AT7 Chapter 129 A3 15 Questions

Continuously Variable and Dual-Clutch Automatic Transmissions

1. What is the advantage of a CVT over a planetary-gear automatic transmission?

A. More compact and lighter weight

B. More efficient fuel use and emissions

C. Constant, stepless acceleration

D. All of the above

2. What is the function of the pulleys in a CVT design?

A. To vary the gear ratio in a continuous manner

B. To produce an underdrive

C. To mimic upshifts and downshifts

D. To provide the driving ease of an automatic transmission

3. What are the direct inputs monitored by the transmission control module (TCM) of a CVT?

A. Transmission range sensor, input speed sensor, output speed sensor, primary pressure sensor, secondary pressure sensor, and transmission temperature sensor

B. PCM requests, engine output torque, brake switch, ABS status signals, charging system voltage, engine RPM, engine coolant temperature, accelerator pedal position, vehicle speed, and A/C system requests

C. Stepper motor, line pressure solenoid, secondary pressure solenoid, and TCC lockup solenoid

D. None of the above

4. What are the indirect inputs monitored by the TCM of a CVT?

A. Transmission range sensor, input speed sensor, output speed sensor, primary pressure sensor, secondary pressure sensor, and transmission temperature sensor

B. PCM requests, engine output torque, brake switch, ABS status signals, charging system voltage, engine RPM, engine coolant temperature, accelerator pedal position, vehicle speed, and A/C system requests

C. Stepper motor, line pressure solenoid, secondary pressure solenoid, and TCC lockup solenoid

D. None of the above

5. What are the TCM outputs in a CVT?

A. Transmission range sensor, input speed sensor, output speed sensor, primary pressure sensor, secondary pressure sensor, and transmission temperature sensor

B. PCM requests, engine output torque, brake switch, ABS status signals, charging system voltage, engine RPM, engine coolant temperature, accelerator pedal position, vehicle speed, and A/C system requests

C. Stepper motor, line pressure solenoid, secondary pressure solenoid, and TCC lockup solenoid

D. None of the above

6. What is the function of the TCM in a CVT?

A. To vary the gear ratio in a continuous manner

B. To produce an underdrive

C. To mimic upshifts and downshifts

D. To control the drive ratio to match vehicle needs and adjust the ratio during vehicle cruise

7. What is the function of the secondary pulley spring in a CVT?

A. To vary the gear ratio in a continuous manner

B. To produce an underdrive

C. To mimic upshifts and downshifts

D. To force the floating side to a narrow, high-belt position, which produces an underdrive

8. What is needed for reverse-direction operation in a CVT?

A. A planetary gear set

B. A forward clutch mounted on the input shaft from the torque converter

C. A low-profile elliptical torque converter with a lockup clutch

D. None of the above

9. What are some of the names for a dual-clutch automatic transmission?

A. DSG, PDK, AMT, or twin clutch transmission.

B. CVT, DCT, or TCM.

C. DPS6, line pressure, or shift select.

D. Torque converter, clutch cooling, or position sensor.

10. Which type of vehicle typically uses dual dry clutches?

A. Low powered vehicles.

B. High powered vehicles.

C. Sports cars.

D. Electric vehicles.

11. How is the transmission controlled in a dual-clutch automatic transmission?

A. By the position of the accelerator pedal.

B. Using a shift lever or paddles on the steering wheel.

C. Through voice commands.

D. By the position of the brake pedal.

12. What type of sensors does the TCM use to determine proper clutch and shift servo operation?

A. Speed, temperature, pressure, and position sensors.

B. Acceleration, vibration, and noise sensors.

C. Fuel level and engine oil pressure sensors.

D. Brake fluid and coolant temperature sensors.

13. What is the purpose of the line pressure solenoid in a dual-clutch automatic transmission?

A. To cool the clutch during operation.

B. To select the gear ratio.

C. To control the pressure of the transmission fluid

D. To filter the transmission fluid

14. What is the recommended fluid for a dual-clutch automatic transmission?

A. The specified fluid for the transmission.

B. Any high-quality synthetic oil.

C. Conventional motor oil.

D. Transmission fluid for a torque converter automatic transmission.

15. Why is road testing the vehicle after repair important?

A. To test the transmission fluid

B. To ensure the fix is completed

C. To check the position of the accelerator pedal.

D. To diagnose any additional problems with the transmission.

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1. D

2. A

3. A

4. B

5. C

6. D

7. D

8. A

9. A

10. A

11. B

12. A

13. C

14. A

15. B