ENGLAND GCSE PHYSICS EDEXCEL FOUNDATION · UNIT 12 · 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 to let Brett know so he can fix it.

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

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

Understand It with Pulse | Flag a mistake

2 **A calculator is switched on. What does the battery transfer energy to?**

- A the screen only
- B the circuits
- C the case
- D the buttons only

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

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

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4 **A yellow school bus carries children to school. Which blood vessel carries blood away from the heart, like a bus leaving the station?**

- A an artery
- B a vein
- C a capillary
- D a ventricle

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

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

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6 **Hardcover books are stacked on a table. What force pulls them down?**

- A friction
- B gravity
- C air resistance
- D tension

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

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

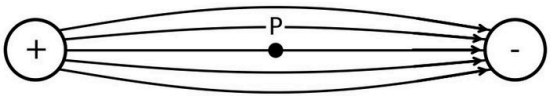
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8 **In Fleming's left-hand rule, what does the thumb show?**

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

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9 **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 negative to positive
- **D** from positive to negative

Understand It with Pulse | Flag a mistake

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

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

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11 **What does a compass needle point to?**

- A the nearest large magnet
- B the centre of the Earth
- C magnetic north
- D geographic south, away from north

Understand It with Pulse | Flag a mistake

12 **What happens when two north poles are brought together?**

- A they attract
- B they repel
- C nothing happens
- D they neutralise

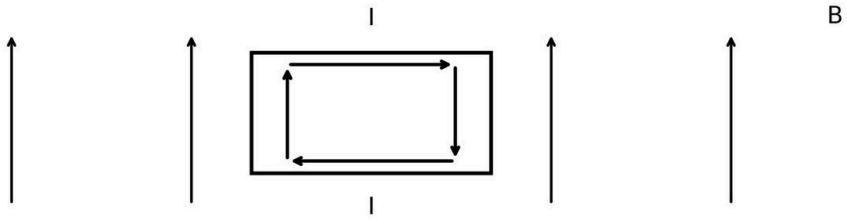
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13 **In Fleming's left-hand rule, what does the first finger show?**

- A the field
- B the motion of the wire itself
- C the current, flowing through the wire
- D the force, pushing on the wire

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

Understand It with Pulse | Flag a mistake

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

- **A** a smaller current
- **B** a shorter wire
- **C** a larger current
- **D** a weaker field

Understand It with Pulse | Flag a mistake

16 **What is at the centre of an electromagnet?**

A a steel core, which stays magnetic

B a copper core, which is not magnetic

C a soft iron core

D an empty space with no core

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17 **What is the motor effect?**

A a force on a wire with no field

B a force that only works in space

C a force on a magnet with no current

D a force on a current in a field

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

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

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

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

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

A a smaller current

B a wooden core

C fewer turns on the coil

D more turns on the coil

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21 **What is an electromagnet?**

A a piece of iron with no coil

B a permanent magnet made of steel

C a magnet that works without any current

D a magnet made by a current

Understand It with Pulse | Flag a mistake

22 **What does a solenoid with an iron core become?**

A a generator making electricity

B a permanent magnet made of steel

C an electromagnet

D a motor that spins around

Understand It with Pulse | Flag a mistake

23 **What is a permanent magnet?**

A a magnet that only works when switched on

B a magnet that loses its magnetism at once

C a piece of iron with no magnetism

D a magnet that keeps its magnetism

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

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

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25 **How else can the strength of an electromagnet be increased?**

- A by cooling the coil in water
- B by adding more turns to the coil
- C by using a longer wire with no coil
- D by taking turns off the coil

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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