Automotive Electrical and Engine Performance 9th Edition
Chapter 25 – Electronic Transmission Controls
Quiz B

1. What are the four types of computer memory used in a TCM?

a. Input, processing, storage, and output

b. RAM, ROM, PROM, and EEPROM

c. Memory allocation, processing, resetting, and storage

d. Voltage conversion, memory, input, and calibration

2. What type of sensor measures transmission fluid temperature?

a. Negative temperature coefficient (NTC) thermistor

b. Potentiometer

c. Transducer

d. Frequency generator

3. What type of sensor measures the speed of the input or output shaft?

a. Potentiometer

b. Thermistor

c. Transducer

d. Frequency generator

4. Which function does the transmission range (TR) switch perform?

a. Prevents engine start in any gear except park or neutral

b. Limits upshifts in manual ranges

c. Operates the backup lights in reverse

d. All of the above

5. What is another name for the input speed sensor (ISS)?

a. Output speed sensor (OSS)

b. Vehicle speed (VS) sensor

c. Turbine speed sensor (TSS)

d. Any of the above depending on the system

6. What is the purpose of the electronic pressure control (EPC) solenoid?

a. Adjust mainline pressure using current

b. Maintain constant hydraulic pressure

c. Modulate temperature within the transmission fluid

d. Control fluid flow direction to the torque converter

7. What is adaptive control in a transmission system?

a. Time delay between shift command and completion

b. Adjustment of shift timing to compensate for clutch wear

c. Default operation in failure mode

d. Transmission operation based on vehicle load detection

8. What function do linear solenoids perform in an electronically controlled transmission?

a. Torque converter clutch (TCC) control

b. Pressure control solenoid (PCS) operation

c. Modulation of fluid flow using pulse-width signals

d. All of the above

9. Which condition would necessitate brake switch input to the TCM?

a. Engaging the parking brake

b. Disengaging the torque converter clutch (TCC)

c. Activating adaptive transmission learning mode

d. Calibrating the transmission range switch

10. What is the role of fuzzy logic in adaptive transmission control?

a. Allows fixed shift timing based on ROM programming

b. Adapts shift patterns based on throttle activity and terrain

c. Reduces engine load during downshifts

d. Maintains default gear selection in limp-in mode

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Correct Answers:

1. b

2. a

3. d

4. b

5. c

6. a

7. b

8. d

9. b

10. c