

Automotive Technology 7th Edition
Chapter 92: Fuel Cells and Advanced Technologies
Short Answer Quiz

Name:

Date:

1. Explain the principle of a fuel cell and how it generates electricity.
2. Discuss the advantages and disadvantages of fuel cells in automotive applications.
3. Describe the various methods of hydrogen production and their relevance to fuel cell technology.
4. What is an ultracapacitor, and how does it function within fuel-cell hybrid vehicles?
5. Compare and contrast the energy content of hydrogen to that of gasoline and the implications for fuel cell vehicles.

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6. Outline the challenges faced by fuel cells in becoming a mainstream technology and the advancements being made to overcome them.

7. Describe the different types of fuel cells and the criteria by which they are classified.

8. Explain the concept of specific energy and its significance in the context of hydrogen as a fuel.

9. Discuss the role of ultracapacitors in terms of their advantages and limitations in energy storage and discharge.

10. How do fuel-cell hybrid vehicles (FCHVs) differ from fuel-cell vehicles (FCVs), and what are the benefits of the hybrid configuration?