

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) What is the result if a magnet cracks?

2) What is the difference between mutual induction and self-induction?

3) How can EMI be reduced or controlled?

4) What is the difference between a “married” ignition coil and a “divorced” ignition coil?

5) What is the relationship between electricity and magnetism?

Answer Key

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1) A cracked magnet becomes two weaker magnets.

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2) Self-induction occurs when current starts to flow through a conductor, creating a self-induced voltage that opposes the current. Mutual induction occurs when the magnetic field in one conductor or coil induces a voltage in another conductor or coil.

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3) Electromagnetic interference (EMI) can be reduced by using:

- Resistance in the circuit
- Capacitor in the circuit
- Coils in the circuit
- Shielding
- Ground wire or strap

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4) Many ignition coils contain two separate, but electrically connected, windings of copper wire. This type of coil is called a "married" type. Other coils are true transformers in which the primary and secondary windings are not electrically connected. This type of coil is often called a "divorced" type.

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5) Whenever electricity is flowing through a conductor, a magnetic field around the conductor is formed. Whenever a conductor is moved through a magnetic field or a magnetic field is moved past a conductor, electricity is created.

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