Automotive Technology 7th Edition
Chapter 43
Multiple Choice Quiz A

Name: _____ Date: _____

1. What is the definition of capacitance?
A. The ability to conduct electricity.
B. The ability of an object or surface to store an electrical charge.
C. The resistance to the flow of electricity.
D. The potential difference across a circuit.

2. What was the device used by Ewald Christian von Kleist and Pieter Van Musschenbroek to discover capacitance?
A. A resistor
B. A Leyden jar
C. A battery
D. A coil

3. What is the primary function of a capacitor's dielectric?
A. To conduct electricity.
B. To store charge.
C. To insulate and prevent the flow of electricity.
D. To amplify the current.

4. When a capacitor is charged, it can be compared to which of the following?
A. A resistor
B. A switch
C. A battery
D. A coil

5. The capacitance of a capacitor is influenced by which of the following factors?
A. The surface area of the plates.
B. The distance between the plates.
C. The dielectric material.
D. All of the above.

6. In a dynamic random-access memory (DRAM) chip, what does a charged capacitor represent?
A. Binary digit 0
B. Binary digit 1
C. An error in the memory
D. A malfunctioning cell

7. Capacitance is measured in which unit?
A. Ohms
B. Volts
C. Amps
D. Farads

8. What is the primary purpose of a capacitor in spike suppression?
A. To amplify the voltage spike.
B. To store the voltage spike.
C. To reduce the resulting voltage spike.
D. To redirect the voltage spike.

9. Capacitors are commonly used in which of the following components?
A. Computer memory
B. Radio
C. Speaker
D. All of the above.

10. A capacitor used for spike protection is typically placed in which configuration relative to the load or circuit?
A. Series
B. Parallel
C. Either series or parallel
D. Parallel with a resistor in series

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Answer Key

1. B

2. B

3. C

4. C

5. D

6. B

7. D

8. C

9. D

10. B