ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY HIGHER · UNIT 15 · 25 QUESTIONS

Electric 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 are stacked on a table. What force pulls them down?**

A air resistance

B friction

C gravity

D tension

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2 **A guitar amplifier is connected to the mains. What is the voltage of the mains supply in the UK?**

- A 50 V
- B 110 V
- C 12 V
- D 230 V

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

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

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4 **Glass marbles are shaken in a tray. What does this model?**

A particles disappearing completely

B particles freezing into place

C particles gaining energy

D particles bonding together

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

A amperes

B volts, the unit of voltage

C watts, the unit of power

D ohms, the unit of 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 evaporates
- C it freezes
- D it expands

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7 **A resistor has a potential difference of 12 V across it and a resistance of 4 ohms. What is the current?**

- A 48 A
- B 6 A
- C 1.5 A
- D 3 A

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8 **A component has a potential difference of 12 V across it and a current of 2 A through it. What is its resistance?**

- A 3 ohms
- B 12 ohms
- C 6 ohms
- D 24 ohms

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

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

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10 **A current of 4 A flows for 10 seconds. How much charge flows?**

- A 40 C
- B 20 C
- C 14 C
- D 80 C

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

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

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12 **A current of 5 A flows for 30 seconds. How much charge flows?**

- **A** 300 C
- **B** 150 C
- **C** 75 C
- **D** 160 C

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

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

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14 **Which of these is NOT a magnetic material?**

A iron

B nickel

C copper

D cobalt

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15 **Two 4 ohm resistors are in series. What is the total resistance?**

A 8 ohms

B 4 ohms

C 2 ohms

D 16 ohms

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16 **A device works at 230 V with a current of 5 A. What is its power?**

- A 1160 W
- B 2300 W
- C 1150 W
- D 575 W

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17 **How does an antistatic mat stop a build-up of charge?**

- A charge flows away
- B it heats the charge away
- C it makes more charge
- D it insulates the worker

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18 **What do closely spaced field lines show?**

- A no field at all
- B a weak field
- C a strong field
- D a magnetic field

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19 **In Fleming's left-hand rule, what does the second finger show?**

- A the current direction
- B the direction the wire moves in
- C the force direction
- D the field direction

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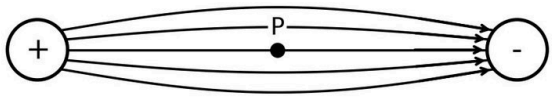
20 **The diagram shows the electric field around two charges. In which direction do the field lines go?**



A from positive to negative

B from negative to positive

C in circles

D they do not have a direction

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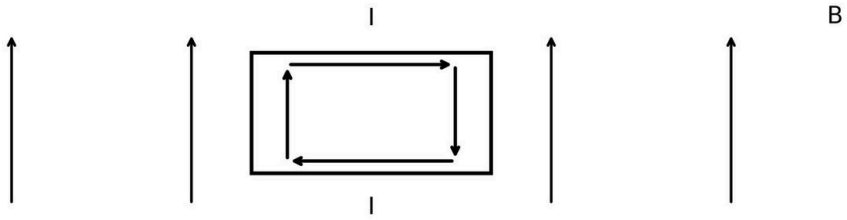
21 **The diagram shows a coil in a magnetic field with a current through it. What happens to the coil?**



- **A** it stays still
- **B** it heats up
- **C** it moves sideways
- **D** it turns

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22 **What does a light-dependent resistor do in bright light?**

- **A** its resistance stays the same
- **B** its resistance rises
- **C** its resistance falls
- **D** it makes its own light

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23 **What happens to the force if the current in the wire is reversed?**

- **A** it disappears
- **B** it stays the same
- **C** it doubles
- **D** it reverses too

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24 **A resistor has a potential difference of 6 V across it and a resistance of 2 ohms. What is the current?**

- **A** 6 A
- **B** 3 A
- **C** 12 A
- **D** 1.5 A

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25

A component has a potential difference of 10 V across it and a current of 4 A through it. What is its resistance?

A 2.5 ohms

B 5 ohms

C 1.25 ohms

D 40 ohms

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Flag a mistake

ANSWER KEY

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

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