

## Automotive Engines 10th

### Quiz 33A

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

1. Which of the following is NOT reciprocating weight? 1. \_\_\_\_\_
  - A) Piston
  - B) Big end of a connecting rod
  - C) Small end of a connecting rod
  - D) Piston ring
  
2. The bob weight must equal weight of the oil between the journal and bearing, plus the \_\_\_\_\_. 2. \_\_\_\_\_
  - A) weight of all the pistons
  - B) rotating weight
  - C) a percentage of the reciprocating weight
  - D) Both B and C
  
3. When balancing pistons, which of these is done? 3. \_\_\_\_\_
  - A) Choose heaviest and add weight to the others
  - B) Choose heaviest and grind weight off until it matches the average of all the others
  - C) Choose lightest and grind material from other pistons until all pistons are of equal weight
  - D) Balance piston only after it is assembled with the connecting rod
  
4. What process can be used to balance a crankshaft? 4. \_\_\_\_\_
  - 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
  
5. The setup in this illustration is used to measure \_\_\_\_\_. 5. \_\_\_\_\_



- A) Valve air flow
- B) Combustion chamber volume
- C) Cylinder head thickness
- D) Spark plug bore diameter

6. The big end of the rod is considered to be \_\_\_\_\_. 6. \_\_\_\_\_  
A) rotating weight  
B) reciprocating weight  
C) inertia weight  
D) Both A and B
7. Which of these are attached to the rod journals on V-type engines to simulate the weight of the rods and pistons? 7. \_\_\_\_\_  
A) Bob weights  
B) Counterbalances  
C) Pad weights  
D) Longer bolts
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. A(n) \_\_\_\_\_ is used to determine correct pushrod length. 9. \_\_\_\_\_  
A) adjustable pushrod  
B) feeler gauge  
C) dial indicator  
D) vernier caliper
10. When balancing a 4-cylinder engine, all of the following parts are needed, EXCEPT \_\_\_\_\_. 10. \_\_\_\_\_  
A) crankshaft  
B) damper  
C) flywheel  
D) valve springs

## Answer Key

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