

Automotive Technology 7<sup>th</sup> 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.

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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.

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

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

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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?

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

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

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

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

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