Automotive Electrical and Engine Performance 9th Edition
Chapter 2 – Strategy-Based Diagnosis
Quiz A

1. What is the first step in a strategy-based diagnostic procedure?

a. Verify the problem (concern).

b. Perform a thorough visual inspection.

c. Retrieve diagnostic trouble codes (DTCs).

d. Narrow the problem to a specific system or cylinder.

2. What is the purpose of a smoke machine in engine diagnostics?

a. To measure fuel injector pulse widths.

b. To test ignition coil outputs.

c. To locate vacuum leaks by observing escaping smoke.

d. To check exhaust backpressure levels.

3. Which of the following is critical during a thorough visual inspection?

a. Checking for vacuum hose damage or disconnection.

b. Ensuring the customer complaint matches the repair history.

c. Verifying that all diagnostic tools are calibrated.

d. Documenting unrelated fault codes.

4. What does a pending code indicate during diagnostics?

a. A severe malfunction requiring immediate attention.

b. A fault detected but not repeated enough to trigger the MIL.

c. An issue stored during a previous diagnostic session.

d. A random error that does not affect vehicle performance.

5. Why is a customer's description of the problem important?

a. It eliminates the need for additional diagnostic tests.

b. It provides insights into possible technical service bulletins (TSBs).

c. It helps avoid unnecessary part replacements.

d. It narrows down the conditions when the issue occurs.

6. How can a diagnostic trouble code (DTC) be cleared?

a. Using a scan tool.

b. Disconnecting the fuel system.

c. Running a compression test.

d. Driving the vehicle until the issue resolves.

7. What should be checked when looking at scan tool data?

a. Fuel tank pressure levels during acceleration.

b. Engine coolant temperature matches intake air temperature after the engine cools.

c. Mismatched brake pad wear patterns.

d. Intermittent changes in dashboard indicator lights.

8. What is the purpose of technical service bulletins (TSBs)?

a. To provide information on unresolved manufacturer defects.

b. To supply repair and diagnostic updates for specific issues.

c. To store historical data on diagnostic sessions.

d. To reset factory diagnostic systems.

9. Which scan tool parameter indicates the state of an oxygen sensor?

a. Coolant temperature

b. Voltage readings between 200 mV and 800 mV

c. Engine oil pressure

d. Brake pedal position sensor

10. How is the freeze frame data useful in diagnosis?

a. It helps clear error codes automatically.

b. It records conditions present when the DTC was set.

c. It identifies parts needing immediate replacement.

d. It confirms whether the repair has fixed the problem.

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Correct Answers:

1. a

2. c

3. a

4. b

5. d

6. a

7. c

8. b

9. b

10. b