ENGLAND GCSE COMBINED SCIENCE EDEXCEL FOUNDATION · UNIT 26 · 25 QUESTIONS

Magnetism and the Motor Effect — 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 **A calculator uses a battery. What energy is stored in the battery?**

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

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

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

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

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

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

- A it decreases
- B it stays the same
- C it becomes zero
- D it increases

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

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

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6 **A passenger train travels at a steady speed. What is its acceleration?**

- A 0 m/s²
- B 10 m/s²
- C 1 m/s²
- D 9.8 m/s²

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7 **Where is a magnetic field strongest?**

- A far away from the magnet
- B in the middle of the magnet
- C at the poles
- D inside the metal only

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8 **What is inside an electromagnet to make it stronger?**

A a copper core

B an air core

C a wooden core

D an iron core

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9 **Why is soft iron used in an electromagnet?**

A it stays magnetic for ever after use

B it loses its magnetism quickly

C it does not conduct electricity

D it is stronger than steel when magnetised

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10 **How can the field of a solenoid be made stronger?**

- **A** by switching the current off
- **B** by using a steel core instead of iron
- **C** by using fewer turns on the coil
- **D** by increasing the current

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11 **In Fleming's left-hand rule, what does the thumb show?**

- **A** the field, going from north to south
- **B** the motion of the wire itself
- **C** the current, flowing through the wire
- **D** the force

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

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

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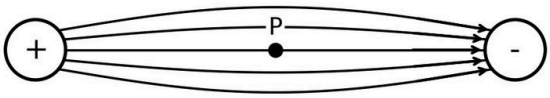
13 **The diagram shows the electric field around two charges. In which direction do the field lines go?**



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

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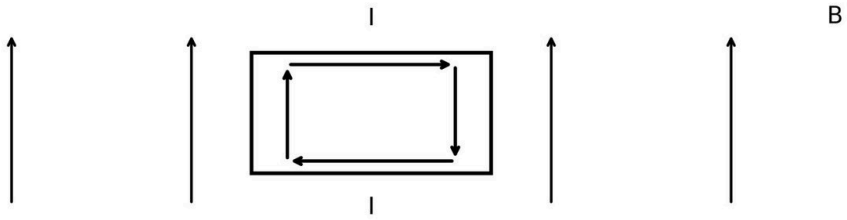
14 **The diagram shows a coil in a magnetic field with a current through it. What happens to the coil?**



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

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

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

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16 **What is the magnetic field around a magnet?**

A the region where light is bent by the magnet

B the metal the magnet is made from

C the region where its force acts

D the poles at the ends of the magnet

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17 **What is an electromagnet used for in a scrapyard?**

A melting scrap metal for recycling

B lifting scrap aluminium and copper

C lifting scrap iron

D cutting scrap metal into pieces

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18 **What is the magnetic field inside a solenoid like?**

- A strong and uniform
- B weak and changing all the time
- C strongest at the ends only
- D the same as outside the coil

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

- A iron
- B copper
- C aluminium
- D wood

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

- A the force, pushing on the wire
- B the motion of the wire itself
- C the current
- D the field, going from north to south

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21 **What happens to an electromagnet when the current is switched off?**

- A it attracts more strongly than before
- B it becomes a permanent magnet
- C it stays magnetic for ever after
- D it loses its magnetism

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

A iron

B copper

C cobalt

D nickel

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23 **How can the force on a wire be increased?**

A by using a shorter length of wire

B by increasing the current

C by switching the current off

D by using a weaker magnetic field

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24 **Why does a motor need a magnetic field?**

- A the field makes the coil heavier
- B the field charges the battery
- C the field cools the coil
- D it pushes on the current

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25 **Which poles repel each other?**

- A like poles
- B unlike poles, which attract each other
- C north and south poles together
- D no poles repel each other at all

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ANSWER KEY

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

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