

Automotive Electrical and Engine Performance 9th Edition
Chapter 25 – Hybrid and Electric Vehicle Safety
Multiple Choice Questions Quiz B

1. What color are the high-voltage cables used in hybrid and electric vehicles?
 - a. Blue
 - b. Yellow
 - c. Orange
 - d. Red

2. What is the voltage rating of high-voltage lineman's gloves recommended for working on hybrid electric vehicles?
 - a. 500 volts
 - b. 1,000 volts
 - c. 1,500 volts
 - d. 600 volts

3. Which standard must safety glasses or face shields meet for high-voltage work?
 - a. ASTM F150
 - b. ANSI Z87.1
 - c. ISO 9001
 - d. OSHA 1910

4. When should the high-voltage system be depowered during vehicle servicing?
 - a. Only when replacing the 12-volt battery
 - b. During routine oil changes
 - c. When working on HV battery, inverter, or orange cable systems
 - d. Only when performing diagnostic scans

5. What is the purpose of the safety interlock system in hybrid vehicles?
- a. To prevent unauthorized access to the HV system
 - b. To maintain high voltage during operation
 - c. To detect open circuits and depower the HV system
 - d. To regulate battery cooling
6. What device is used to check for continuity between HV cables and the vehicle chassis?
- a. Ohmmeter
 - b. Insulation tester (megohmmeter)
 - c. Clamp-on ammeter
 - d. Digital multimeter
7. What precautions should be taken when hoisting a hybrid or electric vehicle?
- a. Avoid contacting orange HV cables
 - b. Ensure lift points do not contact the battery case
 - c. Avoid damaging coolant and refrigeration lines
 - d. All of the above
8. What does the acoustic vehicle alerting system (AVAS) do?
- a. Generates sound at low speeds to warn pedestrians
 - b. Alerts drivers when the vehicle is powered off
 - c. Produces emergency sounds during collisions
 - d. Synchronizes vehicle components for safety

9. What type of fire extinguisher is recommended for electrical fires in hybrid vehicles?

- a. Class A
- b. Class B
- c. Class C
- d. ABC-rated

10. What should be done if a technician's HV gloves show signs of wear or have expired inspection dates?

- a. Continue using them if they pass the air test
- b. Dispose of them and use new gloves
- c. Send them to a lab for re-inspection
- d. Use them with an additional leather glove layer

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Answer Key Quiz B

Correct Answers:

1. c
2. b
3. b
4. c
5. c
6. b
7. d
8. a
9. c
10. c