

Name \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 1) Which battery rating is tested at 0°F (-18 C)? 1) \_\_\_\_\_
  - A) Cold-cranking amperes (CCA)
  - B) Cranking amperes (CA)
  - C) Reserve capacity
  - D) Battery voltage test
  
- 2) How are the high voltage batteries cooled in an HEV? 2) \_\_\_\_\_
  - A) Ice packs
  - B) By circulating cabin air
  - C) By forced air from under the vehicle
  - D) By opening a folding roof flap
  
- 3) Which battery rating is expressed in minutes? 3) \_\_\_\_\_
  - A) Cold-cranking amperes
  - B) Cranking amperes
  - C) Reserve capacity
  - D) Battery voltage test
  
- 4) Technician A says that the state of charge of a NiMH battery can be determined by measuring cell voltage. Technician B says that many factors should be considered in determining the state of charge of a NiMH battery, including temperature, output current, and cell voltage. Which technician is correct? 4) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
  
- 5) What is the electrolyte used in a NiMH battery? 5) \_\_\_\_\_
  - A) Gear acid
  - B) Sodium H<sub>2</sub>O
  - C) Potassium hydroxide
  - D) Sulfuric acid
  
- 6) Where are AGM auxiliary batteries usually located in a hybrid electric vehicle? 6) \_\_\_\_\_
  - A) Under the hood
  - B) In the trunk/rear area
  - C) Under the front fender
  - D) Under the front seat
  
- 7) Each cell of an automobile 12 volt battery can produce about \_\_\_\_\_ volts. 7) \_\_\_\_\_
  - A) 1.2
  - B) 2.1
  - C) 4.2
  - D) 4

- 8) A battery high rate discharge (load capacity) test is being performed on a 12 volt battery. Technician A says that a good battery should have a voltage reading of higher than 9.6 volts while under load at the end of the 15-second test. Technician B says that the battery should be discharged (loaded) to twice its CCA rating. Who is right? 8) \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
- 9) The internal resistance of a HV battery block as displayed on a scan tool, should be \_\_\_\_\_. 9) \_\_\_\_\_
- A) 15-40 milliohms
  - B) 45-60 milliohms
  - C) 70-110 milliohms
  - D) Over 110 milliohms
- 10) When load testing a battery, which battery rating is usually used to determine how much load to apply to the battery? 10) \_\_\_\_\_
- A) CA
  - B) RC
  - C) MCA
  - D) CCA

## Answer Key

Testname: HYBRID4\_8B

1) A

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2) B

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3) C

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4) B

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5) C

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6) B

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7) B

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8) A

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9) A

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10) D

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