

**Automotive Electrical and Engine Performance 9th Edition**  
**Chapter 11 – CAN and Network Communications**  
**Multiple Choice Questions Quiz B**

1. What is the primary advantage of a vehicle's communication network?
  - a) Reduces wiring complexity and weight
  - b) Increases data transmission speeds beyond 1 Mbps
  - c) Creates isolated circuits for enhanced module control
  - d) Eliminates the need for a central diagnostic tool
  
2. What is the primary role of terminating resistors in a CAN network?
  - a) Enhance module-to-module communication speeds
  - b) Maintain signal integrity by preventing reflections
  - c) Ground the network to reduce electromagnetic interference
  - d) Increase the operating voltage for high-speed data
  
3. In a star link network, how are modules connected?
  - a) Directly to the main powertrain module
  - b) In a closed loop with each module connected in series
  - c) To a central hub or splice pack
  - d) Through isolated wiring to reduce interference
  
4. What voltage levels are typical for CAN high and CAN low lines during active communication?
  - a) 3.5V (high) and 1.5V (low)
  - b) 5.0V (high) and 0V (low)
  - c) 2.5V for both lines at rest
  - d) 12V (high) and ground (low)

5. What is a node in the context of automotive networks?

- a) A central gateway for all module communication
- b) A module or device connected to the network
- c) The point at which CAN lines are grounded
- d) The resistor that terminates a network bus

6. Which diagnostic tool function is used to verify the status of individual modules on a network?

- a) Voltage spike isolation
- b) Waveform monitoring
- c) Ping module function
- d) Packet loss analysis

7. What distinguishes Class A, B, and C communication networks in vehicles?

- a) Their wiring configurations
- b) The number of modules they support
- c) Their data transmission speeds
- d) The type of modules they connect

8. Which protocol uses a single-wire system and toggles between 7.5V and 0V for communication?

- a) PCI
- b) LIN
- c) UART
- d) CCD

9. What type of network configuration combines elements of ring and star link networks?

- a) CAN Class C
- b) Hybrid network
- c) Parallel network
- d) Serial differential network

10. What is the significance of twisted pair wiring in CAN networks?

- a) It increases signal amplitude for long-distance communication
- b) It eliminates the need for terminating resistors
- c) It reduces electromagnetic interference (EMI)
- d) It allows simultaneous transmission of high and low-speed data

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**Answer Key Quiz B**

**Correct Answers:**

1. a
2. b
3. c
4. a
5. b
6. c
7. c
8. a
9. b
10. c