

PRACTICE EXAM 3: A8 SIMULATION

— ENGINE PERFORMANCE

1. The proper purpose of the powertrain control module (PCM) is to:

- A. Apply compressed air to the system
- B. Process sensor inputs and control engine actuators based on programmed strategy
- C. Replace the PCM as a precaution
- D. Filter contaminants from the system

2. The proper procedure for diagnosing a PCM fault is to:

- A. Apply compressed air to the PCM
- B. Replace the PCM as a precaution
- C. Visually inspect for visible damage only
- D. Verify proper power and ground, retrieve DTCs, monitor scan data, identify the cause

3. A vehicle's PCM has been brought in for replacement. The proper procedure for replacement is to:

- A. Apply compressed air to the PCM
- B. Replace the PCM as a precaution
- C. Replace with proper part, perform programming and configuration, clear DTCs, verify operation
- D. Replace the brake fluid as the only step

4. The proper procedure for PCM reprogramming is to:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Visually inspect for visible damage only
- D. Use proper scan tool, ensure stable battery voltage, follow procedure, verify success

5. A vehicle's PCM reprogramming has failed. The MOST likely cause is:

- A. Battery voltage drop, scan tool communication issue, or improper procedure
- B. Apply compressed air to the system
- C. Replace the PCM as a precaution
- D. Replace the brake fluid as the only step

6. The proper procedure for identifying when PCM reprogramming is required is to:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Replace the affected components as a precaution
- D. Reference manufacturer technical service bulletins (TSBs) and software-related DTCs

7. A vehicle's crankshaft position sensor (CKP) has been brought in for diagnosis. The proper purpose of a CKP is to:

- A. Apply compressed air to the sensor
- B. Provide crankshaft position and speed data to the PCM
- C. Replace the sensor as a precaution

D. Filter contaminants from the system

8. The proper procedure for testing a CKP sensor is to:

A. Apply compressed air to the sensor

B. Replace the sensor as a precaution

C. Monitor scan data, observe pattern with oscilloscope, compare to spec

D. Visually inspect for visible damage only

9. A vehicle has been brought in with a complaint of no-start condition. Scan data shows no CKP signal. The MOST likely cause is:

A. A failed CKP sensor or fault in the CKP wiring

B. Apply compressed air to the system

C. Replace the PCM as a precaution

D. Replace the brake fluid as the only step

10. The proper purpose of a camshaft position sensor (CMP) is to:

A. Apply compressed air to the sensor

B. Replace the sensor as a precaution

C. Replace the PCM as a precaution

D. Provide camshaft position data for fuel injector and ignition synchronization

11. The proper procedure for testing a CMP sensor is to:

A. Apply compressed air to the sensor

- B. Replace the sensor as a precaution
- C. Monitor scan data, observe pattern with oscilloscope, compare to spec
- D. Visually inspect for visible damage only

12. A vehicle has been brought in with a complaint of stalling. Scan data shows intermittent CMP signal. The MOST likely cause is:

- A. Apply compressed air to the system
- B. A failed CMP sensor, marginal connection, or fault in the wiring
- C. Replace the PCM as a precaution
- D. Replace the brake fluid as the only step

13. The proper purpose of an engine coolant temperature (ECT) sensor is to:

- A. Apply compressed air to the sensor
- B. Replace the sensor as a precaution
- C. Replace the PCM as a precaution
- D. Provide coolant temperature data to the PCM for fuel and ignition control

14. The proper procedure for testing an ECT sensor is to:

- A. Monitor scan data at varied temperatures, compare to spec, verify resistance
- B. Apply compressed air to the sensor
- C. Replace the sensor as a precaution
- D. Visually inspect for visible damage only

15. A vehicle's ECT sensor reports 32°F when actual coolant is at operating temperature. The MOST likely cause is:

- A. Apply compressed air to the sensor
- B. Replace the PCM as a precaution
- C. A failed ECT sensor or fault in the sensor wiring
- D. Replace the brake fluid as the only step

16. The proper purpose of an intake air temperature (IAT) sensor is to:

- A. Apply compressed air to the sensor
- B. Provide intake air temperature data for fuel and timing calculations
- C. Replace the sensor as a precaution
- D. Filter contaminants from the system

17. The proper procedure for testing an IAT sensor is to:

- A. Monitor scan data at varied temperatures, compare to spec, verify resistance
- B. Apply compressed air to the sensor
- C. Replace the sensor as a precaution
- D. Visually inspect for visible damage only

18. The proper purpose of a throttle position sensor (TPS) is to:

- A. Apply compressed air to the sensor
- B. Replace the sensor as a precaution
- C. Replace the PCM as a precaution

D. Provide throttle position data to the PCM for fuel and ignition control

19. The proper procedure for testing a TPS is to:

A. Apply compressed air to the sensor

B. Replace the sensor as a precaution

C. Monitor scan data through full throttle range, verify smooth signal, compare to spec

D. Visually inspect for visible damage only

20. A vehicle's TPS shows erratic signal during throttle movement. The MOST likely cause is:

A. Apply compressed air to the sensor

B. A worn TPS or fault in the sensor wiring

C. Replace the PCM as a precaution

D. Replace the brake fluid as the only step

21. The proper purpose of a vehicle speed sensor (VSS) is to:

A. Apply compressed air to the sensor

B. Replace the sensor as a precaution

C. Replace the PCM as a precaution

D. Provide vehicle speed data to the PCM and other modules

22. The proper purpose of an OBD-II continuous monitor is to:

A. Run continuously while the engine operates, detecting faults as they occur

B. Apply compressed air to the system

- C. Replace the PCM as a precaution
- D. Filter contaminants from the system

23. A vehicle's OBD-II continuous monitors include:

- A. Apply compressed air to the system
- B. Misfire, fuel system, and comprehensive component monitors
- C. Replace the PCM as a precaution
- D. Replace the brake fluid as the only step

24. The proper purpose of an OBD-II non-continuous monitor is to:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Replace the affected components as a precaution
- D. Run only when specific conditions are met, completing periodic diagnostic tests

25. A vehicle's OBD-II non-continuous monitors include:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Catalyst, evaporative system, oxygen sensor, EGR, secondary air, A/C, and heated catalyst monitors
- D. Replace the brake fluid as the only step

26. The proper procedure for verifying OBD-II monitor readiness is to:

- A. Use scan tool to view monitor status, drive vehicle through drive cycle as needed

- B. Apply compressed air to the system
- C. Replace the PCM as a precaution
- D. Visually inspect for visible damage only

27. The proper purpose of an OBD-II drive cycle is to:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Provide specific operating conditions for monitors to complete their diagnostic tests
- D. Filter contaminants from the system

28. The proper procedure for performing an OBD-II drive cycle is to:

- A. Apply compressed air to the system
- B. Follow the manufacturer-specified drive cycle procedure to allow monitors to complete
- C. Replace the PCM as a precaution
- D. Visually inspect for visible damage only

29. A vehicle has been brought in with monitor incomplete status. The MOST likely cause is:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Replace the affected components as a precaution
- D. Recent battery disconnect, recent DTC clearing, or insufficient drive cycle conditions

30. The proper purpose of OBD-II Mode 6 data is to:

- A. Provide test results from non-continuous monitors, showing component-level test data
- B. Apply compressed air to the system
- C. Replace the PCM as a precaution
- D. Filter contaminants from the system

31. The proper procedure for accessing OBD-II Mode 6 data is to:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Visually inspect for visible damage only
- D. Use a scan tool capable of accessing Mode 6, navigate to the Mode 6 menu, view test results

32. A vehicle's Mode 6 data shows catalyst test results approaching limit. The MOST likely indication is:

- A. Apply compressed air to the system
- B. Catalyst is operating but approaching the limit threshold for fault detection
- C. Replace the catalyst as a precaution
- D. Replace the brake fluid as the only step

33. The proper purpose of OBD-II Mode 9 data is to:

- A. Apply compressed air to the system
- B. Replace the PCM as a precaution
- C. Provide vehicle information data, including VIN and calibration ID
- D. Filter contaminants from the system

34. The proper purpose of a wide-band oxygen sensor is to:

- A. Provide accurate air-fuel ratio measurement across a wide range
- B. Apply compressed air to the sensor
- C. Replace the sensor as a precaution
- D. Filter contaminants from the system

35. The proper procedure for testing a wide-band oxygen sensor is to:

- A. Apply compressed air to the sensor
- B. Replace the sensor as a precaution
- C. Monitor scan data for air-fuel ratio at varied conditions, compare to spec
- D. Visually inspect for visible damage only

36. A vehicle's wide-band oxygen sensor shows fixed reading regardless of conditions. The MOST likely cause is:

- A. Apply compressed air to the sensor
- B. A failed wide-band sensor or fault in the sensor wiring
- C. Replace the PCM as a precaution
- D. Replace the brake fluid as the only step

37. The proper purpose of integrating MAF and MAP sensor data is to:

- A. Provide redundant air measurement for accurate fuel calculation
- B. Apply compressed air to the system
- C. Replace the PCM as a precaution

D. Filter contaminants from the system

38. The proper procedure for diagnosing MAF and MAP integration faults is to:

A. Apply compressed air to the system

B. Replace the affected sensors as a precaution

C. Monitor scan data from both sensors, compare to expected values, identify discrepancies

D. Replace the brake fluid as the only step

39. A vehicle has been brought in with DTC P0102 (MAF circuit low input). The MOST likely cause is:

A. Apply compressed air to the sensor

B. A failed MAF sensor, contaminated MAF, or fault in the wiring

C. Replace the PCM as a precaution

D. Replace the brake fluid as the only step

40. The proper procedure for diagnosing P0102 DTC is to:

A. Apply compressed air to the sensor

B. Replace the sensor as a precaution

C. Replace the PCM as a precaution

D. Verify the concern, monitor MAF data, inspect sensor and wiring, identify the cause

41. A vehicle has been brought in with DTC P0420 (catalyst efficiency below threshold, bank 1). The MOST appropriate diagnostic action is:

A. Verify the concern, monitor oxygen sensor activity, evaluate catalyst efficiency

- B. Apply compressed air to the catalyst
- C. Replace the catalyst as a precaution
- D. Replace the brake fluid as the only step

42. A vehicle has been brought in with DTC P0440 (EVAP system fault). The MOST likely cause is:

- A. Apply compressed air to the system
- B. Loose fuel cap, cracked vapor line, faulty purge valve, or faulty vent valve
- C. Replace the EVAP system as a precaution
- D. Replace the brake fluid as the only step

43. The proper procedure for diagnosing P0440 DTC is to:

- A. Apply compressed air to the system
- B. Replace the EVAP system as a precaution
- C. Verify the concern, perform smoke test, identify the leak source
- D. Replace the brake fluid as the only step

44. A vehicle has been brought in with DTC P0455 (EVAP gross leak). The MOST likely cause is:

- A. Apply compressed air to the system
- B. Loose fuel cap, large vapor line leak, or large component leak
- C. Replace the EVAP system as a precaution
- D. Replace the brake fluid as the only step

45. The proper purpose of a refrigerant identifier is to verify... [N/A — A8 has no refrigerant content; this question is replaced]. A vehicle has been brought in with DTC P0442 (EVAP small leak). The MOST appropriate diagnostic action is:

- A. Verify the concern, perform smoke test, identify the small leak source
- B. Apply compressed air to the system
- C. Replace the EVAP system as a precaution
- D. Replace the brake fluid as the only step

46. A vehicle has been brought in with DTC P0401 (EGR flow insufficient). The MOST likely cause is:

- A. Apply compressed air to the system
- B. Replace the EGR system as a precaution
- C. Replace the PCM as a precaution
- D. Restricted EGR passages, faulty EGR valve, faulty EGR control, or carbon buildup

47. The proper procedure for diagnosing P0401 DTC is to:

- A. Apply compressed air to the system
- B. Replace the EGR system as a precaution
- C. Verify the concern, inspect EGR passages and valve, identify the cause
- D. Replace the brake fluid as the only step

48. A vehicle has been brought in with DTC P0402 (EGR flow excessive). The MOST likely cause is:

- A. Apply compressed air to the system
- B. EGR valve stuck open, faulty EGR valve, or faulty EGR control
- C. Replace the EGR system as a precaution

D. Replace the brake fluid as the only step

49. The proper procedure for diagnosing P0402 DTC is to:

A. Apply compressed air to the system

B. Replace the EGR valve as a precaution

C. Replace the PCM as a precaution

D. Verify the concern, inspect EGR valve operation, identify the cause

50. A vehicle has been brought in with multiple DTCs across multiple systems. The MOST appropriate diagnostic action is:

A. Verify each concern, identify common causes, address findings systematically, verify resolution

B. Apply compressed air to the system

C. Replace the affected components as a precaution

D. Replace the brake fluid as the only step

PRACTICE EXAM 3: A8 SIMULATION

— ANSWER KEY, EXPLANATIONS, AND TASK REMEDIATION

1. B — Process sensor inputs and control engine actuators based on programmed strategy. The PCM is the engine's primary control module. It interprets sensor data and commands actuator responses for proper operation. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
2. D — Verify proper power and ground, retrieve DTCs, monitor scan data, identify the cause. PCM diagnosis requires verification of fundamentals before component replacement. Power, ground, and communication are essential. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
3. C — Replace with proper part, perform programming and configuration, clear DTCs, verify operation. PCM replacement requires programming and configuration. Modern PCMs are not plug-and-play. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
4. D — Use proper scan tool, ensure stable battery voltage, follow procedure, verify success. PCM reprogramming requires stable conditions throughout. Voltage drops can corrupt the programming process. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
5. A — Battery voltage drop, scan tool communication issue, or improper procedure. Programming failure has multiple potential causes. Stable conditions and proper procedure are critical. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
6. D — Reference manufacturer technical service bulletins (TSBs) and software-related DTCs. Reprogramming requirements are identified through manufacturer TSBs. Software-related DTCs may indicate need for reprogramming. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
7. B — Provide crankshaft position and speed data to the PCM. The CKP is the primary timing reference. The PCM uses this signal for ignition and injection timing. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*

8. C — Monitor scan data, observe pattern with oscilloscope, compare to spec. CKP testing requires comparison of signal pattern to specification. The waveform pattern reveals proper operation. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
9. A — A failed CKP sensor or fault in the CKP wiring. No CKP signal prevents the engine from starting. Without crankshaft position, the PCM cannot fire injectors or coils. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
10. D — Provide camshaft position data for fuel injector and ignition synchronization. The CMP synchronizes the PCM to the engine cycle. Sequential injection and proper coil firing depend on CMP data. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
11. C — Monitor scan data, observe pattern with oscilloscope, compare to spec. CMP testing parallels CKP testing methods. The signal pattern reveals proper operation. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
12. B — A failed CMP sensor, marginal connection, or fault in the wiring. Intermittent CMP signal indicates inconsistent operation. Each cause produces stalling under specific conditions. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
13. D — Provide coolant temperature data to the PCM for fuel and ignition control. The ECT sensor enables proper fuel mixture and timing across temperature ranges. Cold and hot operation require different strategies. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
14. A — Monitor scan data at varied temperatures, compare to spec, verify resistance. ECT testing requires verification across temperature ranges. The sensor's resistance changes predictably with temperature. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
15. C — A failed ECT sensor or fault in the sensor wiring. Incorrect ECT reading at known temperature indicates sensor or circuit fault. The sensor must report accurately for proper engine control. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
16. B — Provide intake air temperature data for fuel and timing calculations. The IAT sensor enables temperature-compensated fuel calculations. Air density varies with temperature, affecting proper fuel quantity. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
17. A — Monitor scan data at varied temperatures, compare to spec, verify resistance. IAT testing parallels ECT testing methods. The sensor's resistance changes predictably with temperature. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*

18. D — Provide throttle position data to the PCM for fuel and ignition control. The TPS reflects driver demand. The PCM uses this input for fuel and ignition adjustments. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
19. C — Monitor scan data through full throttle range, verify smooth signal, compare to spec. TPS testing requires verification through the entire throttle range. Erratic signal indicates worn or faulty sensor. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
20. B — A worn TPS or fault in the sensor wiring. Erratic TPS signal indicates uneven contact or wiring issue. Wear typically produces drop-outs during throttle movement. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
21. D — Provide vehicle speed data to the PCM and other modules. The VSS supports multiple vehicle systems. Speed data affects shift points, idle control, and other strategies. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
22. A — Run continuously while the engine operates, detecting faults as they occur. Continuous monitors test certain systems at all times. They provide ongoing fault detection during operation. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
23. B — Misfire, fuel system, and comprehensive component monitors. The three continuous OBD-II monitors test these areas at all times. They run whenever the engine operates. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
24. D — Run only when specific conditions are met, completing periodic diagnostic tests. Non-continuous monitors require specific conditions to run. The conditions vary by monitor type. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
25. C — Catalyst, evaporative system, oxygen sensor, EGR, secondary air, A/C, and heated catalyst monitors. These non-continuous monitors test specific systems under specific conditions. Each requires its own drive cycle to complete. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
26. A — Use scan tool to view monitor status, drive vehicle through drive cycle as needed. Monitor readiness verification requires scan tool viewing. Non-ready monitors require drive cycle completion. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
27. C — Provide specific operating conditions for monitors to complete their diagnostic tests. Drive cycles enable monitor completion. Each monitor has specific conditions required for testing. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
28. B — Follow the manufacturer-specified drive cycle procedure to allow monitors to complete. Drive cycle execution requires following the manufacturer's procedure. Each manufacturer

specifies different cycles. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*

29. D — Recent battery disconnect, recent DTC clearing, or insufficient drive cycle conditions. Monitor incomplete status has multiple potential causes. Each cause prevents monitors from completing testing. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
30. A — Provide test results from non-continuous monitors, showing component-level test data. Mode 6 provides detailed test data beyond simple pass/fail. The data shows test values and limits. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
31. D — Use a scan tool capable of accessing Mode 6, navigate to the Mode 6 menu, view test results. Mode 6 access requires capable scan tools. Each manufacturer organizes Mode 6 data differently. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
32. B — Catalyst is operating but approaching the limit threshold for fault detection. Mode 6 catalyst data shows efficiency relative to threshold. Approaching limit indicates aging catalyst. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
33. C — Provide vehicle information data, including VIN and calibration ID. Mode 9 contains vehicle identification information. The calibration ID identifies the current PCM software. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
34. A — Provide accurate air-fuel ratio measurement across a wide range. Wide-band sensors measure beyond stoichiometric. They support modern lean and rich operating modes. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
35. C — Monitor scan data for air-fuel ratio at varied conditions, compare to spec. Wide-band sensor testing requires verification across operating ranges. Each condition has expected values. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
36. B — A failed wide-band sensor or fault in the sensor wiring. Fixed sensor reading indicates non-functional sensor. The sensor must respond to actual exhaust conditions. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
37. A — Provide redundant air measurement for accurate fuel calculation. Both sensors contribute to accurate fuel control. The redundancy improves reliability and accuracy. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
38. C — Monitor scan data from both sensors, compare to expected values, identify discrepancies. MAF and MAP comparison reveals sensor issues. Discrepancies indicate one or both sensors are at fault. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*

39. B — A failed MAF sensor, contaminated MAF, or fault in the wiring. P0102 indicates low MAF signal. Multiple potential causes can produce this condition. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
40. D — Verify the concern, monitor MAF data, inspect sensor and wiring, identify the cause. P0102 diagnosis requires systematic approach. Each step provides different diagnostic information. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*
41. A — Verify the concern, monitor oxygen sensor activity, evaluate catalyst efficiency. P0420 diagnosis requires oxygen sensor analysis. The sensor activity reveals catalyst operating condition. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
42. B — Loose fuel cap, cracked vapor line, faulty purge valve, or faulty vent valve. P0440 indicates EVAP system fault. Multiple potential causes can produce this condition. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
43. C — Verify the concern, perform smoke test, identify the leak source. P0440 diagnosis requires smoke testing. The smoke reveals leak locations. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
44. B — Loose fuel cap, large vapor line leak, or large component leak. P0455 indicates gross EVAP leak. The leak is large enough to detect quickly. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
45. A — Verify the concern, perform smoke test, identify the small leak source. P0442 indicates small EVAP leak. Smoke testing identifies the source. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
46. D — Restricted EGR passages, faulty EGR valve, faulty EGR control, or carbon buildup. P0401 indicates insufficient EGR flow. Multiple potential causes can produce this condition. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
47. C — Verify the concern, inspect EGR passages and valve, identify the cause. P0401 diagnosis requires component inspection. EGR passages can become carbon-blocked. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
48. B — EGR valve stuck open, faulty EGR valve, or faulty EGR control. P0402 indicates excessive EGR flow. The valve is providing more EGR than commanded. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
49. D — Verify the concern, inspect EGR valve operation, identify the cause. P0402 diagnosis requires valve operation verification. The valve must close properly when commanded. *ASE Task Reference: A8 Domain E — Emissions Control Systems. Review subsection 8.5.*
50. A — Verify each concern, identify common causes, address findings systematically, verify resolution. Multiple DTCs require systematic approach. Common causes often produce multiple

symptoms. *ASE Task Reference: A8 Domain B — Computerized Engine Controls. Review subsection 8.2.*