

Automotive Technology 7<sup>th</sup> Edition  
Chapter 44: Magnetism and Electromagnetism  
Short Answer Quiz

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. Describe the relationship between electricity and magnetism as presented in the document.

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2. What is the difference between mutual induction and self-induction? Provide examples of each.

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3. Explain the phenomenon of magnetic induction and its significance in the context of electromagnetic devices.

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4. Discuss the behavior of magnetic poles when placed close together. How do like poles and unlike poles interact?

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5. Describe the concept of permeability in relation to magnetic flux lines. How do different materials affect the flow of these lines?

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6. Differentiate between "married" and "divorced" ignition coils. How does their construction and connection differ?

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7. Explain the principle of electromagnetic induction and how it applies to devices like ignition coils.

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8. How can electromagnetic interference (EMI) be reduced or controlled in electronic devices?

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9. Describe the role of solenoids and relays in electromagnetic systems. How do they utilize the principles of magnetism?

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10. What factors influence the strength of a magnetic field, and how is this strength typically measured?

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