Automotive Technology 7th Edition
Chapter 89
Multiple Choice Quiz A

Name: _____ Date: _____

1. Why do high-voltage batteries need to be heated if cold or cooled if hot?
A. To maintain optimal performance
B. To extend battery life
C. To increase energy efficiency
D. All of the above

2. An electric vehicle can travel _____ miles per kilowatt-hour.
A. About 10 to 12
B. About 3 to 4
C. About 100 or more
D. Less than 2

3. Long battery life requires _____ for battery cell balancing.
A. Passive and active methods
B. Only passive methods
C. Only active methods
D. No balancing at all

4. What are the steps involved to address failed high-voltage battery modules?
A. Isolation of the failed module
B. Replacement with a new module
C. Rebalancing the battery pack
D. All of the above

5. What occurs if the state-of-charge exceeds 80%?
A. The battery's life span decreases
B. The battery's efficiency increases
C. The battery enters a maintenance mode
D. The battery's cooling system activates

6. High-voltage batteries are used in _____.
A. Hybrid electric vehicles
B. Battery electric vehicles
C. ICE vehicles
D. Both A and B

7. The nominal voltage of an NiMH battery cell is _____.
A. 1.2 volts
B. 3.2 volts
C. 3.6 volts
D. 4.8 volts

8. A lithium-ion cell produces _____ per cell.
A. 1.2 volts
B. 3.2 volts
C. 3.6 volts
D. 4.8 volts

9. Electronic components operate more efficiently as their temperature _____.
A. Increases
B. Decreases
C. Remains constant
D. Changes from hot to cold rapidly

10. Lithium-ion cells can be _____.
A. Cylindrical cell
B. Prismatic—hard case
C. Prismatic—pouch type
D. Any of the above

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Answer Key

1. D

2. A

3. A

4. D

5. A

6. D

7. A

8. C

9. B

10. D