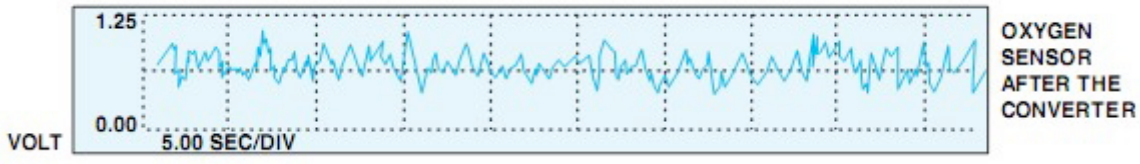
Automotive Engine Performance, 5th Edition
Quiz 24A

Name_____

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

1) A low O2S voltage could be due to _____. 1) _____
A) A rich exhaust
B) A lean exhaust
C) A defective spark plug wire
D) Both B and C

2) With the vehicle in closed loop, the following post converter HO2S scope pattern activity is seen. What does this indicate? 2) _____




A) A good converter
B) A bad converter
C) A lazy converter
D) None of these

3) With the vehicle in closed loop, the following post converter HO2S scope pattern activity is seen. What does this indicate? 3) _____

A) A good converter
B) A bad converter
C) A missing converter
D) A lazy converter

4) A P0131 DTC is being discussed. Technician A says that an exhaust leak upstream of HO2S (bank 1) oxygen sensor could be the cause. Technician B says an extremely rich air–fuel mixture could be the cause. Which technician is correct? 4) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

5) It is possible to test a heated oxygen sensor without running the engine. 5) _____
A) True
B) False

6) An oxygen sensor is being tested using a DSO (digital storage oscilloscope). A good oxygen sensor should display how many switches per second? 6) _____

A) 1–5
B) 5–10
C) 10–15
D) 15–20

7) Technician A says that oxygen sensors can be tested using a test light or jumper wire. Technician B says conditions can occur that cause the oxygen sensor to be fooled and give a false lean or false rich signal to the PCM. Which technician is correct? 7) _____

A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician

8) Oxygen sensor cross counts can be determined using a (an) _____. 8) _____

A) DMM (digital multimeter)
B) Dwell meter
C) Logic probe
D) Scan tool

9) When the concentration of oxygen on the exhaust side of the thimble is low (rich exhaust), a voltage of _____ is generated between the electrodes. 9) _____

A) 0.25–0.50
B) 0.60–1.0
C) 1.0–2.0
D) 10–20

10) What does the post, or downstream, oxygen sensor (HO2S) measure? 10) _____

A) Amount of $H_2O$ behind the catalytic converter
B) Amount of oxygen behind the catalytic converter
C) Amount of $H_2O$ in front of the catalytic converter
D) Amount of oxygen in front of the catalytic converter

Answer Key
Testname: ENGINEPERF5_24A

1) D
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2) B
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3) A
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4) A
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5) A
Page Ref: 380
6) A
Page Ref: 378
7) B
Page Ref: 376, 386
8) D
Page Ref: 377
9) B
Page Ref: 371
10) B
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