ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 27 · 25 QUESTIONS

# Electromagnetic Induction — 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** **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

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

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

Understand It with Pulse | Flag a mistake

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

A it increases

B it becomes zero

C it stays the same

D it becomes negative

Understand It with Pulse | Flag a mistake

4 **A calculator runs on a small current. What is current measured in?**

A amperes

B volts, the unit of voltage

C watts, the unit of power

D ohms, the unit of resistance

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

7 **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 1150 V
- B 46 V
- C 240 V
- D 92 V

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8 **A transformer has 200 turns on the primary coil and 50 turns on the secondary coil. What is the turns ratio?**

- A 3
- B 5
- C 4
- D 8

Understand It with Pulse | Flag a mistake

9 **How does a generator make electricity?**

- A a battery is charged
- B a magnet is heated
- C a current flows through a coil
- D a coil turns in a field

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

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

Understand It with Pulse | Flag a mistake

11 **Why does the National Grid use step-up transformers?**

A to make more electricity

B to raise the current and cut the voltage

C to raise the voltage and cut the current

D to change direct current to sound

Understand It with Pulse | Flag a mistake

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

A lift

B drag

C weight

D thrust

Understand It with Pulse | Flag a mistake

13 **What does a loudspeaker turn electrical signals into?**

A sound

B radio waves

C light

D heat

Understand It with Pulse | Flag a mistake

14 **What happens if a magnet is pulled out of a coil instead of pushed in?**

A the potential doubles

B the coil melts

C the induced potential reverses

D the potential disappears for ever

Understand It with Pulse | Flag a mistake

15 **A transformer has a primary voltage of 240 V. The number of turns on the secondary coil is 2 times smaller than on the primary coil. What is the secondary voltage?**

- A 240 V
- B 120 V
- C 480 V
- D 250 V

Understand It with Pulse | Flag a mistake

16 **A transformer has a primary voltage of 240 V. The secondary coil has 5 times fewer turns than the primary coil. What is the secondary voltage?**

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

A 360

B 240

C 300

D 600

Understand It with Pulse | Flag a mistake

20 **What is the frequency of mains electricity in the UK?**

A 50 Hz

B 60 Hz

C 230 Hz

D 5 Hz

Understand It with Pulse | Flag a mistake

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

A to make it cheaper to make

B to increase the current

C to reduce energy loss

D to make it safer

Understand It with Pulse | Flag a mistake

22 **A microphone and a loudspeaker both use a coil in a magnetic field. How do they differ?**

A one needs no magnet at all

B one uses light and the other uses heat

C they work in exactly the same way

D sound to current, current to sound

Understand It with Pulse | Flag a mistake

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

- A 540
- B 1200
- C 600
- D 660

Understand It with Pulse | Flag a mistake

**24** **What is the voltage of mains electricity in homes in the UK?**

- A 400 V
- B 12 V
- C 230 V
- D 110 V

Understand It with Pulse | Flag a mistake

25

## What does a generator do?

A makes a magnet

B turns movement into electricity

C turns electricity into movement

D stores electricity

Understand It with Pulse

Flag a mistake

# ANSWER KEY

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

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