

Name: _____

Date: _____

1. What is the primary purpose of the homogeneous mode in a gasoline direct-injection (GDI) system?
 - A. To create a lean air-fuel mixture
 - B. To create an even air-fuel mixture in the cylinder
 - C. To reduce the possibility of spark knock
 - D. To quickly warm the catalytic converter

2. In a GDI system, what is the role of the high-pressure fuel pump?
 - A. To control the vehicle's navigation system
 - B. To generate the desired spray pattern
 - C. To produce high fuel pressure for direct injection
 - D. To regulate the air conditioning system

3. What is the significance of the stratified mode in a GDI system?
 - A. To provide a richer air-fuel mixture near the spark plug
 - B. To create a lean combustion, reducing fuel consumption
 - C. To control the vehicle's speed
 - D. To adjust the transmission fluid temperature

4. How does the homogeneous stratified mode operate in a GDI system?
 - A. By two injections of fuel, one during the intake stroke and another during the compression stroke
 - B. By managing the vehicle's entertainment system
 - C. By controlling the vehicle's navigation system
 - D. By adjusting the air conditioning system

5. What is the purpose of the homogeneous knock protection mode in a GDI system?
 - A. To control the audio system volume
 - B. To indicate the gear position
 - C. To measure the speed of the vehicle
 - D. To reduce the possibility of spark knock under heavy loads at low engine speeds

6. Why is it important to replace the Teflon seal whenever reinstalling a GDI injector?
 - A. To ensure a leak-free connection in the combustion chamber
 - B. To control the vehicle's lighting system
 - C. To manage the air conditioning system
 - D. To maintain working pressures for clutch pistons

7. What is the function of the PCM in controlling the high-pressure fuel pump in a GDI system?
 - A. To regulate the transmission fluid temperature
 - B. To control the power feed and ground for the pressure control valve
 - C. To adjust the transmission system
 - D. To manage the vehicle's navigation system

8. What are the advantages of using gasoline direct injection compared to port fuel injection?

- A. To control the vehicle's speedometer
- B. To regulate the engine's RPM
- C. To measure the vehicle's acceleration
- D. Improved fuel economy and higher engine efficiency

9. What is a key characteristic of GDI fuel injectors?

- A. They manage the vehicle's entertainment system
- B. They control the vehicle's navigation system
- D. They are electrically magnetic injectors mounted in the cylinder head
- C. They adjust the air conditioning system

10. Why should high-pressure lines in a GDI system be replaced with new parts when removed?

- A. The ball-ends deform when tightened and will not seal if reused
- B. To control the audio system volume
- C. To indicate the gear position
- D. To measure the speed of the vehicle

Automotive Technology 7th Edition

Chapter 76

Multiple Choice Quiz A

Answer Key

1. B

2. C

3. B

4. A

5. D

6. A

7. B

8. D

9. A

10. A