

Manual Drivetrains and Axles 9th Edition

Chapter 17

Multiple Choice Quiz A

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. What is the most common source of low-frequency vibrations (5–20 Hz) in vehicles?
  - A. Engine problems
  - B. Driveline issues
  - C. Tires and wheels
  - D. Brake system
  
2. What does a vibration order in a vehicle indicate?
  - A. Number of vibrations in one component revolution
  - B. Number of engine cylinders
  - C. Frequency of sound waves
  - D. Speed of the vehicle
  
3. Which component is essential in diagnosing and correcting vehicle vibrations and noise?
  - A. Tachometer
  - B. Odometer
  - C. Speedometer
  - D. Electronic Vibration Analyzer (EVA)
  
4. What is the typical frequency range for high-frequency vibrations in vehicles?
  - A. 5-20 Hz
  - B. 20-50 Hz
  - C. 50-100 Hz
  - D. 100-150 Hz
  
5. How is the rolling circumference of a tire calculated for vibration analysis?
  - A.  $1.47 \times \text{mph}/\text{tire circumference in ft}$
  - B. Diameter  $\times \pi$
  - C. Radius  $\times 2\pi$
  - D. Circumference  $\times$  wheel radius
  
6. What does the neutral run-up test help determine in a vehicle?
  - A. Wheel alignment
  - B. Engine-related vibrations
  - C. Brake efficiency
  - D. Transmission health
  
7. What is the unit of measure for vibration frequency in vehicles?
  - A. Newton
  - B. Pascal
  - C. Hertz (Hz)
  - D. Watt

8. What is a common symptom of out-of-round brake drums or warped disc brake rotors?

- A. Squeaking noise
- B. Oil leakage
- C. Increased fuel consumption
- D. Vibration during braking

9. Which is NOT a typical cause of medium-frequency vibrations (20–50 Hz) in vehicles?

- A. Driveshaft problems
- B. Wheel imbalance
- C. Engine misfires
- D. Differential issues

10. What might indicate incorrect driveshaft angles in a vehicle?

- A. Excessive tire wear
- B. Vibration during heavy acceleration
- C. Unusual engine noise
- D. Poor fuel efficiency

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Answer Key

1. C

2. A

3. D

4. C

5. A

6. B

7. C

8. D

9. B

10. B