mistake

13 **A wave has a frequency of 2 Hz and a wavelength of 5 m. What is the wave speed?**

- A 15 m/s
- B 5 m/s
- C 20 m/s
- D 10 m/s

Understand It with Pulse | Flag a mistake

14 **What is an echo?**

- A a loud sound
- B a high pitched sound
- C a reflected sound wave
- D a refracted sound wave

Understand It with Pulse | Flag a mistake

15 **What is a beta particle?**

A a fast electron

B a proton

C a helium nucleus

D a neutron

Understand It with Pulse | Flag a mistake

16 **A wave has a frequency of 5 Hz and a wavelength of 3 m. What is its speed?**

A 15 m/s

B 7.5 m/s

C 30 m/s

D 8 m/s

Understand It with Pulse | Flag a mistake

17 **What type of wave is sound?**

A electromagnetic

B longitudinal

C standing

D transverse

Understand It with Pulse | Flag a mistake

18 **A wave travels at 40 m/s with a wavelength of 4 m. What is its frequency?**

A 160 Hz

B 10 Hz

C 20 Hz

D 5 Hz

Understand It with Pulse | Flag a mistake

19 **Carbon dioxide levels rose from 320 ppm to 460 ppm. What is the increase?**

A 180 ppm

B 140 ppm

C 160 ppm

D 120 ppm

Understand It with Pulse | Flag a mistake

20 **What is total internal reflection used for?**

A making mirrors

B heating water

C in optical fibres

D making sound louder

Understand It with Pulse | Flag a mistake

21 **Which type of radiation is used to cook food?**

A gamma rays

B microwaves

C X-rays

D ultraviolet

Understand It with Pulse | Flag a mistake

22 **A wave has a frequency of 20 Hz and a wavelength of 5 m. What is the wave speed?**

A 105 m/s

B 100 m/s

C 200 m/s

D 50 m/s

Understand It with Pulse | Flag a mistake

23 **Which type of wave is a light wave?**

- A transverse
- B seismic
- C sound
- D longitudinal

Understand It with Pulse | Flag a mistake

24 **Which type of radiation is stopped by aluminium?**

- A neutron
- B alpha
- C beta
- D gamma

Understand It with Pulse | Flag a mistake

25

Which radiation is used to treat cancer?

A alpha

B gamma

C neutron

D beta

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.