

Name _____

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

- 1) Technician A says that pressure below atmospheric pressure is called vacuum and is measured in inches of mercury (Hg). Technician B says that a manifold absolute pressure (MAP) sensor uses a low vacuum in the sensor to determine the pressure. Who is right? 1) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
- 2) Which statement is FALSE? 2) _____
- A) Absolute pressure is equal to barometric pressure plus intake manifold vacuum.
 - B) A decrease in manifold vacuum means an increase in manifold pressure.
 - C) The MAP sensor compares manifold vacuum to a perfect vacuum.
 - D) Barometric pressure minus the MAP sensor reading equals intake manifold vacuum.
- 3) As the load on an engine increases, manifold vacuum decreases and the manifold absolute pressure _____. 3) _____
- A) increases
 - B) decreases
 - C) changes with barometric pressure only (altitude or weather)
 - D) remains constant (absolute)
- 4) When testing a MAP sensor, the technician should first check the _____ voltage. 4) _____
- A) signal
 - B) reference
 - C) alternator
 - D) back
- 5) Technician A says that a heavy engine load results in high intake manifold vacuum and a high MAP sensor signal voltage. Technician B says that a manifold absolute pressure (MAP) sensor uses a perfect vacuum (zero absolute pressure) in the sensor to determine the pressure. Who is right? 5) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
- 6) A P0106 DTC is being discussed. Technician A says a damaged or missing MAP sensor O-ring could be the cause. Technician B says a defective MAP sensor could be the cause. Who is right? 6) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

- 7) As the altitude of the vehicle increases, BARO voltage _____. 7) _____
- A) increases
 - B) does not change
 - C) decreases
 - D) either B or C, depending on the vehicle
- 8) The output of a MAP sensor is reading 1.0 volt. What is the approximate engine vacuum in inches of mercury (Hg)? 8) _____
- A) 0
 - B) 5
 - C) 10-15
 - D) 17-21
- 9) Two technicians are discussing MAP sensors. Technician A says that the MAP sensor should be replaced if anything comes out of the sensor when the vacuum hose is removed from the sensor. Technician B says that the injector pulse width should increase when vacuum to the MAP sensor is increased. Who is right? 9) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician
- 10) Two technicians are discussing testing MAP sensors. Technician A says that the MAP sensor voltage on a General Motors vehicle at idle should be about 1.0 volt. Technician B says that the MAP sensor voltage on a Chrysler vehicle at idle should be about 1.0 volt. Which technician is correct? 10) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

Answer Key

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1) A

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2) A

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3) A

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4) B

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5) B

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6) C

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7) C

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8) D

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9) A

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10) C

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