

## Automotive Engines 10th

### Quiz 33B

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

1. Blueprinting is a process that \_\_\_\_\_. 1. \_\_\_\_\_
  - A) uses factory-only specifications
  - B) uses the parts manufacturer's recommended specification for many of the critical clearances
  - C) includes identifying the use of the engine and the vehicle it is going to be used in
  - D) Both B and C
  
2. Combustion chamber volume is measured using a fluid and what unit of measure? 2. \_\_\_\_\_
  - A) Cubic inches (in.<sup>3</sup>)
  - B) Cubic centimeters (cc)
  - C) Liters (L)
  - D) Ounces (oz.)
  
3. When balancing a 4-cylinder engine, all of the following parts are needed, EXCEPT \_\_\_\_\_. 3. \_\_\_\_\_
  - A) crankshaft
  - B) damper
  - C) flywheel
  - D) valve springs
  
4. An accurate setting for top dead center (TDC) can be found using a degree wheel and \_\_\_\_\_. 4. \_\_\_\_\_
  - A) a piston stop
  - B) a connecting rod brake
  - C) flywheel and block chisel marks
  - D) timing cover marks
  
5. Reciprocating weight is also called \_\_\_\_\_. 5. \_\_\_\_\_
  - A) balance weight
  - B) bob weight
  - C) rotating weight
  - D) inertial weight
  
6. What process can be used to balance a crankshaft? 6. \_\_\_\_\_
  - A) Material is welded onto the counterweight
  - B) Heavy metal is used to increase the weight of the counterweight
  - C) Material is drilled out of the counterweight
  - D) Any of these may be used
  
7. A balancing factor is a formula used to determine what percentage of the reciprocating weight needs to be included in the bob weight. This is usually \_\_\_\_\_. 7. \_\_\_\_\_
  - A) 10%
  - B) 20%
  - C) 40%
  - D) 50%

8. Technician A says that material is drilled out of the counterweight to balance a crankshaft. Technician B says that only rotating weight is considered during the balancing procedure. Which technician is correct? 8. \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians A and B
  - D) Neither technician A nor B

9. The setup in this illustration is used to measure \_\_\_\_\_. 9. \_\_\_\_\_



- A) Valve air flow
  - B) Combustion chamber volume
  - C) Cylinder head thickness
  - D) Spark plug bore diameter
10. The bob weight must equal weight of the oil between the journal and bearing, plus the \_\_\_\_\_. 10. \_\_\_\_\_
- A) weight of all the pistons
  - B) rotating weight
  - C) a percentage of the reciprocating weight
  - D) Both B and C

## Answer Key

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1. D  
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2. B  
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3. D  
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4. A  
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5. D  
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6. D  
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7. D  
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8. A  
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10. D  
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