

Automotive Technology 7th Edition
Chapter 51: Charging System Parts and Operation
Short Answer Quiz

Name:

Date:

1. Explain the principle of electromagnetic induction and how it is utilized in the operation of an alternator.
2. Describe the construction and significance of the two-piece cast aluminum housing of an alternator. Why is aluminum specifically used?
3. How does an alternator change the generated alternating current (AC) to direct current (DC)? What components play a crucial role in this conversion?
4. What is the primary purpose and function of the charging system in a vehicle?
5. Discuss the various modes of operation of a computer-controlled charging system. How do these modes enhance the efficiency and performance of the charging system?

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6. Describe the significance of the "drive-end (DE) housing" and the "slip-ring-end (SRE) housing" in an alternator's construction.

7. How does the computer interface with the alternator, and what advantages does this bring to the charging system?

8. Explain the concept of "duty cycle" in relation to the alternator's output voltage. How does it impact the performance of the alternator?

9. Discuss the importance of cooling in an alternator. What methods or components are used to ensure effective cooling?

10. Describe the conditions under which the "fuel economy mode" of a computer-controlled charging system is activated and its implications for the vehicle's performance.