Automotive Technology 7th Edition
Chapter 32: Crankshafts, Balance Shafts, and Bearings
Short Answer Quiz

Name: Date:

1. Explain the primary purpose of a crankshaft in the operation of an engine.

2. Describe how the engine stroke is calculated in relation to the centerlines of the connecting rod bearing journal and the crankshaft main bearing journal.

3. How does the combustion force applied to the crank throw result in the rotation of the crankshaft?

4. List and briefly describe the main components that comprise a crankshaft.

5. What is the role of the main bearing journals and rod bearing journals in the crankshaft's function?

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6. How do split main bearings facilitate the assembly process around the crankshaft main bearing journals?

7. What are the implications of the crank throw being offset from the crankshaft centerline?

8. Discuss the significance of counterweights in relation to the crankshaft.

9. Differentiate between externally and internally balanced engines and explain the implications of each type.

10. What are the key considerations in crankshaft service to ensure the longevity and efficient operation of an engine?