Automotive Electrical and Engine Performance 9th Edition
Chapter 28 – Module Reprogramming
Quiz A

1. What method was commonly used to update vehicle programming before the introduction of replaceable PROM?

a. Direct EEPROM flashing

b. Replacing the entire computer module

c. Using over-the-air updates

d. Installing a pass-through device

2. What does the J2534 standard primarily facilitate?

a. Universal data link connections

b. Reprogramming emission-related modules

c. Enhancing engine performance beyond compliance

d. Monitoring vehicle sensor data remotely

3. Which type of device is typically used to reprogram multiple vehicle brands?

a. Manufacturer-specific pass-through device

b. Single-wire CAN bus interface

c. Generic J2534 pass-through device

d. Onboard reprogramming module

4. During module reprogramming, why is a battery maintainer required?

a. To preserve the vehicle's keyless entry settings

b. To stabilize system voltage and prevent interruptions

c. To ensure the diagnostic trouble codes are erased

d. To avoid potential overcharging of the vehicle battery

5. What is a significant drawback of aftermarket programming tools?

a. Limited compatibility with emission-related modules

b. Removal of vehicles from emission compliance standards

c. Complexity of installation and setup

d. Unavailability for non-OEM repair facilities

6. Why was the EEPROM introduced for emission-related modules in 1996?

a. To allow vehicle owners to modify fuel efficiency

b. To prevent modifications that violate emission compliance

c. To simplify data transmission between sensors

d. To integrate with third-party diagnostic tools

7. What functionality does the cerium element provide in catalytic converters?

a. Stabilizing voltage fluctuations in the reprogramming process

b. Storing and releasing oxygen for optimal exhaust conversion

c. Preventing overheating during high-load conditions

d. Reducing NOx emissions through mechanical reactions

8. Which of the following best describes off-board programming?

a. Programming modules using the vehicle's data link connector

b. Flashing modules remotely via internet-based tools

c. Programming a module outside the vehicle using external power and connectivity

d. Using pass-through devices to communicate with modules on the vehicle

9. What is the SAE J2534-2 update primarily designed to address?

a. Issues related to single-wire CAN communication protocols

b. Enhancing emission compliance through firmware updates

c. Streamlining remote module programming capabilities

d. Standardizing API design for all vehicle brands

10. What is a potential risk of aftermarket programmers or “tuners”?

a. Increased engine wear and emission failures

b. Compatibility issues with onboard diagnostics

c. Damage to pass-through devices

d. Permanent loss of factory settings

Automotive Electrical and Engine Performance 9th Edition
Chapter 28 – Module Reprogramming
Quiz A

Correct Answers:

1. b

2. a

3. d

4. b

5. a

6. a

7. c

8. d

9. b

10. d