ENGLAND GCSE PHYSICS EDEXCEL HIGHER · UNIT 5 · 25 QUESTIONS

Light and the Electromagnetic Spectrum — 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 guitar string vibrates to make a sound. What type of wave is the sound wave?**

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

Understand It with Pulse | Flag a mistake

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

A gravity

B friction

C tension

D air resistance

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3 **A wristwatch is used to time a race. What is speed calculated from?**

A distance and time

B distance only, not time

C time only, not distance

D mass and time together

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

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

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5 **A set square is used to measure an angle of reflection. What is the angle of incidence equal to?**

- A double the angle of reflection
- B zero
- C the angle of reflection
- D half the angle of reflection

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6 **A passenger aeroplane takes off. Which force lifts it up?**

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

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

- A infrared
- B microwaves
- C gamma rays
- D radio waves, which are the lowest

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

- A it loses energy
- B its speed changes
- C it becomes sound
- D its colour changes

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9 **A hotter object gives out more radiation. What else changes as it gets hotter?**

- A the colour stays the same
- B the radiation stops
- C the peak wavelength gets longer
- D the peak gets shorter

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10 **What is the focal length of a lens?**

A the thickness of the lens

B lens to focus distance

C the width of the lens

D the distance to the object

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11 **An object 3 cm tall forms an image 6 cm tall. Calculate the magnification.**

A 4

B 2

C 1

D 3

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12 **What are radio waves used for?**

A seeing inside the body in hospitals

B television and radio

C killing cancer cells in treatment

D cooking food in a microwave oven

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13 **Which wave has the highest frequency in the electromagnetic spectrum?**

A microwaves, which have a low frequency

B radio waves, which have the lowest frequency

C infrared, which has a low frequency

D gamma rays

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14 **What do all electromagnetic waves travel at?**

A the speed of light

B the speed of sound

C different speeds

D the speed of the wave

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

A ultraviolet

B gamma rays, which are the shortest

C X-rays

D radio waves

Understand It with Pulse | Flag a mistake

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

A making sound louder

B making mirrors

C in optical fibres

D heating water

Understand It with Pulse | Flag a mistake

17 **Which lens is used in a magnifying glass?**

A a concave lens

B a prism

C a flat mirror

D a convex lens

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18 **An object 3 cm tall forms an image 15 cm tall. Calculate the magnification.**

- A 4
- B 10
- C 5
- D 6

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19 **What are X-rays used for?**

- A transmitting television signals
- B cooking food in a microwave oven
- C heating food in a kitchen
- D seeing bones

Understand It with Pulse | Flag a mistake

20 **Which waves can the human eye see?**

- A ultraviolet, which causes sunburn
- B visible light
- C microwaves, which heat food
- D infrared, which is felt as heat

Understand It with Pulse | Flag a mistake

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

- A infrared
- B X-rays
- C ultraviolet
- D gamma rays

Understand It with Pulse | Flag a mistake

22 **Which electromagnetic waves are used to take pictures of bones?**

A infrared

B radio waves

C X-rays

D visible light

Understand It with Pulse | Flag a mistake

23 **What happens to the intensity of radiation from a black body as the temperature rises?**

A it falls at all wavelengths

B it only rises in the red

C it increases everywhere

D it stays the same

Understand It with Pulse | Flag a mistake

24 **An object 1 cm tall forms an image 4 cm tall. Calculate the magnification.**

A 4

B 8

C 3

D 5

Understand It with Pulse | Flag a mistake

25 **What does a concave lens do to light?**

A it absorbs light

B it brings light to a focus

C it reflects light

D it spreads light out

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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