

Automotive Electrical and Engine Performance 9th Edition
Chapter 45 – Module Programming
Multiple Choice Questions Quiz A

1. What is the purpose of the SAE J2534 standard in automotive diagnostics and repairs?
 - a) To regulate software updates for infotainment systems
 - b) To provide guidelines for vehicle electrical system design
 - c) To mandate battery maintenance during programming
 - d) To standardize pass-through programming for emission-related modules

2. Technician A states that the J2534 standard applies only to vehicles manufactured after 2010. Technician B says J2534 allows non-dealership repair facilities to reprogram emission-related modules. Who is correct?
 - a) Technician A only
 - b) Technician B only
 - c) Both Technicians A and B
 - d) Neither Technician A nor B

3. Why is a battery maintainer recommended during module reprogramming?
 - a) To keep all diagnostic trouble codes (DTCs) cleared
 - b) To ensure stable voltage levels during the process
 - c) To prevent data loss in the ECM memory
 - d) To maintain a connection between the DLC and PCM

4. In the J2534 protocol, which device connects the vehicle's data link connector (DLC) to the programming computer?
 - a) Battery maintainer
 - b) API controller
 - c) Pass-through device
 - d) On-board diagnostic monitor

5. What is the main reason for regulatory requirements mandating J2534 compliance in vehicle programming?

- a) To prevent aftermarket modifications
- b) To allow standardized reprogramming of emission-related modules
- c) To ensure faster processing in diagnostics
- d) To reduce the number of required reprogramming events

6. What issue might arise when using a generic J2534 pass-through device instead of a manufacturer-specific tool?

- a) Lack of compatibility with certain vehicle models
- b) Inability to connect to the vehicle's DLC
- c) Reduced voltage stability during programming
- d) Limited access to diagnostic trouble codes (DTCs)

7. Which of the following is NOT a common method for reprogramming a vehicle's control module?

- a) Over-the-air (OTA) updates
- b) On-board reprogramming
- c) Remote programming with an external tool
- d) Manual reset using OBD-II codes

8. In the event of programming issues, the NASTF provides resources primarily for:

- a) Non-compliant aftermarket modifications
- b) Access to reprogramming information for independent repair facilities
- c) Battery maintenance and power stabilization
- d) Updating vehicle software through dealership-only tools

9. Technician A says that off-board programming requires the control module to be removed from the vehicle. Technician B says off-board programming can be completed using a J2534 pass-through device while the module remains in the vehicle. Who is correct?

- a) Technician A only
- b) Technician B only
- c) Both Technicians A and B
- d) Neither Technician A nor B

10. What is a primary concern with aftermarket programming tools that modify a vehicle's emission controls?

- a) Higher diagnostic costs
- b) Reduced need for emission testing
- c) Non-compliance with EPA/CARB regulations
- d) Increased fuel efficiency at the expense of power

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Answer Key Quiz A

Correct Answers:

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