ENGLAND GCSE COMBINED SCIENCE OCR GATEWAY FOUNDATION · UNIT 16 · 25 QUESTIONS

Waves and Radioactivity — 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 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

- A exactly normal
- B below normal
- C impossible to tell
- D above normal

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

3 **A kite flies in the wind. Which force holds the kite up?**

- A thrust
- B weight
- C drag
- D lift

Understand It with Pulse | Flag a mistake

4 **A set square is placed on a mirror. What happens to light hitting the mirror?**

- A it is absorbed
- B it passes through
- C it reflects
- D it refracts

Understand It with Pulse | Flag a mistake

5 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

- A Sv
- B Ag
- C S
- D Si

Understand It with Pulse | Flag a mistake

6 **A Ferris wheel turns. What force keeps a person moving in a circle?**

- A gravity only, pulling them down
- B friction only, gripping the seat
- C centripetal force
- D air resistance pushing them back

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

8 **A wristwatch measures time. What is the unit of time?**

- A the second
- B the minute
- C the hour
- D the day

Understand It with Pulse | Flag a mistake

9 **What is the normal in a refraction question?**

- A the ray of light itself, in the glass
- B at right angles to the surface
- C a line along the surface
- D the edge of the block

Understand It with Pulse | Flag a mistake

10 **A radioactive sample has an activity of 400 Bq. What is its activity after 2 half-lives?**

A 400 Bq

B 50 Bq

C 100 Bq

D 200 Bq

Understand It with Pulse | Flag a mistake

11 **Which electromagnetic wave has the highest frequency?**

A infrared

B radio waves, which are the lowest

C microwaves

D gamma rays

Understand It with Pulse | Flag a mistake

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

A gamma rays

B microwaves

C radio waves

D infrared

Understand It with Pulse | Flag a mistake

13 **Which type of wave is a sound wave?**

A longitudinal

B transverse

C electromagnetic

D standing

Understand It with Pulse | Flag a mistake

14 **A wave travels at 20 m/s with a wavelength of 5 m. What is its frequency?**

- A 2 Hz
- B 100 Hz
- C 4 Hz
- D 8 Hz

Understand It with Pulse | Flag a mistake

15 **A wave has a frequency of 5 Hz and a wavelength of 10 m. What is the wave speed?**

- A 50 m/s
- B 25 m/s
- C 100 m/s
- D 55 m/s

Understand It with Pulse | Flag a mistake

16 **How can the risk from a radioactive source be reduced?**

- A keep distance, limit time
- B by warming it up
- C by holding it for longer
- D by looking at it closely, every day

Understand It with Pulse | Flag a mistake

17 **Why is carbon-14 used to date old objects?**

- A it lasts thousands of years
- B it never decays
- C it is found in all rocks
- D it glows in the dark, like a watch

Understand It with Pulse | Flag a mistake

18 **A calculator runs on a small current. What is current measured in?**

A volts, the unit of voltage

B ohms, the unit of resistance

C watts, the unit of power

D amperes

Understand It with Pulse | Flag a mistake

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

A 30 m/s

B 8 m/s

C 15 m/s

D 7.5 m/s

Understand It with Pulse | Flag a mistake

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

A friction

B air resistance

C tension

D gravity

Understand It with Pulse | Flag a mistake

21 **What are ultrasound waves?**

A sound waves below human hearing

B radio waves

C light waves

D sound above human hearing

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

23 **A sample has an activity of 800 counts per minute. After 3 half-lives, what is its activity?**

- A 200
- B 100
- C 400
- D 50

Understand It with Pulse | Flag a mistake

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

A neutron

B gamma

C beta

D alpha

Understand It with Pulse | Flag a mistake

25 **A sample's activity halves every 10 years. After 20 years, what fraction of the original activity remains?**

A 1/4

B 1/8

C 1/2

D 1

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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