

## Automotive Engines 10th

### Quiz 25A

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

1. Technician A says that the only valve guide repair option for integral valve guides is to use oversize-stem valves. Technician B says that valve guides should be checked for wear using a ball gauge or a dial indicator. 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 gasket surface of a cylinder head, as measured with a straightedge, should have a maximum variation of which of \_\_\_\_\_. 2. \_\_\_\_\_
  - A) 0.002 inch in any 6-inch length or 0.004 inch overall
  - B) 0.001 inch in any 6-inch length or 0.004 inch overall
  - C) 0.020 inch in any 10-inch length or 0.020 inch overall
  - D) 0.004 inch in any 10-inch length or 0.008 inch overall
  
3. For lowest hydrocarbon emissions, which of these engine design features is used? 3. \_\_\_\_\_
  - A) Low combustion chamber surface area-to-volume ratio
  - B) High combustion chamber surface area-to-volume ratio
  - C) Non-centrally mounted spark plug
  - D) Increased (as much as possible) quench area
  
4. Two technicians are discussing a Hemi engine. Technician A says that a Hemi is an engine with a hemi-spherical shaped combustion chamber. Technician B says that all Hemi engines are cam-in-block designs. Which technician is correct? 4. \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technician A and B
  - D) Neither technician A nor B
  
5. Technician A says that an Audi five-valve engine uses three intake valves and two exhaust valves. Technician B says that it uses three exhaust valves and two intake valves. Which technician is correct? 5. \_\_\_\_\_
  - A) Technician A only
  - B) Technician B only
  - C) Both technician A and B
  - D) Neither technician A nor B
  
6. Removal of excessive material from the block or cylinder head during machining can cause valve timing to be \_\_\_\_\_ on an overhead cam engine. 6. \_\_\_\_\_
  - A) shortened
  - B) advanced
  - C) normal
  - D) retarded

7. In addition to intake and exhaust ports, what other ports or passages are cast into the cylinder head? 7. \_\_\_\_\_
- A) Air ports
  - B) Resonator ports
  - C) Coolant passages
  - D) Gasket ports
8. Typical intake valve stem-to-guide clearance is \_\_\_\_\_. 8. \_\_\_\_\_
- A) 0.030 to 0.045 inch (0.8 to 0.10 mm)
  - B) 0.015 to 0.020 inch (0.4 to 0.5 mm)
  - C) 0.005 to 0.010 inch (0.13 to 0.25 mm)
  - D) 0.001 to 0.004 inch (0.025 to 0.076 mm)
9. Technician A says that the most commonly used combustion chamber types include hemispherical, and wedge. Technician B says that coolant and lubricating openings and passages are located throughout most cylinder heads. Which technician is correct? 9. \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians A and B
  - D) Neither technician A nor B
10. What other engine component may have to be machined if the cylinder heads are machined on a V-type engine? 10. \_\_\_\_\_
- A) Exhaust manifold
  - B) Intake manifold
  - C) Block deck
  - D) Distributor mount (if equipped)

## Answer Key

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