STEM 101
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Name: _____
Period: _____

Acoustics & Electromagnetism Level 2 Quiz - Answer Key

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.

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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.