

Name _____

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

- 1) Air filters can remove particles and dirt as small as _____. 1) _____
A) 5 to 10 microns
B) 10 to 25 microns
C) 30 to 40 microns
D) 40 to 50 microns
- 2) Why is the catalytic converter placed as close to the engine as possible? 2) _____
A) For easier access when working on the engine
B) So the heat can help the converter work most efficiently
C) To allow the exhaust pipes from the catalytic converter rearward to be as long as possible
D) To prevent the heat from the exhaust system moving upward toward the floor of the vehicle
- 3) The upper portion of a two part intake manifold is often called the _____. 3) _____
A) housing
B) lower part
C) plenum
D) vacuum chamber
- 4) Technician A says that a cracked exhaust manifold can affect engine operation. Technician B says that a leaking lower intake manifold gasket could cause a vacuum leak. Which technician is correct? 4) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician
- 5) Why are the EGR gases cooled before entering the engine on some engines? 5) _____
A) Cool exhaust gas is more effective at controlling NOx 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
- 6) A cracked exhaust manifold can cause false readings from which of these engine sensors? 6) _____
A) Oxygen sensor
B) Coolant temperature sensor
C) Intake air temperature sensor
D) Exhaust temperature sensor

- 7) The automotive engine uses about _____ gallons of air for every gallon of gasoline burned at an air-fuel ratio of 14.7 to 1. 7) _____
- A) 2000
 - B) 4000
 - C) 7000
 - D) 9000
- 8) All of these are main jobs of the air cleaner and filter parts, EXCEPT _____. 8) _____
- 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 pressure
- 9) Which of the following is/are terms for a variable intake manifold? 9) _____
- A) Variable intake system (VIS)
 - B) Variable volume induction (VVI)
 - C) Dual-stage intake (DSI)
 - D) Any of the above
- 10) The intake manifold of a port fuel-injected engine does which of these? 10) _____
- 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