ENGLAND GCSE COMBINED SCIENCE AQA TRILOGY FOUNDATION · UNIT 24 · 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 so it can be fixed.

1 **A yellow school bus stops at a station. What happens to its speed?**

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

Understand It with Pulse | Flag a mistake

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

A 9.8 m/s²

B 0 m/s²

C 10 m/s²

D 1 m/s²

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3 **A passenger aeroplane takes off. Which force lifts it up?**

A drag

B lift

C thrust

D weight

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

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

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5 **A guitar string vibrates to make a sound. What type of wave is the sound wave?**

- A transverse
- B longitudinal
- C standing
- D electromagnetic

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

A it increases

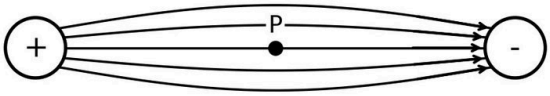
B it decreases

C it becomes zero

D it stays the same

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7 **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 from positive to negative

C in circles

D from negative to positive

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

- A 4
- B 6
- C 5
- D 10

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9 **A transformer has a primary voltage of 230 V. The number of turns on the secondary coil is 5 times smaller than on the primary coil. What is the secondary voltage?**

- A 92 V
- B 1150 V
- C 240 V
- D 46 V

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10 **What is a transformer used for?**

A storing electricity

B changing the current only

C making electricity

D changing the voltage

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11 **The force on a wire in a magnetic field is 2 N. If the current doubles, what is the new force?**

A 2 N

B 4 N

C 1 N

D 6 N

Understand It with Pulse | Flag a mistake

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

- A an air core
- B a copper core
- C a wooden core
- D an iron core

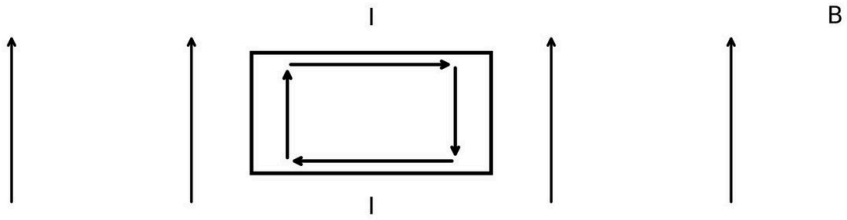
Understand It with Pulse | Flag a mistake

13 **A generator coil turns 2 times per second. How many turns is that in one minute?**

- A 240
- B 60
- C 180
- D 120

Understand It with Pulse | Flag a mistake

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 stays still
- **D** it moves sideways

Understand It with Pulse | Flag a mistake

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

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

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

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

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17 **A transformer has a primary voltage of 240 V. The number of turns on the secondary coil is 5 times smaller than on the primary coil. What is the secondary voltage?**

- A 250 V
- B 48 V
- C 96 V
- D 1200 V

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

A 3 N

B 18 N

C 12 N

D 6 N

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19 **What happens when a north pole and a south pole are brought together?**

A nothing happens

B they attract

C they neutralise

D they repel

Understand It with Pulse | Flag a mistake

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

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

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21 **A transformer has 100 turns on the primary coil and 10 turns on the secondary coil. What is the turns ratio?**

- **A** 20
- **B** 10
- **C** 11
- **D** 9

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

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

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23 **A transformer has 200 turns on the primary coil and 10 turns on the secondary coil. What is the turns ratio?**

- A 20
- B 19
- C 21
- D 40

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24 **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 2300 V
- D 23 V

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25 **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 12 N
- C 2 N
- D 8 N

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ANSWER KEY

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

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