

Manual Drivetrains and Axles 9th Edition

Chapter 2

Multiple Choice Quiz A

Name: _____ Date: _____

1. What is the primary function of a vehicle drivetrain?
 - A. To control the vehicle's braking system
 - B. To transfer power from the engine to the drive wheels
 - C. To manage the vehicle's electrical systems
 - D. To enhance the fuel efficiency of the vehicle

2. What does the term 'torque' refer to in the context of drivetrains?
 - A. The vehicle's speed
 - B. The rate of fuel consumption
 - C. A twisting force that causes rotation
 - D. The gear ratio in the transmission

3. How does a differential benefit a vehicle's drivetrain?
 - A. By increasing fuel efficiency
 - B. By reducing the vehicle's weight
 - C. By enhancing the braking system
 - D. By allowing different wheels to rotate at different speeds

4. What is the main advantage of using helical gears over spur gears?
 - A. Higher speed capability
 - B. Greater fuel efficiency
 - C. Quieter operation and higher strength
 - D. Easier manufacturing process

5. In the context of drivetrains, what is the purpose of a planetary gear set?
 - A. To provide a direct drive ratio
 - B. To enable reverse gear in manual transmissions
 - C. To offer multiple gear ratios in a compact space
 - D. To reduce the overall weight of the transmission

6. What is the role of a transfer case in a four-wheel-drive system?
 - A. To distribute power evenly to all four wheels
 - B. To increase the vehicle's ground clearance
 - C. To improve fuel efficiency
 - D. To enhance the vehicle's aerodynamics

7. How does an automatic transmission differ from a manual transmission?
 - A. It uses a torque converter instead of a clutch
 - B. It requires the driver to manually change gears
 - C. It is only found in electric vehicles
 - D. It offers fewer gear ratios

8. What is the significance of gear ratios in a vehicle's drivetrain?

- A. They determine the vehicle's color
- B. They control the air conditioning system
- C. They affect the speed and torque of the vehicle
- D. They regulate the vehicle's exhaust emissions

9. In a drivetrain, what is the function of a driveshaft?

- A. To store electrical energy
- B. To transfer power from the transmission to the drive axles
- C. To cool the engine
- D. To filter the engine oil

10. What is the primary advantage of all-wheel drive (AWD) over front-wheel drive (FWD)?

- A. Lower manufacturing cost
- B. Improved traction in various driving conditions
- C. Higher fuel efficiency
- D. Simpler maintenance

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Answer Key

1. B

2. C

3. D

4. C

5. C

6. A

7. A

8. C

9. B

10. B