

Manual Drivetrains and Axles 9th Edition

Chapter 15

Multiple Choice Quiz B

Name: _____ Date: _____

1. What is the typical ratio for low range in a transfer case?
 - A. 2:1 to about 3:1
 - B. 8:1
 - C. 10:1
 - D. 12:1 or higher

2. What is the function of a center differential in an all-wheel-drive vehicle?
 - A. To control the braking system
 - B. To allow the front and rear wheels to travel different distances
 - C. To increase engine power
 - D. To reduce fuel consumption

3. Which type of four-wheel-drive system does not include a center (interaxle) differential?
 - A. All-wheel drive (AWD)
 - B. Full-time four-wheel drive
 - C. Part-time four-wheel drive
 - D. None of the above

4. What type of four-wheel-drive arrangement is used in many passenger vehicles and SUVs?
 - A. Front engine – RWD
 - B. Rear engine – RWD
 - C. Mid-engine – RWD
 - D. Front engine – FWD

5. What can occur if turns are made on pavement while in 4WD mode?
 - A. Gear train bind up
 - B. Increased acceleration
 - C. Reduced tire wear
 - D. Enhanced fuel economy

6. Why is there a need for a transfer case in four-wheel-drive vehicles?
 - A. To balance the vehicle
 - B. To connect the engine to the wheels
 - C. To split the engine torque
 - D. To cool the transmission

7. What is the purpose of a viscous coupling in a four-wheel-drive system?
 - A. To lock the differential
 - B. To transfer torque to the rear drive axle
 - C. To increase traction
 - D. To reduce engine load

8. How is engine torque distributed in a part-time four-wheel-drive system?

- A. Only to the rear wheels
- B. Equally to all four wheels
- C. Only to the front wheels
- D. To both front and rear wheels

9. What is the main characteristic of full-time four-wheel drive systems?

- A. They have no center differential
- B. They use locking hubs
- C. They are always in four-wheel drive
- D. They are manually operated

10. What happens when a vehicle with a four-wheel-drive system makes a turn?

- A. The vehicle's speed increases
- B. All wheels travel the same distance
- C. Each wheel travels a different distance
- D. The drivetrain disengages

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Answer Key

1. A

2. B

3. C

4. D

5. A

6. C

7. B

8. D

9. C

10. C