1. What are the four basic functions of a vehicle computer?

a. Input, processing, storage, and output

b. Reading, printing, timing, and output

c. Memory allocation, processing, resetting, and storage

d. Voltage conversion, memory, input, and calibration

2. What is the SAE J2534 standard primarily used for?

a. Supporting off-board diagnostics

b. Standardizing pass-through device communication

c. Regulating internet-based diagnostics

d. Creating uniformity in on-board diagnostic connectors

3. How does EEPROM improve over PROM in engine module programming?

a. It is faster and requires less memory.

b. It can be reprogrammed without module replacement.

c. It eliminates the need for a pass-through device.

d. It integrates with battery maintainers automatically.

4. What is the primary function of a battery maintainer during reprogramming?

a. Ensures stable voltage throughout the programming event

b. Protects the EEPROM from memory loss

c. Resets module calibration after programming

d. Keeps on-board sensors powered

5. Why might off-board programming be preferred in some cases?

a. It minimizes the risk of voltage fluctuations.

b. It allows module programming outside of the vehicle.

c. It eliminates dependency on pass-through devices.

d. It is faster and more reliable for all vehicle types.

6. What is one advantage of using NASTF resources for reprogramming?

a. Provides universal access to manufacturer-specific tools

b. Offers comprehensive training and guidance

c. Ensures compatibility with aftermarket tuners

d. Reduces the need for battery maintainers

7. What was a major drawback of PROM-based programming?

a. Requiring replacement of the entire vehicle module

b. Inability to update software without PROM replacement

c. Lack of compatibility with modern vehicle APIs

d. Excessive cost due to software licensing

8. What type of programming allows for updates without physical connection?

a. Over-the-air (OTA) updates

b. Off-board programming with pass-through devices

c. Remote programming via internet control

d. Manufacturer-direct software calibration

9. Why are aftermarket programmers often noncompliant with EPA regulations?

a. They bypass emission control measures.

b. They increase horsepower and torque beyond legal limits.

c. They fail to meet standard OBD-II specifications.

d. They require proprietary equipment to operate.

10. What is the role of a pass-through device in module programming?

a. Allows direct communication between the vehicle and computer

b. Serves as an intermediary for J2534-based operations

c. Replaces the need for on-board diagnostic tools

d. All of the above

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Quiz B

Correct Answers:

1. d

2. b

3. c

4. a

5. b

6. c

7. a

8. d

9. c

10. d