

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

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

1. What is the primary function of the Secondary Air-Injection (SAI) pump when directed to the catalytic converter?

- A. To reduce engine temperature
- B. To provide extra oxygen for efficient conversion of exhaust gases
- C. To filter the exhaust gases
- D. To cool down the catalytic converter

2. At what temperature does the PCM turn on the SAI pump during start-up?

- A. Above 32°F (0°C)
- B. Below 32°F (0°C)
- C. At exactly 32°F (0°C)
- D. Temperature is not a factor

3. What is the purpose of the check valve in an air-injection system?

- A. To regulate the air pressure
- B. To protect the air pump from reverse exhaust flow
- C. To filter the air
- D. To control the temperature of the air

4. What happens to the HC and CO levels when the SAI system is shut off, if it is working correctly?

- A. They remain constant
- B. They decrease
- C. They increase
- D. They alternate between increasing and decreasing

5. What is the effect of a failed check valve on exhaust emissions?

- A. Decrease in NO<sub>x</sub>
- B. Increase in O<sub>2</sub>
- C. Excessive emissions, especially CO
- D. Reduction in HC

6. What is the typical duration of operation for an electric SAI pump?

- A. Until the engine reaches normal operating temperature
- B. Continuously during engine operation
- C. Only during engine start-up
- D. For a maximum of four minutes or until the system enters closed-loop operation

7. What is the role of the PCV valve's electric heater in some vehicles?

- A. To prevent ice from forming inside the valve
- B. To improve fuel efficiency
- C. To increase the airflow
- D. To reduce engine noise

8. What is indicated by a PCV valve that does not rattle when shaken?

- A. It is functioning correctly
- B. It may be defective or clogged
- C. It is a new design that does not rattle
- D. It is in the closed position

9. What should the PCV system create in the crankcase at 2,500 RPM?

- A. A slight pressure
- B. A slight vacuum
- C. No change in pressure
- D. A high level of pressure

10. Which exhaust emissions are controlled by the PCV system?

- A. HC and NO<sub>x</sub>
- B. CO and O<sub>2</sub>
- C. HC and CO
- D. NO<sub>x</sub> and O<sub>2</sub>

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Chapter 81

Multiple Choice Quiz A

Answer Key

1. B

2. A

3. B

4. C

5. C

6. D

7. A

8. B

9. B

10. C