ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 25 · 25 QUESTIONS

Electricity and Circuits — 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 joules
- B kilograms
- C newtons, the unit of force
- D watts

Understand It with Pulse | Flag a mistake

2 **A basketball bounces. What type of energy is stored when the ball squashes?**

- A gravitational potential
- B kinetic
- C thermal
- D elastic potential

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3 **A tennis ball is served fast. What is its speed like?**

- A zero
- B low
- C negative
- D high

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

- A light energy from the Sun
- B kinetic energy of motion
- C thermal energy from heat
- D chemical energy

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5 **A guitar string is tightened. What happens to the pitch?**

- A it falls
- B it stays the same
- C it disappears
- D it rises

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6 **A wristwatch ticks every second. How many ticks in a minute?**

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

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7 **A diode is connected the wrong way round in a circuit. What current flows?**

- **A** current in the opposite direction only
- **B** the same current as before
- **C** almost none
- **D** a very large current

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8 **A component has a potential difference of 20 V across it and a current of 4 A through it. What is its resistance?**

- **A** 2.5 ohms
- **B** 10 ohms
- **C** 80 ohms
- **D** 5 ohms

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9 **A device works at 230 V with a current of 3 A. What is its power?**

- A 1380 W
- B 690 W
- C 700 W
- D 345 W

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10 **A resistor has a potential difference of 6 V across it and a resistance of 4 ohms. What is the current?**

- A 3 A
- B 24 A
- C 1.5 A
- D 0.75 A

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11 What is the frequency of UK mains electricity?

- **A** 60 Hz
- **B** 100 Hz
- **C** 230 Hz
- **D** 50 Hz

Understand It with Pulse | Flag a mistake

12 A current of 3 A flows for 10 seconds. How much charge flows?

- **A** 40 C
- **B** 15 C
- **C** 30 C
- **D** 60 C

Understand It with Pulse | Flag a mistake

13 **A current of 3 A flows for 60 seconds. How much charge flows?**

- A 90 C
- B 360 C
- C 63 C
- D 180 C

Understand It with Pulse | Flag a mistake

14 **What does an ammeter measure?**

- A current
- B power
- C resistance
- D voltage

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15 **A lamp runs at 6 V with a current of 3 A. What is its power?**

- **A** 36 W
- **B** 28 W
- **C** 18 W
- **D** 9 W

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16 **Why does the resistance of a filament lamp increase as the current increases?**

- **A** the filament gets hotter
- **B** the filament melts away
- **C** the filament gets colder
- **D** the filament gets longer

Understand It with Pulse | Flag a mistake

17 **A component has a potential difference of 20 V across it and a current of 2 A through it. What is its resistance?**

- A 5 ohms
- B 20 ohms
- C 40 ohms
- D 10 ohms

Understand It with Pulse | Flag a mistake

18 **A device works at 230 V with a current of 2 A. What is its power?**

- A 920 W
- B 230 W
- C 460 W
- D 470 W

Understand It with Pulse | Flag a mistake

19 **A resistor has a potential difference of 6 V across it and a resistance of 6 ohms. What is the current?**

- A 36 A
- B 0.5 A
- C 2 A
- D 1 A

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20 **What is the voltage of UK mains electricity?**

- A 110 V
- B 12 V
- C 400 V
- D 230 V

Understand It with Pulse | Flag a mistake

21 A current of 2 A flows for 10 seconds. How much charge flows?

- A 40 C
- B 30 C
- C 10 C
- D 20 C

Understand It with Pulse | Flag a mistake

22 A current of 5 A flows for 20 seconds. How much charge flows?

- A 100 C
- B 200 C
- C 50 C
- D 25 C

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23 **What is the unit of current?**

- A the amp
- B the watt
- C the volt
- D the ohm

Understand It with Pulse | Flag a mistake

24 **A lamp runs at 24 V with a current of 2 A. What is its power?**

- A 24 W
- B 48 W
- C 96 W
- D 58 W

Understand It with Pulse | Flag a mistake

25

For a fixed resistor at constant temperature, what is the current-voltage characteristic?

A a straight line through zero

B a curve that rises steeply then stops

C a curve that flattens out

D a flat line at zero current

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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