

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) H₂SO₄
 - B) potassium hydroxide
 - C) nickel cadmium
 - D) organic solvent

Answer Key

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1) D

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2) B

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3) D

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4) B

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5) D

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6) A

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7) D

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8) A

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9) D

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10) D

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