

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

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

1. What is the commanded charging voltage during the start-up mode?
  - A. 12.7 volts
  - B. 13.9 volts
  - C. 14.5 volts
  - D. 15.5 volts
  
2. Which of these methods does an alternator NOT use to cool itself during operation?
  - A. Using coolant
  - B. Using an external fan
  - C. Using an internal fan
  - D. Using heat sinks
  
3. Which component in an alternator allows current to flow in only one direction?
  - A. Capacitor
  - B. Resistor
  - C. Diode
  - D. Transistor
  
4. What is the significance of the duty cycle in relation to the alternator's output voltage?
  - A. It determines the speed of the alternator
  - B. It controls the temperature of the alternator
  - C. It varies the output voltage of the alternator
  - D. It regulates the battery's state of charge
  
5. In which mode does the computer-controlled charging system command a target voltage of 13 volts?
  - A. Fuel economy mode
  - B. Charge mode
  - C. Voltage reduction mode
  - D. Start-up mode
  
6. Which component provides support and friction reduction for the belt-driven rotor assembly in an alternator?
  - A. Slip-ring-end (SRE) housing
  - B. Front ball bearing
  - C. Diode
  - D. Stator
  
7. Which mode is activated in a computer-controlled charging system when the output voltage is less than 13.2 volts for 45 minutes?
  - A. Fuel economy mode
  - B. Charge mode
  - C. Voltage reduction mode
  - D. Battery sulfation mode

8. What is the primary reason for using an electronic load control (ELC) in some vehicle manufacturers' charging systems?

- A. To increase battery life
- B. To improve fuel economy
- C. To enhance engine performance
- D. To reduce engine noise

9. What is the primary function of the rotor in an alternator?

- A. To store electrical energy
- B. To convert AC to DC
- C. To generate a magnetic field
- D. To regulate voltage

10 Which of the following is NOT a mode of operation in a computer-controlled charging system?

- A. Overcharge mode
- B. Fuel economy mode
- C. Charge mode
- D. Start-up mode

Automotive Technology 7th Edition

Chapter 51

Multiple Choice Quiz B

Answer Key

1. C

2. D

3. C

4. C

5. A

6. B

7. D

8. B

9. C

10. A