

Name: _____

Date: _____

1. What is the primary function of the engine block?
 - A. It is the supporting structure for the entire engine.
 - B. It lubricates the engine components.
 - C. It is responsible for fuel combustion.
 - D. It cools the engine.

2. Which material makes the engine block appear gray in color?
 - A. Steel
 - B. Aluminum
 - C. Graphite
 - D. Nickel

3. Why is cast iron commonly used to make engine blocks?
 - A. It is lightweight and inexpensive.
 - B. It has lubricating properties and is strong for its weight.
 - C. It is resistant to high temperatures.
 - D. It prevents engine overheating.

4. Which feature of cast iron allows for easy machining often without coolant?
 - A. Its magnetic properties
 - B. Its gray color
 - C. The carbon content
 - D. Its brittleness

5. What design is commonly used in newer engine blocks to reduce weight?
 - A. Monoblock design
 - B. Aluminum design
 - C. CGI design
 - D. Dual-block design

6. Which of the following is NOT a characteristic of aluminum blocks?
 - A. Nonmagnetic
 - B. Heavyweight
 - C. Used with Styrofoam cores during casting
 - D. Lightweight

7. Why is compacted graphite iron (CGI) used in many diesel engine blocks?
 - A. It is cheaper than gray iron.
 - B. It has higher strength and reduces noise vibration.
 - C. It provides better lubrication.
 - D. It gives a unique color to the engine block.

8. What happens to Styrofoam when it comes in contact with molten aluminum during casting?

- A. It solidifies and strengthens the block.
- B. It vaporizes, leaving behind a cavity.
- C. It reacts chemically with the aluminum.
- D. It acts as a coolant.

9. Which type of block walls do aluminum block engines usually require for proper wear?

- A. Cast-iron cylinder walls
- B. Compacted graphite walls
- C. Nickel walls
- D. Steel walls

10. What changes the shape of graphite to compacted graphite forms in compacted graphite iron?

- A. Adding a small amount of nickel
- B. Reducing the sulfur content
- C. Cooling the iron rapidly
- D. Adding a very small amount of magnesium

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Chapter 31

Multiple Choice Quiz A

Answer Key

1. A

2. C

3. B

4. C

5. A

6. B

7. B

8. B

9. A

10. D