

Name \_\_\_\_\_

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

- 1) A P0401 DTC (exhaust gas recirculation flow insufficient) is being discussed. Technician A says that a defective EGR valve could be the cause. Technician B says that clogged EGR passages could be the cause. Which technician is correct? 1) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
  
- 2) At about what temperature does oxygen combine with the nitrogen in the air to form NO<sub>x</sub>? 2) \_\_\_\_\_
  - A) 500 degrees F
  - B) 750 degrees F
  - C) 1500 degrees F
  - D) 2500 degrees F
  
- 3) Blocking off the EGR valve passages will have no effect on the OBD-II system. 3) \_\_\_\_\_
  - A) True
  - B) False
  
- 4) Which type of EGR valve requires a positive exhaust system pressure to operate? 4) \_\_\_\_\_
  - A) Positive backpressure
  - B) Negative backpressure
  - C) Linear
  - D) Digital
  
- 5) Which exhaust emission is formed by high combustion chamber temperatures? 5) \_\_\_\_\_
  - A) NO<sub>x</sub>
  - B) HC
  - C) CO
  - D) CO<sub>2</sub>
  
- 6) Two technicians are discussing clogged EGR passages. Technician A says that clogged EGR passages can cause excessive NO<sub>x</sub> exhaust emission. Technician B says that clogged EGR passages can cause the engine to ping (spark knock or detonation). Which technician is correct? 6) \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician
  
- 7) A vehicle comes into the shop and the technician retrieves the diagnostic code P0401 "EGR flow insufficient." Which of these could be the cause? 7) \_\_\_\_\_
  - A) Clogged EGR ports or passages
  - B) EGR valve stuck open
  - C) Electrical wiring shorted
  - D) All of these are correct.

- 8) Exhaust gas recirculation (EGR) is generally not needed under any of the following conditions EXCEPT \_\_\_\_\_. 8) \_\_\_\_\_
- A) idle speed
  - B) cold engine
  - C) cruise speed
  - D) wide open throttle (WOT)
- 9) What causes the nitrogen and oxygen in the air to combine and form NO<sub>x</sub>? 9) \_\_\_\_\_
- A) Sunlight
  - B) Any spark will cause this to occur
  - C) Heat above 2,500°F (1,370°C)
  - D) Chemical reaction in the catalytic converter
- 10) A typical EGR pintle-position sensor is what type of sensor? 10) \_\_\_\_\_
- A) Potentiometer
  - B) Rheostat
  - C) Wheatstone bridge
  - D) Piezoelectric