ENGLAND GCSE PHYSICS OCR GATEWAY FOUNDATION · UNIT 4 · 25 QUESTIONS

# Magnetism and Magnetic Fields — 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 basketball is dropped. What energy store increases as it falls?**

- A thermal
- B kinetic
- C gravitational potential
- D elastic

Understand It with Pulse | Flag a mistake

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

A air resistance

B friction

C gravity

D tension

Understand It with Pulse | Flag a mistake

3 **A tennis ball is served fast. What is its speed like?**

A negative

B high

C zero

D low

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

5 **A wristwatch ticks every second. How many ticks in a minute?**

- A 12
- B 100
- C 60
- D 30

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 longitudinal
- B electromagnetic
- C transverse
- D standing

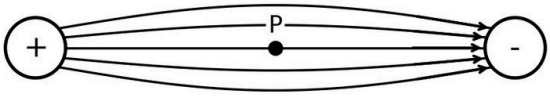
Understand It with Pulse | Flag a mistake

7 **How can the direction of a magnetic field be found?**

- A with a ruler
- B with a stopwatch
- C with a thermometer
- D with a compass

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 in circles

B they do not have a direction

C from positive to negative

D from negative to positive

Understand It with Pulse | Flag a mistake

9 **How does the strength of the field around a wire change with current?**

- A it changes with the wire length
- B it does not change at all
- C bigger current, weaker field
- D bigger current, stronger field

Understand It with Pulse | Flag a mistake

10 **What does the behaviour of a compass tell us about the core of the Earth?**

- A it must be hollow
- B it must be magnetic
- C it must be made of iron
- D it must be very hot

Understand It with Pulse | Flag a mistake

11 **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

12 **A solenoid has a bigger current through it. What happens to its magnetic field?**

A it stays the same

B it disappears

C it gets weaker

D it gets stronger

Understand It with Pulse | Flag a mistake

13 **What do iron filings show when sprinkled around a bar magnet?**

- A the field pattern
- B the strength in numbers
- C the poles only
- D the temperature

Understand It with Pulse | Flag a mistake

14 **The current in a wire is reversed. What happens to its magnetic field?**

- A it reverses too
- B it stays the same
- C it gets stronger
- D it disappears

Understand It with Pulse | Flag a mistake

**15** **What is a permanent magnet?**

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

Understand It with Pulse | Flag a mistake

**16** **An iron core is put inside a solenoid. What happens to the field?**

- **A** it disappears
- **B** it gets weaker
- **C** it gets stronger
- **D** it stays the same

Understand It with Pulse | Flag a mistake

17 **Do magnetic field lines ever cross each other?**

- A no, never
- B yes, at the poles
- C yes, in the middle
- D only in strong fields

Understand It with Pulse | Flag a mistake

18 **How does the strength of the field around a wire change with distance from the wire?**

- A it gets weaker further away
- B it gets weaker closer in
- C it gets stronger further away
- D it stays the same

Understand It with Pulse | Flag a mistake

19 **What does the needle of a compass point to?**

A the Sun

B the nearest magnet

C magnetic north

D true north

Understand It with Pulse | Flag a mistake

20 **What can be used to show the magnetic field around a wire?**

A a stopwatch

B a thermometer

C compasses

D a ruler

Understand It with Pulse | Flag a mistake

21 **Why do compasses stop working near a strong magnet?**

A the needle rusts

B the needle melts

C the Earth stops being magnetic

D the magnet's field wins

Understand It with Pulse | Flag a mistake

22 **A solenoid has more turns added to its coil. What happens to its magnetic field?**

A it stays the same

B it gets stronger

C it disappears

D it gets weaker

Understand It with Pulse | Flag a mistake

23 **In which direction do magnetic field lines point outside a bar magnet?**

A from south to north

B into the magnet

C out of both poles

D from north to south

Understand It with Pulse | Flag a mistake

24 **What does the right-hand grip rule tell you?**

A field direction

B the current size

C the wire material

D the wire length

Understand It with Pulse | Flag a mistake

25

**A compass is held near a bar magnet. What does the needle do?**

A it stops moving

B it spins round and round

C it points to the Sun

D it follows the field

Understand It with Pulse

Flag a mistake

# ANSWER KEY

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

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