

Name _____

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

- 1) A splayed crankshaft is a crankshaft that _____. 1) _____
A) is externally balanced
B) is internally balanced
C) has offset main bearing journals
D) has offset rod journals
- 2) Crankshaft journals are checked for which of these? 2) _____
A) Out of Round
B) Taper
C) Both A and B
D) Neither A nor B
- 3) Technician A says primary vibration is created by the slight differences in the inertia of the pistons between top dead center and bottom dead center. Technician B says secondary vibration is a strong low-frequency vibration caused by the movement of the piston traveling up and down in the cylinder. Who is right? 3) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician
- 4) Technician A says that most crankshafts can be reground to be 0.010, 0.020, or 0.030 inch undersize. Technician B says that most engine bearings are constructed with an aluminum shell for strength and are covered with a tin-lead alloy. Who is right? 4) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician
- 5) Technician A says balance shafts are used to counteract vibration created in the engine. Technician B says proper balancing of the engine is important for smooth operation. Who is right? 5) _____
A) Technician A only
B) Technician B only
C) Both technicians
D) Neither technician
- 6) If bearing-to-journal clearance is doubled, how much oil will flow? 6) _____
A) One-half as much
B) The same amount if the pressure is kept constant
C) Double the amount
D) Four times the amount

- 7) Why does a 4-cylinder engine have very little, if any, primary vibration? 7) _____
- A) Uses a splayed crankshaft
 - B) Two cylinders fire at the same time, reducing the primary vibration
 - C) Two pistons traveling upward at the same time two pistons are traveling downward
 - D) Bore is small, reducing the primary vibration
- 8) Typical journal-to-bearing clearance is _____. 8) _____
- A) 0.00015 to 0.00018 inch
 - B) 0.0005 to 0.0025 inch
 - C) 0.150 to 0.250 inch
 - D) 0.020 to 0.035 inch
- 9) A typical V-8 engine crankshaft has _____ main bearings. 9) _____
- A) three
 - B) four
 - C) five
 - D) seven
- 10) A four-cylinder engine fires one cylinder at every _____ degrees of crankshaft rotation. 10) _____
- A) 270
 - B) 180
 - C) 120
 - D) 90