Automatic Transmissions and Transaxles 8th Edition
Chapter 6
Multiple Choice Quiz A

Name: _____ Date: _____

1. What is the primary function of a torque converter in an automatic transmission system?
A. To control the vehicle's speed
B. To transmit and multiply engine torque
C. To regulate the temperature of the transmission fluid
D. To provide lubrication to the gear train

2. What is the role of the impeller in a torque converter?
A. It acts as a centrifugal pump when the engine is running
B. It controls the flow of transmission fluid
C. It directly drives the vehicle's wheels
D. It cools down the transmission fluid

3. Which of the following best describes vortex flow in a torque converter?
A. A counterclockwise flow of fluid leaving the impeller
B. A clockwise flow of fluid leaving the turbine
C. A continuous circulation of fluid outward from the impeller, around the guide ring, inward into the turbine
D. A static flow of fluid within the converter

4. What is the purpose of the torque converter clutch (TCC)?
A. To increase the torque multiplication
B. To eliminate slippage during the coupling phase, improving fuel economy
C. To regulate the temperature of the transmission fluid
D. To provide additional lubrication to the transmission

5. What happens during the coupling phase in a torque converter?
A. The turbine speed reaches 90% to 95% of impeller speed
B. The impeller and turbine rotate at the same speed
C. The stator redirects the fluid flow in the converter
D. The torque converter locks up, connecting the transmission input shaft directly to the engine

6. What is stall speed in the context of a torque converter?
A. The speed at which the vehicle moves when the engine is at idle
B. The fastest RPM that an engine can reach while the turbine is held stationary
C. The maximum speed the impeller can achieve
D. The speed at which the torque converter clutch engages

7. How does a torque converter differ from other hydraulic units?
A. It transfers power through the static pressure of the fluid
B. It transfers power through the dynamic motion of the fluid
C. It uses a mechanical linkage to transfer power
D. It relies on electrical signals to transfer power

8. What is the function of the stator in a torque converter?
A. To act as the driving member of the converter
B. To redirect the fluid flow in the converter
C. To control the temperature of the transmission fluid
D. To multiply the torque generated by the engine

9. What is the consequence of a faulty torque converter in an automatic transmission?
A. Increased fuel efficiency
B. Enhanced shift quality
C. Overheating and potential damage to the transmission
D. Reduced noise and vibration

10. What is the role of the flexplate in a vehicle with an automatic transmission?
A. To act as a conventional flywheel
B. To dampen engine vibrations
C. To engage the starter motor pinion gear
D. Both B and C

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Answer Key

1. B
2. A
3. C
4. B
5. A
6. B
7. B
8. B
9. C
10. D