

Name \_\_\_\_\_

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

- 1) The HV battery is normally kept at a state of charge (SOC) target of \_\_\_\_\_ percent. 1) \_\_\_\_\_
  - A) 80
  - B) 20
  - C) 100
  - D) 60
  
- 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 type is NOT being used in hybrid or electric vehicles? 3) \_\_\_\_\_
  - A) Zinc air
  - B) Sodium sulfur
  - C) Sodium-metal-chloride (ZEBRA)
  - D) All of the above
  
- 4) The high voltage battery disconnect should be pulled out before refueling an HEV. 4) \_\_\_\_\_
  - A) True
  - B) False
  
- 5) Normal operating state-of-charge (SOC) range for most hybrid electric vehicles is \_\_\_\_\_. 5) \_\_\_\_\_
  - A) 15% to 95%
  - B) 23% to 83%
  - C) 46% to 56%
  - D) 52% to 68%
  
- 6) What type of battery uses two different electrolytes? 6) \_\_\_\_\_
  - A) Sodium-metal-chloride (ZEBRA)
  - B) Potassium phosphate
  - C) NiCD
  - D) Lead-acid
  
- 7) Technician A says the nominal voltage for ONE lithium-ion cell is 1.2 volts. Technician B says the nominal voltage for ONE NiMH battery cell is 2.1 volts. Which technician is correct? 7) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician

- 8) Technician A says that NiMH batteries are an alkaline design. Technician B says that high-voltage battery packs are constructed using NiMH cells connected in parallel. Which technician is correct? 8) \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
- 9) When working around high-voltage batteries, what precautions should be adhered to? 9) \_\_\_\_\_
- A) Do not work on the vehicle if moisture is present on the skin or anywhere on or near the vehicle.
  - B) Be sure to disconnect the HV battery and allow enough time for system capacitors to discharge before proceeding.
  - C) ALWAYS refer to the service manual for approved safety procedures when handling the HV battery pack.
  - D) All of the above.
- 10) The electrolyte in a nickel lithium-ion battery is \_\_\_\_\_. 10) \_\_\_\_\_
- A) H<sub>2</sub>SO<sub>4</sub>
  - B) potassium hydroxide
  - C) nickel cadmium
  - D) organic solvent