

Acoustics and Electromagnetism Level 2 Quiz

1) What happens when an electric current flows through a wire?

Select one:

- a) It creates sound.
- b) It produces light.
- c) It creates a magnetic field.
- d) It produces heat.

2) What is the purpose of a coil of wire in electromagnetism?

Select one:

- a) To block the electric current.
- b) To concentrate and increase the magnetic field.
- c) To store electricity.
- d) To create heat.

3) What is induction?

Select one:

- a) The process where electricity produces heat.
- b) The process of generating electricity when a magnetic field is moved through a coil of wires.
- c) A method of creating magnets from metals.
- d) The flow of electric current in a wire.

4) Which of the following is necessary to generate electricity using induction?

Select one:

- a) A stationary magnetic field.
- b) Moving or changing magnetic fields.
- c) A hot wire.
- d) A non-conductive material.

5) Which device creates electricity by using induction?

Select one:

- a) A toaster.
- b) A wind turbine.
- c) A refrigerator.
- d) A light bulb.

6) What does the voice coil in a speaker do?**Select one:**

- a) It vibrates to create sound.
- b) It generates electrical pulses.
- c) It creates a magnetic field that moves the speaker cone.
- d) It amplifies the sound.

7) How does a speaker create sound?**Select one:**

- a) By converting magnetic fields into light.
- b) By converting pulses of electric current into sound waves.
- c) By vibrating the air directly.
- d) By reflecting sound waves from its surface.

8) What part of a speaker is responsible for moving air to create sound waves?**Select one:**

- a) The frame.
- b) The magnet.
- c) The cone.
- d) The voice coil.

9) The magnet in a speaker is repelled and attracted by the voice coil, causing the cone to move.**Select one:**

- a) True
- a) False

10) What is one real-world application of electromagnetism in power generation?**Select one:**

- a) A nuclear power plant.
- b) A flashlight.
- c) A solar panel.
- d) A light switch.