ENGLAND GCSE PHYSICS AQA HIGHER · UNIT 7 · 25 QUESTIONS

Magnetism and Electromagnetism — 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 stays the same

C it decreases

D it becomes zero

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2 **A guitar is plugged into an amplifier. What flows through the cable?**

- A water
- B sound waves travelling along it
- C electric current
- D light

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3 **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 amperes
- D watts, the unit of power

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4 **A passenger train brakes. What force slows it down?**

- A friction
- B thrust
- C lift
- D gravity, pulling it down

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5 **A yellow school bus is full of children. What is its mass like?**

- A larger than when empty
- B the same as when empty
- C zero
- D smaller than when empty

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6 **A passenger aeroplane cruises. Which force opposes its motion?**

A lift

B drag

C weight

D thrust

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7 **A transformer has a primary voltage of 240 V. The secondary coil has 10 times fewer turns than the primary coil. What is the secondary voltage?**

A 2400 V

B 250 V

C 48 V

D 24 V

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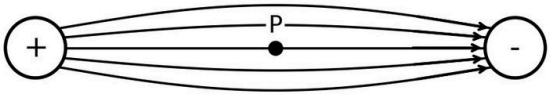
8 **The diagram shows the electric field around two charges. In which direction do the field lines go?**



- **A** in circles
- **B** they do not have a direction
- **C** from positive to negative
- **D** from negative to positive

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9 **What kind of current does a generator produce?**

- **A** no current at all
- **B** alternating current
- **C** static charge
- **D** direct current only

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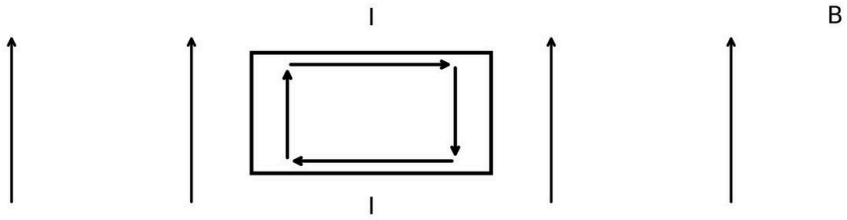
10 **The diagram shows a coil in a magnetic field with a current through it. What happens to the coil?**



A it turns

B it stays still

C it heats up

D it moves sideways

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11 **The force on a wire in a magnetic field is 4 N. If the current doubles, what is the new force?**

- **A** 4 N
- **B** 8 N
- **C** 2 N
- **D** 12 N

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

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

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13 **A generator coil turns 5 times per second. How many turns is that in one minute?**

- A 600
- B 360
- C 300
- D 240

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14 **A transformer has 100 turns on the primary coil and 50 turns on the secondary coil. What is the turns ratio?**

- A 4
- B 1
- C 3
- D 2

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15 **What does the motor effect need?**

- A a current with no magnet
- B current in a field
- C a battery with no wire
- D a magnet with no current

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16 **A transformer has a primary voltage of 230 V. The number of turns on the secondary coil is 10 times smaller than on the primary coil. What is the secondary voltage?**

- A 240 V
- B 46 V
- C 23 V
- D 2300 V

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17 **What does a loudspeaker turn electrical signals into?**

A radio waves

B light

C sound

D heat

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18 **A magnet is moved into a coil. What is induced in the coil?**

A heat only

B a potential

C sound

D a new magnet

Understand It with Pulse | Flag a mistake

19 **Which of these is a magnetic material?**

A wood

B aluminium

C copper

D iron

Understand It with Pulse | Flag a mistake

20 **How does a generator make electricity?**

A a battery is charged

B a coil turns in a field

C a magnet is heated

D a current flows through a coil

Understand It with Pulse | Flag a mistake

21 **The force on a wire in a magnetic field is 6 N. If the current doubles, what is the new force?**

- A 6 N
- B 12 N
- C 18 N
- D 3 N

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

23 **What does Fleming's left-hand rule give?**

- A the size of the force
- B the direction of the field
- C the direction of the force
- D the direction of the current

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24 **How can an electromagnet be made stronger?**

- A a smaller current
- B more turns on the coil
- C a wooden core
- D fewer turns on the coil

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25 **A transformer has 100 turns on the primary coil and 20 turns on the secondary coil. What is the turns ratio?**

A 6

B 10

C 4

D 5

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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