

Name: _____

Date: _____

1. What is the quench area in the context of the combustion chamber?
 - A. The area with the highest temperature.
 - B. The flat area of the combustion chamber above the flat area of the piston.
 - C. The curved region near the exhaust valve.
 - D. The area closest to the spark plug.

2. How does the quench area help reduce detonation?
 - A. By increasing temperatures in the combustion chamber.
 - B. By promoting faster burning of the air-fuel mixture.
 - C. By causing gasoline vapors to condense on cooler surfaces.
 - D. By enhancing turbulence in the combustion chamber.

3. Where is the best placement for a spark plug in the combustion chamber?
 - A. Near the exhaust valve.
 - B. At the edge of the combustion chamber.
 - C. At the center of the combustion chamber.
 - D. Adjacent to the intake valve.

4. Why is central spark plug placement preferred?
 - A. It allows for easier access during replacement.
 - B. It ensures longer spark plug life.
 - C. It reduces the flames' travel to all edges of the combustion chamber.
 - D. It improves the aesthetic appeal of the combustion chamber.

5. What is the primary role of cylinder heads in an engine?
 - A. To support the pistons and piston rings.
 - B. To support the valves and valve train and contain passages for various flows.
 - C. To provide mounting for spark plugs only.
 - D. To act as a cover for the combustion chamber.

6. In an overhead camshaft design engine, what additional components does the cylinder head support?
 - A. Only the camshaft.
 - B. Camshaft, rocker arms, followers, intake and exhaust valves, and valve guides.
 - C. Pistons and piston rings.
 - D. Fuel injectors and throttle body.

7. What is the purpose of the squish area in a cylinder head's design?
 - A. To reduce the volume of the combustion chamber.
 - B. To promote turbulence and improve air and fuel mixing.
 - C. To provide a mounting point for spark plugs.
 - D. To act as a cooling channel for the combustion chamber.

8. Why do some engines use two spark plugs per cylinder?

- A. To improve fuel efficiency by double ignition.
- B. To ensure a backup in case one spark plug fails.
- C. To enhance the aesthetics of the engine design.
- D. To reduce the cost of spark plug replacement.

9. What does the addition of more than two valves per cylinder achieve?

- A. It reduces the engine's power output.
- B. It decreases the air's velocity entering and exiting the engine.
- C. It permits more air to flow into and out of the engine with greater velocity.
- D. It makes the engine quieter.

10. Which of the following terms refers to an area of the combustion chamber where the piston nearly contacts the cylinder head?

- A. Quench area.
- B. Squish area.
- C. Turbulence zone.
- D. Ignition point.

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Chapter 27

Multiple Choice Quiz A

Answer Key

1. B

2. C

3. C

4. C

5. B

6. B

7. B

8. A

9. C

10. B