ENGLAND GCSE PHYSICS AQA FOUNDATION · 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 **A yellow school bus is full of children. What is its mass like?**

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

Understand It with Pulse | Flag a mistake

2 **A passenger train carries people around the country. Which part of the blood is like the train, carrying oxygen around the body?**

- A plasma
- B red blood cells
- C white blood cells
- D platelets

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

4 **A passenger aeroplane flies at a steady speed and height. What is the resultant force on the aeroplane?**

- A 10000 N
- B 0 N
- C 5000 N
- D 1000 N

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

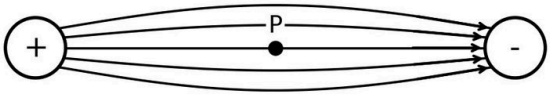
Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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



A from positive to negative

B in circles

C they do not have a direction

D from negative to positive

Understand It with Pulse | Flag a mistake

9 **Why does a bicycle dynamo light get brighter when the cyclist pedals faster?**

- A the magnet gets stronger
- B the wires get shorter
- C the coil turns faster
- D the bulb gets hotter

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

11 **A transformer has a primary voltage of 240 V. The number of turns on the secondary coil is 10 times smaller than on the primary coil. What is the secondary voltage?**

- A 48 V
- B 24 V
- C 2400 V
- D 250 V

Understand It with Pulse | Flag a mistake

12 **What is a permanent magnet?**

- A a magnet that stays magnetic
- B a magnet that can be switched off
- C a magnet made of iron only
- D a magnet that is very strong

Understand It with Pulse | Flag a mistake

13 **Why is a loudspeaker cone light?**

- A so it looks nice
- B so it does not fall down
- C so it stays cool
- D so it can vibrate easily

Understand It with Pulse | Flag a mistake

14 **A transformer has a primary voltage of 230 V. The secondary coil has 5 times fewer turns than the primary coil. What is the secondary voltage?**

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

Understand It with Pulse | Flag a mistake

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

A the direction of the current

B the size of the force

C the direction of the force

D the direction of the field

Understand It with Pulse | Flag a mistake

16 **A generator coil turns 10 times per second. How many turns is that in one minute?**

A 660

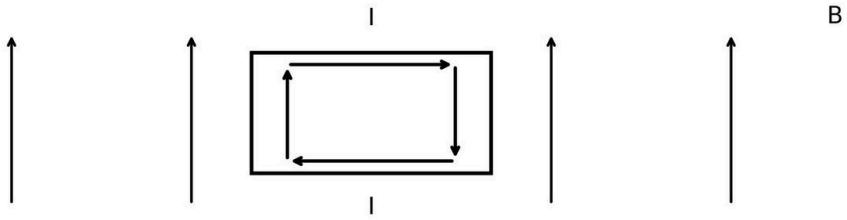
B 540

C 1200

D 600

Understand It with Pulse | Flag a mistake

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



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

Understand It with Pulse | Flag a mistake

18 **A magnet sits still inside a coil. What potential is induced?**

- **A** a changing potential
- **B** a large potential
- **C** a small potential
- **D** none

Understand It with Pulse | Flag a mistake

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

A a wooden core

B more turns on the coil

C fewer turns on the coil

D a smaller current

Understand It with Pulse | Flag a mistake

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

A 19

B 21

C 20

D 40

Understand It with Pulse | Flag a mistake

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

A 2 N

B 12 N

C 4 N

D 8 N

Understand It with Pulse | Flag a mistake

22 **Why is electricity transmitted at high voltage?**

A to reduce energy loss

B to make it safer

C to increase the current

D to make it cheaper to make

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

25 **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** 240 V
- **B** 92 V
- **C** 1150 V
- **D** 46 V

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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