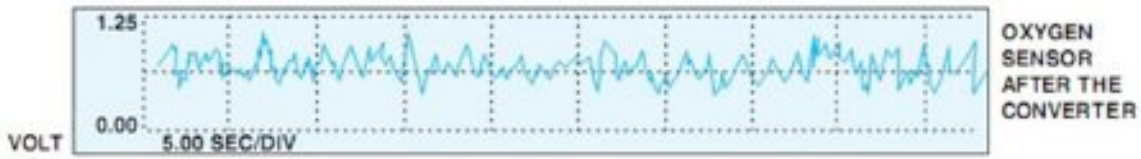


Name \_\_\_\_\_

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

- 1) 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 that an extremely rich air-fuel mixture could be the cause. Who is right? 1) \_\_\_\_\_  
A) Technician A only  
B) Technician B only  
C) Both technicians  
D) Neither technician
- 2) On a poorly running engine, the wide band oxygen sensor can be quickly checked by \_\_\_\_\_. 2) \_\_\_\_\_  
A) jumping the connector with a flashlight battery  
B) jumping the connector with a jumper wire  
C) disconnecting the sensor connector  
D) disconnecting the vehicle battery
- 3) When the air/ fuel ratio is expressed as lambda, a lambda number of less than 1 indicates a(n) \_\_\_\_\_ exhaust. 3) \_\_\_\_\_  
A) rich  
B) lean  
C) excessively cold  
D) excessively hot
- 4) A P0133 DTC is being discussed. Technician A says that a defective heater circuit could be the cause. Technician B says that a contaminated sensor could be the cause. Which technician is correct? 4) \_\_\_\_\_  
A) Technician A only  
B) Technician B only  
C) Both technicians  
D) Neither technician
- 5) Where is sensor 1, bank 1 located on a V-type engine? 5) \_\_\_\_\_  
A) On the same bank where number 1 cylinder is located  
B) Before the catalytic converter  
C) On the bank opposite cylinder number 1  
D) Both A and B

- 6) With the vehicle in closed loop, the following post converter HO2S scope pattern activity is seen. 6) \_\_\_\_\_  
What does this indicate?



- A) A good converter  
B) A bad converter  
C) A lazy converter  
D) None of these
- 7) When testing an oxygen sensor using a digital storage oscilloscope (DSO), how quickly should the voltage change when either propane is added to the intake stream or when a vacuum leak is created? 7) \_\_\_\_\_  
A) 1-3 seconds  
B) Less than 100 ms  
C) 100-200 ms  
D) 450-550 ms
- 8) A high O2S voltage could be due to a \_\_\_\_\_. 8) \_\_\_\_\_  
A) rich exhaust  
B) lean exhaust  
C) defective spark plug wire  
D) both A and C
- 9) An oxygen sensor is being tested using a digital storage oscilloscope (DSO). A good oxygen sensor should display how many switches per second? 9) \_\_\_\_\_  
A) 1-5  
B) 5-10  
C) 10-15  
D) 15-20
- 10) In some hybrid electric vehicles, the wide band oxygen sensor can cause the PCM to enter closed loop \_\_\_\_\_. 10) \_\_\_\_\_  
A) as soon as the engine (ICE) starts  
B) within 10 seconds of engine (ICE) start-up  
C) by the time the vehicle reaches 60 mph  
D) within 2 minutes

## Answer Key

Testname: AT6\_78A

- 1) A  
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- 2) C  
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- 3) A  
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- 4) C  
Page Ref: 917
- 5) D  
Page Ref: 906
- 6) B  
Page Ref: 912
- 7) B  
Page Ref: 910
- 8) A  
Page Ref: 904
- 9) A  
Page Ref: 910
- 10) A  
Page Ref: 913