

Automotive Electrical and Engine Performance 9th Edition
Chapter 6 – Scan Tools and Scan Tool Diagnosis
Quiz B

1. What does a flashing Malfunction Indicator Lamp (MIL) signify?
 - a. The engine has stalled
 - b. A catalytic converter-damaging fault has occurred
 - c. The vehicle needs a scheduled service
 - d. A fault has been temporarily resolved

2. What is the function of pins #6 and #14 in a 16-pin data link connector (DLC)?
 - a. Chassis ground
 - b. SAE J1850 communication terminals
 - c. CAN C high-speed terminals
 - d. Battery and signal grounds

3. What type of scan tool is required to access bidirectional control features?
 - a. Code reader
 - b. Smartphone scan tool
 - c. Aftermarket scan tool
 - d. Factory scan tool

4. What is the primary purpose of freeze-frame data in OBD-II systems?
 - a. To clear permanent DTCs automatically
 - b. To capture data when a fault is detected
 - c. To display the vehicle's fuel trim values in real time
 - d. To simulate various engine operating conditions

5. What should a technician do first before clearing diagnostic trouble codes (DTCs)?
 - a. Record the codes and investigate their causes
 - b. Perform an all-module scan
 - c. Disconnect the battery for 10 minutes
 - d. Replace the vehicle's PCM

6. What makes permanent codes different from other DTCs?
 - a. They are stored in non-volatile memory and cannot be erased manually
 - b. They are related only to emissions faults
 - c. They reset after two consecutive drive cycles
 - d. They are automatically cleared after a battery disconnect

7. Which type of testing allows a technician to activate vehicle components?
 - a. Sensor-only diagnostics
 - b. Bidirectional control testing
 - c. Graphing mode testing
 - d. Passive fault monitoring

8. Why are pre- and post-scans necessary in a repair process?
 - a. To estimate repair costs and confirm all repairs are complete
 - b. To diagnose engine performance issues exclusively
 - c. To adjust readiness monitors for emissions testing
 - d. To reset the MIL after repair completion

9. What should the MAP sensor reading be with the key on and engine off (KOEO)?
 - a. Equal to BARO (barometric pressure)
 - b. Higher than BARO
 - c. Lower than BARO
 - d. Twice as much as BARO

10. What type of tool is commonly used for accessing manufacturer-specific diagnostic data?

- a. Basic code reader
- b. Smartphone scan tool with a free app
- c. OEM factory scan tool
- d. Standalone OBD-II reader

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Correct Answers:

1. b

2. c

3. b

4. c

5. a

6. a

7. d

8. d

9. a

10. c