

Name _____

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

- 1) Some systems also have a _____ sensor between the throttle body and the air cleaner. 1) _____
 - A) Air temperature
 - B) Mass airflow (MAF)
 - C) Exhaust gas sensor (EGS)
 - D) Throttle position sensor (TPS)

- 2) The automotive engine uses about _____ gallons of air for every gallon of gasoline burned at an air-fuel ratio of 14.7 to 1. 2) _____
 - A) 2000
 - B) 4000
 - C) 7000
 - D) 9000

- 3) All of these are main jobs of the air cleaner and filter parts, EXCEPT _____. 3) _____
 - A) Clean the air before it is mixed with fuel
 - B) Silence the intake air noise
 - C) Act as a flame arrester in case of a backfire
 - D) Lower the intake air temperature

- 4) Why are the EGR gases cooled before entering the engine on some engines? 4) _____
 - A) Cool exhaust gas is more effective at controlling NO_x emissions
 - B) To help prevent the exhaust from slowing down
 - C) To prevent damage to the intake valves
 - D) To prevent heating the air-fuel mixture in the cylinder

- 5) Intake charge velocity has to be _____ to prevent fuel droplet separation. 5) _____
 - A) 25 feet per second
 - B) 50 feet per second
 - C) 100 feet per second
 - D) 300 feet per second

- 6) Technician A says that the exhaust system also contains a catalytic converter, exhaust pipes, and muffler. Technician B says that the entire exhaust system is supported by metal hangers that isolate the noise and vibration of the exhaust from the rest of the vehicle. Which technician is correct? 6) _____
 - A) Technician A
 - B) Technician B
 - C) Both technicians
 - D) Neither technician

- 7) Exhaust passages are included in some intake manifolds. Technician A says that the exhaust passages are used for exhaust gas recirculation (EGR) systems. Technician B says that the upper intake is often called the plenum. Which technician is correct? 7) _____
- A) Technician A
 - B) Technician B
 - C) Both Technicians
 - D) Neither Technician
- 8) Exhaust gases exit the exhaust port into the exhaust manifold, then travel to the _____. 8) _____
- A) Muffler
 - B) Catalytic converter
 - C) Tail pipe
 - D) Atmosphere
- 9) The intake manifold of a port fuel-injected engine does which of these? 9) _____
- A) Uses a heater to heat the intake air
 - B) Uses a leaner air-fuel mixture than TBI
 - C) Contains only fuel
 - D) Contains only air
- 10) Why do many port fuel injected engines use long intake runners? 10) _____
- A) To reduce exhaust emissions
 - B) To heat the incoming air
 - C) To increase high RPM power
 - D) To increase low RPM torque

Answer Key

Testname: ENGINES9_20B

1) B

Page Ref: 280

2) D

Page Ref: 279

3) D

Page Ref: 279

4) A

Page Ref: 284

5) B

Page Ref: 281

6) A

Page Ref: 284

7) C

Page Ref: 283-284

8) B

Page Ref: 284

9) D

Page Ref: 282

10) D

Page Ref: 282