ENGLAND GCSE PHYSICS OCR TWENTY FIRST CENTURY FOUNDATION · UNIT 3 · 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 to let Brett know so he can fix it.

1 **Hardcover books are dropped. What happens to their speed as they fall?**

A it increases

B it decreases

C it stays the same

D it becomes zero

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

A particles disappearing completely

B particles bonding together

C particles freezing into place

D particles gaining energy

Understand It with Pulse | Flag a mistake

7 **A lamp runs at 6 V with a current of 5 A. What is its power?**

A 15 W

B 40 W

C 60 W

D 30 W

Understand It with Pulse | Flag a mistake

8 **What is the electric field between two parallel plates?**

A uniform

B zero in the middle

C strongest at the edges

D stronger near the positive plate

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9 **A resistor has a potential difference of 12 V across it and a resistance of 2 ohms. What is the current?**

A 24 A

B 3 A

C 12 A

D 6 A

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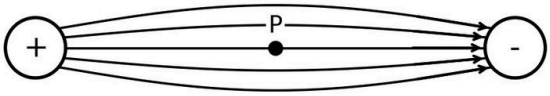
10 **The diagram shows the electric field around two charges. In which direction do the field lines go?**



A from negative to positive

B they do not have a direction

C in circles

D from positive to negative

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

12 **A current of 2 A flows for 30 seconds. How much charge flows?**

- **A** 120 C
- **B** 70 C
- **C** 30 C
- **D** 60 C

Understand It with Pulse | Flag a mistake

13 **A small positive charge is placed in an electric field. Which way does the force on it point?**

A there is no force on it

B at right angles to the field

C against the field lines

D along the field lines

Understand It with Pulse | Flag a mistake

14 **A current of 4 A flows for 20 seconds. How much charge flows?**

A 40 C

B 24 C

C 80 C

D 160 C

Understand It with Pulse | Flag a mistake

15 **A device works 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

Understand It with Pulse | Flag a mistake

16 **Which material is best for holding a static charge?**

- A a conductor, which holds charge well
- B a semiconductor
- C a magnet
- D an insulator

Understand It with Pulse | Flag a mistake

17 **What happens to the total resistance when resistors are added in parallel?**

A it becomes zero

B it decreases

C it stays the same

D it increases

Understand It with Pulse | Flag a mistake

18 **A component has a potential difference of 10 V across it and a current of 2 A through it. What is its resistance?**

A 2.5 ohms

B 20 ohms

C 5 ohms

D 10 ohms

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19 **What is the unit of potential difference?**

A the amp

B the volt

C the watt

D the ohm

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20 **What colour is the neutral wire in a plug?**

A brown

B green and yellow

C red

D blue

Understand It with Pulse | Flag a mistake

21 **Why can static electricity be dangerous when filling a fuel tanker?**

- A the tanker becomes too heavy
- B the fuel becomes magnetic
- C a spark could ignite it
- D the fuel freezes

Understand It with Pulse | Flag a mistake

22 **A rod is rubbed with a cloth and becomes negatively charged. What has the rod gained?**

- A neutrons from the cloth
- B electrons
- C protons from the cloth
- D a positive charge from the air

Understand It with Pulse | Flag a mistake

23 **A lamp runs at 24 V with a current of 5 A. What is its power?**

- A 60 W
- B 130 W
- C 120 W
- D 240 W

Understand It with Pulse | Flag a mistake

24 **What happens to the field lines where two like charges are close?**

- A they join together
- B they push apart
- C they form circles
- D they disappear

Understand It with Pulse | Flag a mistake

25

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

A 6 A

B 48 A

C 1.5 A

D 3 A

Understand It with Pulse

Flag a mistake

ANSWER KEY

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

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