

Name _____

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

- 1) Two technicians are discussing wide-band oxygen sensors on a newer diesel engine. Technician A says they are used to adjust the air-fuel ratio. Technician B says they are used to verify the operation of the EGR system. Which technician is correct? 1) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

- 2) The operation of a particulate filter is being discussed. Technician A says that it is designed to reduce NOx emissions. Technician B says that the filter is designed to trap particulate matter (PM). Which technician is correct? 2) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

- 3) Diesel exhaust systems are being discussed. Technician A says that the exhaust downpipe can be changed to a header system for more power. Technician B says that the exhaust downpipe is part of the emission certification and should not be changed. Which technician is correct? 3) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

- 4) Excessive HC in the exhaust could be due to _____ in the combustion chamber. 4) _____
 - A) Too much fuel
 - B) Oil burning
 - C) Either A or B
 - D) Neither A nor B

- 5) An exhaust backpressure regulator (EBPR) is being discussed. Technician A says that the regulator valve helps control idle speed during extended idle periods. Technician B says that the EBPR causes restrictions in the exhaust and can safely be removed in warm climates. Which technician is correct? 5) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B

- 6) Diesel exhaust fluid is being discussed. Technician A says that it includes distilled water. Technician B says that it contains 32.5% urea. Which technician is correct? 6) _____
- A) Technician A only
 - B) Technician B only
 - C) Both technicians A and B
 - D) Neither technician A nor B
- 7) The implementation of Tier II diesel emissions requirements in 2007 required the reduction of which two tailpipe emissions? 7) _____
- A) CO and HC
 - B) CO and NO_x
 - C) PM and NO_x
 - D) PM and HC
- 8) The NO_x sensor downstream of the selective catalyst reduction (SCR) systems fails to record a minimum change in the exhaust stream. What could be the cause? 8) _____
- A) The selective catalyst reduction (SCR) has failed.
 - B) The diesel exhaust fluid is of poor quality.
 - C) Both A and B
 - D) Neither A nor B
- 9) A wide-band oxygen sensor operation differs from a conventional oxygen sensor because it _____. 9) _____
- A) Is able to monitor a broader air-fuel ratio
 - B) Operates at a hotter temperature
 - C) Becomes operational faster on a cold start
 - D) All of the above
- 10) A _____ sensor is used to detect restrictions in the particulate filter. 10) _____
- A) Differential pressure
 - B) Temperature
 - C) Knock
 - D) NO_x

Answer Key

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1) B

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2) B

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3) B

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4) C

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5) D

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6) B

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7) C

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8) C

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9) D

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10) A

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