

**Automotive Electrical and Engine Performance 9th Edition**  
**Chapter 26 – Engine Condition Diagnosis**  
**Multiple Choice Questions Quiz B**

1. What does blue smoke from the exhaust indicate?
  - a. The engine is burning oil due to faulty piston rings or valve stem seals.
  - b. Excessive fuel is being burned in the combustion chamber.
  - c. Water or coolant is entering the combustion chamber.
  - d. Normal exhaust behavior during cold weather.
  
2. Which method is recommended for finding the source of an oil leak?
  - a. Inspect the engine while running at idle without cleaning.
  - b. Add fluorescent dye to the oil and use a black light for inspection.
  - c. Disconnect all hoses and inspect manually.
  - d. Apply talcum powder directly to the crankcase area.
  
3. Which of the following can cause a loss of compression in an engine cylinder?
  - a. A restricted air filter
  - b. Worn ignition cables
  - c. A clogged catalytic converter
  - d. A leaking head gasket
  
4. During a vacuum test, what does a vacuum reading below 2.5 inches Hg during cranking typically indicate?
  - a. Worn piston rings or leaking valves
  - b. Normal engine operation
  - c. High exhaust back pressure
  - d. Proper valve timing

5. What is the purpose of the cylinder power balance test?
- a. To measure engine RPM at idle
  - b. To determine which cylinder is underperforming by grounding cylinders one at a time
  - c. To check the exhaust gas composition
  - d. To ensure all cylinders have equal compression
6. Which tool is commonly used during a relative compression test?
- a. Vacuum gauge
  - b. Inductive amp clamp with a digital storage oscilloscope (DSO)
  - c. Pressure tester
  - d. Cylinder leakage tester
7. What does the "first puff" reading in a compression test indicate?
- a. Valve timing accuracy
  - b. Compression leakage through piston rings
  - c. Initial compression pressure in the cylinder
  - d. Faulty ignition timing
8. How can a cylinder leakage test confirm a defective intake valve?
- a. Air is heard escaping from the tailpipe.
  - b. Air is heard escaping from the oil filler cap.
  - c. Air is heard coming from the throttle body or air inlet.
  - d. Bubbles are visible in the coolant.
9. What does a low and fluctuating vacuum reading during a vacuum test usually indicate?
- a. Burned valves or weak valve springs
  - b. Proper engine operation at idle
  - c. Advanced ignition timing
  - d. Restricted exhaust flow

10. What safety precaution is necessary before performing a compression test?
- a. Remove the battery cables to avoid short circuits.
  - b. Disable the ignition and fuel injection systems to prevent accidental ignition.
  - c. Drain the engine oil to prevent pressure build-up.
  - d. Keep the throttle plate closed for accurate readings.

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**Answer Key Quiz B**

**Correct Answers:**

1. a
2. b
3. d
4. a
5. b
6. b
7. c
8. c
9. a
10. b