

Name \_\_\_\_\_

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

- 1) When measuring the output signal of a MAP sensor on a General Motors vehicle, the digital multimeter should be set to read \_\_\_\_\_. 1) \_\_\_\_\_
  - A) DC volts
  - B) AC volts
  - C) frequency in Hz
  - D) DC amperes
  
- 2) 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? 2) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
  
- 3) Technician A says that MAP sensors use a 5-volt reference voltage from the PCM. Technician B says that the MAP sensor voltage will be higher at idle at high altitudes compared to when the engine is operating at near sea level. Who is right? 3) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
  
- 4) A scan tool can be used to test a MAP sensor by monitoring the injector pulse width (in milliseconds) while \_\_\_\_\_ is being applied to the MAP sensor. 4) \_\_\_\_\_
  - A) voltage
  - B) vacuum
  - C) air pressure
  - D) ground
  
- 5) When the engine is at idle speed, manifold vacuum is \_\_\_\_\_. 5) \_\_\_\_\_
  - A) low (1 to 4 in. Hg)
  - B) fluctuating from 8 to 10 in. Hg
  - C) high (17 to 21 in. Hg)
  - D) zero
  
- 6) A MAP sensor is being discussed. Technician A says that many MAP sensors act as a barometric pressure sensor when the ignition switch is turned off. Technician B says that on many MAP sensors the signal voltage should increase when the vacuum at the sensor decreases. Who is right? 6) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician

- 7) Technician A says that a MAP sensor can be tested by visual inspection, using a digital meter, or a scan tool. Technician B says a light engine load results in low intake manifold vacuum and a high MAP sensor signal voltage. Who is right? 7) \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
- 8) A P0107 DTC is being discussed. Technician A says that a defective MAP sensor could be the cause. Technician B says that a MAP sensor signal wire shorted-to-ground could be the cause. Who is right? 8) \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
- 9) Which statement is FALSE? 9) \_\_\_\_\_
- 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.
- 10) Which of these is NOT a purpose or function of the MAP sensor? 10) \_\_\_\_\_
- A) Measures the load on the engine
  - B) Measures engine speed
  - C) Calculates fuel delivery based on altitude
  - D) Helps diagnose the EGR system