

Automotive Electrical and Engine Performance 9th Edition
Chapter 41 – EVAP and EGR Systems
Multiple Choice Questions Quiz B

1. What is the primary function of the evaporative emission control (EVAP) system?
 - a. To increase fuel efficiency
 - b. To trap and hold gasoline vapors to prevent atmospheric release
 - c. To reduce exhaust gas temperatures
 - d. To optimize engine timing during acceleration

2. What component in the EVAP system is typically located under the vehicle and exposed to environmental conditions?
 - a. Purge valve
 - b. Charcoal canister
 - c. Vent valve
 - d. Rollover valve

3. What is the typical pressure buildup measurement unit used in the EVAP system?
 - a. Inches of mercury (in. Hg)
 - b. Pounds per square inch (PSI)
 - c. Millimeters of water (mm H₂O)
 - d. Inches of water (in. H₂O)

4. What is the main purpose of a leak detection pump (LDP) in the EVAP system?
 - a. To maintain vacuum pressure during idle
 - b. To pressurize the fuel tank and detect leaks
 - c. To control the flow of vapors to the intake manifold
 - d. To prevent excessive carbon buildup in the canister

5. Which system feature in onboard refueling vapor recovery (ORVR) prevents vapors from escaping during refueling?
- a. Charcoal granules in the canister
 - b. Vent valve closing during pressurization
 - c. A temperature-controlled vapor release mechanism
 - d. A restricted fuel tank filler tube
6. What happens if the EVAP purge solenoid is stuck in the open position?
- a. Fumes flow directly into the intake manifold, causing a rich air–fuel mixture
 - b. The system fails to pressurize, leading to error codes
 - c. The vent valve does not activate during testing
 - d. Vacuum pressure drops excessively, triggering a DTC
7. What is the main function of the exhaust gas recirculation (EGR) system?
- a. To increase fuel mileage by optimizing air–fuel ratios
 - b. To reduce NOx emissions by lowering combustion temperatures
 - c. To enhance the operation of the catalytic converter
 - d. To eliminate carbon deposits in the intake manifold
8. What indicates a properly functioning EGR valve during a vacuum test?
- a. Vacuum levels drop between 6 and 8 in. Hg when activated
 - b. The vacuum diaphragm fails to hold any pressure
 - c. The exhaust gas flow increases drastically
 - d. No change occurs in manifold pressure

9. What does a delta pressure feedback EGR (DPFE) sensor monitor?

- a. The oxygen level in exhaust gases
- b. The pressure differential across a metered orifice in the EGR system
- c. The position of the EGR valve stem
- d. The flow rate of exhaust gases entering the intake manifold

10. What diagnostic code indicates a large leak in the EVAP system?

- a. P0440
- b. P0455
- c. P0446
- d. P0441

Automotive Electrical and Engine Performance 9th Edition
Chapter 41 – EVAP and EGR Systems
Answer Key Quiz B

Correct Answers:

1. b
2. c
3. d
4. b
5. d
6. a
7. b
8. a
9. b
10. b