

Manual Drivetrains and Axles 9th Edition

Chapter 5

Multiple Choice Quiz B

Name: _____ Date: _____

1. What is the main function of the input shaft in a manual transmission?
 - A. To transfer power from the engine to the transmission
 - B. To control the gear ratios
 - C. To connect to the differential
 - D. To support the transmission case

2. Which component is responsible for reversing the direction of rotation in a manual transmission?
 - A. Main shaft
 - B. Idler gear
 - C. Synchronizer
 - D. Input shaft

3. What is the primary purpose of using synchronizers in manual transmissions?
 - A. To increase torque transmission
 - B. To facilitate reverse gear engagement
 - C. To lock the gears in place
 - D. To ensure smooth gear shifting

4. In a manual transmission, what is the role of the countershaft?
 - A. To provide reverse gear
 - B. To hold the synchronizers
 - C. To transfer power from the input shaft to the speed gears
 - D. To connect to the output shaft

5. What does the term 'torque capacity' in a manual transmission refer to?
 - A. The maximum speed of the vehicle
 - B. The strength of the transmission case
 - C. The efficiency of gear shifting
 - D. The amount of engine torque the transmission can handle

6. Which of the following is not a typical component of a synchronizer assembly?
 - A. Hub
 - B. Sleeve
 - C. Flywheel
 - D. Blocker ring

7. What is the main purpose of the main shaft in a manual transmission?
 - A. To engage the clutch
 - B. To transmit power to the driveshaft
 - C. To control the gear ratios
 - D. To support the countershaft

8. How does the helix angle of gears in a manual transmission affect its operation?

- A. It affects the noise level and end thrust
- B. It determines the torque capacity
- C. It controls the speed of gear engagement
- D. It influences the transmission's overall size

9. In a five-speed transmission which gear selection results in a 1:1 ratio?

- A. Third
- B. Fourth
- C. Fifth
- D. None of these

10. What role do transmission cases and bearings play in a manual transmission?

- A. They control the gear ratios
- B. They facilitate gear shifting
- C. They provide structural support and reduce friction
- D. They increase the transmission's torque capacity

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Answer Key

1. A

2. B

3. D

4. C

5. D

6. C

7. B

8. A

9. B

10. C