ENGLAND GCSE COMBINED SCIENCE EDEXCEL FOUNDATION · 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 **A guitar is plugged into an amplifier. What flows through the cable?**

- A light
- B water
- C electric current
- D sound waves travelling along it

Understand It with Pulse | Flag a mistake

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

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

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3 **A wristwatch measures time. What is the unit of time?**

- A the minute
- B the second
- C the hour
- D the day

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

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

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

- A 1 m/s²
- B 10 m/s²
- C 9.8 m/s²
- D 0 m/s²

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

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

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

- A to raise the current and cut the voltage
- B to change direct current to sound
- C to make more electricity
- D to raise the voltage and cut the current

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8 **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

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

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

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

- A they work in exactly the same way
- B sound to current, current to sound
- C one needs no magnet at all
- D one uses light and the other uses heat

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11 **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** 1200 V
- **B** 96 V
- **C** 48 V
- **D** 250 V

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

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

Understand It with Pulse | Flag a mistake

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

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

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14 **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 46 V
- B 240 V
- C 1150 V
- D 92 V

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

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

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

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

Understand It with Pulse | Flag a mistake

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

A storing electricity

B changing the current only

C changing the voltage

D making electricity

Understand It with Pulse | Flag a mistake

18 **What happens to the induced potential if the coil turns faster?**

A it stays the same

B it increases

C it becomes direct

D it decreases

Understand It with Pulse | Flag a mistake

19 **How does a microphone work?**

- A sound heats a coil
- B sound makes a magnet stronger and bigger
- C sound moves a coil in a field
- D sound charges a battery

Understand It with Pulse | Flag a mistake

20 **A transformer has a primary voltage of 240 V. The secondary coil has 10 times fewer turns than the primary coil. What is the secondary voltage?**

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

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

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

Understand It with Pulse | Flag a mistake

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

- A 230 Hz
- B 60 Hz
- C 50 Hz
- D 5 Hz

Understand It with Pulse | Flag a mistake

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

- A the potential disappears for ever
- B the coil melts
- C the potential doubles
- D the induced potential reverses

Understand It with Pulse | Flag a mistake

24 **A transformer has a primary voltage of 230 V. The secondary coil has 2 times fewer turns than the primary coil. What is the secondary voltage?**

- A 240 V
- B 460 V
- C 115 V
- D 230 V

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25 **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

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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