

Name: _____

Date: _____

1. When testing an oxygen sensor using a digital multimeter, what is the significance of observing voltages higher than 800 mV and lower than 200 mV?

- A. Indicates a properly functioning sensor
- B. Suggests possible sensor contamination
- C. Implies a constant rich or lean air–fuel mixture
- D. Both B and C

2. What does a voltage reading of 4.5 volts or more on the oxygen sensor signal wire indicate to the PCM?

- A. The sensor is functioning correctly
- B. The sensor is open
- C. The sensor is shorted-to-ground
- D. The sensor is operating at high efficiency

3. During the Key On, Engine Off Oxygen Sensor Test, a good oxygen sensor should indicate a voltage of less than 100 mV after how many minutes?

- A. One minute
- B. Two minutes
- C. Three minutes
- D. Four minutes

4. What is the purpose of the bias voltage applied to the oxygen sensor during certain tests?

- A. To heat the sensor
- B. To check the sensor's electrical conductivity
- C. To detect if the sensor signal circuit is open or grounded
- D. To measure the sensor's response time

5. How does an oxygen sensor detect oxygen levels in the exhaust?

- A. By measuring the exhaust temperature
- B. By measuring the exhaust pressure
- C. By measuring the voltage change due to oxygen content
- D. By calculating the exhaust flow rate

6. What is the difference between open-loop and closed-loop engine operation?

- A. The use of oxygen sensor input
- B. The type of fuel used
- C. The engine's operating temperature
- D. The air intake method

7. What can cause an oxygen sensor to provide incorrect information to the PCM?

- A. A faulty spark plug
- B. An exhaust manifold leak
- C. Incorrect tire pressure
- D. A weak battery

8. What is the purpose of a wide-band oxygen sensor?

- A. To detect only rich air–fuel mixtures
- B. To provide accurate air–fuel ratio information over a broad range
- C. To control the vehicle's speed
- D. To monitor the engine's oil level

9. What is the significance of a dual cell wide-band oxygen sensor's ability to detect exhaust air–fuel ratio from as rich as 10:1 to as lean as 23:1?

- A. It indicates the sensor's limited range
- B. It is only relevant for diesel engines
- C. It suggests the sensor is malfunctioning
- D. It allows for more precise fuel control

10. When observing oxygen sensor activity on a scan tool, what indicates that the sensor is not working correctly?

- A. Most snapshot values at both ends (0 to 300 mV and 600 to 1,000 mV)
- B. A constant voltage signal
- C. Most readings in the middle voltage range
- D. Rapid switching from rich to lean and lean to rich

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Chapter 73

Multiple Choice Quiz B

Answer Key

1. D

2. B

3. C

4. C

5. C

6. A

7. B

8. B

9. D

10. C