

Name _____

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

- 1) How many high voltage cables supply electrical power to the HV components at the front of the vehicle? 1) _____
 - A) Two or three on some vehicles
 - B) Six on some vehicles
 - C) Four on some vehicles
 - D) None of these

- 2) One way to be sure that the high voltage system is turned off is to turn off the ignition and leave the key in the vehicle. 2) _____
 - A) True
 - B) False

- 3) A HEV has been involved in an accident and the driver is unconscious. The paramedics consult a technician for safety tips to extract the driver without electrocution. Technician A says that as long as the engine is not running there is no danger of electrical shock. Technician B says that if the ignition switch is in the off position, the high energy relays are not energized. Which technician is correct? 3) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

- 4) If a HEV is submerged what causes the high voltage relays to turn off? 4) _____
 - A) A dissolved safety pellet
 - B) The ground fault circuit detects a connection between the HV battery and the vehicle body (ground)
 - C) The relays only turn off when the key is removed
 - D) None of these

- 5) What is the pH of the electrolyte of a hybrid electric vehicle's NiMH battery? 5) _____
 - A) 13.5
 - B) 2.5
 - C) 7.0
 - D) 14.7

- 6) Orange cables connect the high voltage battery to the HEV electrical motors. High voltage may also be connected to _____. 6) _____
 - A) The air bags
 - B) The AC compressor
 - C) The bumper sensors
 - D) The passenger presence system

- 7) If the electrolyte from a high voltage battery is spilled, what should be used to neutralize it? 7) _____
- A) Baking soda
 - B) Vinegar or boric acid
 - C) Water
 - D) CO₂
- 8) A hybrid electric vehicle is submerged under water. A rescue squad member consults automotive technicians for information regarding safety precautions. Technician A says that there is no danger of electrical shock from touching the body of the vehicle or the frame in or out of the water. Technician B says that the vehicle will detect a ground fault and open the HV relays. Which technician is correct? 8) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
- 9) Which is true of high voltage battery electrolyte? 9) _____
- A) It is flammable
 - B) It is explosive
 - C) It creates noxious fumes
 - D) None of these is correct
- 10) The high voltage circuits are controlled by _____, that are in turn controlled by the ignition switch. 10) _____
- A) Main relays
 - B) Knife switches
 - C) Vacuum switching relays
 - D) Solenoids

Answer Key

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1) A

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2) B

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3) B

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4) B

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5) A

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6) B

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7) B

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8) C

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9) D

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10) A

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