

Name _____

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

- 1) Which of these is true regarding port fuel injection systems? 1) _____
 - A) Fuel distribution to all cylinders is equal.
 - B) Fuel is injected almost directly into the combustion chamber.
 - C) The intake manifold may be shaped and sized to best fit the engine performance requirements.
 - D) All of these are correct.

- 2) Which type of port fuel injection groups the injectors into two groups, with each group firing once per crankshaft revolution? 2) _____
 - A) Grouped double fired
 - B) Simultaneous double fired
 - C) Sequential fired
 - D) Throttle body injection

- 3) Technician A says that all injectors in a sequential fuel injection system often use the same power wire. Technician B says that each injector in a sequential fuel injection system should have a different ground wire. Which technician is correct? 3) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

- 4) Which of these describes a condition that results in more fuel being delivered? 4) _____
 - A) Long pulse width
 - B) Short pulse width
 - C) Hot intake air
 - D) Warm engine

- 5) Which sensor is used to calculate the amount of fuel required using the speed density method? 5) _____
 - A) MAP sensor
 - B) TP sensor
 - C) ECT and IAT sensors
 - D) All of these are used

- 6) Which term describes the PCM using oxygen sensor feedback to control fuel delivery? 6) _____
 - A) Closed loop mode
 - B) Starting mode
 - C) Open loop mode
 - D) Clear flood mode

- 7) All these methods can calculate airflow EXCEPT _____. 7) _____
A) Load calculation
B) Mass airflow
C) Speed density
D) All of these are methods of calculating the air-fuel mixture.
- 8) Technician A says that vacuum-operated fuel pressure regulators allow an equal pressure drop across the fuel injectors all the time. Technician B says that intake manifold pressure is high at idle. Which technician is correct? 8) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician
- 9) Which sensor has the greatest influence on injector pulse width besides the MAF sensor? 9) _____
A) IAT
B) BARO
C) ECT
D) TP
- 10) Why is a vacuum line attached to a fuel-pressure regulator on many port-fuel-injected engines? 10) _____
A) To draw fuel back into the intake manifold through the vacuum hose
B) To create an equal pressure drop across the injectors
C) To raise the fuel pressure at idle
D) To lower the fuel pressure under heavy engine load conditions to help improve fuel economy

Answer Key

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1) D

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2) A

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3) C

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4) A

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5) D

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6) A

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7) A

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8) A

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9) D

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10) B

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