

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. What is the purpose of the second injection in a GDI system's stratified catalyst heating mode?
  - A. To cool the exhaust
  - B. To heat the exhaust
  - C. To clean the NOx catalyst
  - D. To reduce fuel consumption
  
2. What is the function of the Teflon seal in GDI injectors?
  - A. To ensure a leak-free connection in the combustion chamber
  - B. To regulate fuel pressure
  - C. To filter impurities from the fuel
  - D. To cool the injector tip
  
3. During which mode does a GDI system inject fuel during both the intake and compression strokes?
  - A. Homogeneous stratified mode
  - B. Stratified catalyst heating mode
  - C. Homogeneous knock protection mode
  - D. Homogeneous lean mode
  
4. What is the main advantage of the homogeneous knock protection mode in a GDI system?
  - A. It allows for higher fuel efficiency
  - B. It prevents spark knock under heavy loads at low engine speeds
  - C. It reduces the need for fuel during acceleration
  - D. It improves cold starting and throttle response
  
5. In a GDI system, what is the typical cause of a clicking sound that may concern customers?
  - A. Noisy valves
  - B. Loose components under the hood
  - C. Faulty fuel lines
  - D. High-pressure injector operation
  
6. What is the recommended service action if high-pressure lines in a GDI system are removed?
  - A. Reuse after inspection
  - B. Repair if damaged
  - C. Tighten to a higher torque
  - D. Replace with new parts
  
7. How does a GDI system contribute to rapid catalytic converter heating during cold-start warm-up?
  - A. By using a lean air-fuel mixture
  - B. By injecting fuel into the exhaust port
  - C. By retarding the spark to increase exhaust temperature
  - D. By increasing the engine's idle speed

8. What is the effect of carbon accumulation on GDI systems?

- A. It increases fuel efficiency
- B. It can cause power loss and require carbon cleaning
- C. It enhances the air-fuel mixture
- D. It reduces the need for maintenance

9. What is the primary benefit of combining direct-injection injectors with port fuel injectors in some engines?

- A. To increase the noise level for better diagnostics
- B. To reduce the complexity of the fuel system
- C. To supply the fuel needed by the engine more effectively
- D. To allow the use of higher-octane gasoline

10. What is the main reason for the improved fuel economy in GDI systems compared to port fuel injection systems?

- A. Higher air pressure in the intake manifold
- B. Reduced pumping losses and heat loss
- C. Increased fuel pressure in the combustion chamber
- D. The use of more advanced fuel filters

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Multiple Choice Quiz B

Answer Key

1. B

2. A

3. A

4. B

5. D

6. D

7. C

8. B

9. C

10. B