

Automotive Electrical and Engine Performance 9th Edition
Chapter 7 – Automotive Wiring and Wire Repair
Multiple Choice Questions Quiz B

1. When sizing automotive wiring, what does an increase in the AWG number indicate?
 - a) An increase in the wire's diameter
 - b) A decrease in the wire's diameter
 - c) An increase in the wire's insulation thickness
 - d) An increase in the current-carrying capacity

2. Technician A states that battery cables are usually between 4-gauge and 1-gauge wires. Technician B says that cables larger than 1-gauge are labeled "0 gauge" or "00 gauge." Who is correct?
 - a) Technician A only
 - b) Technician B only
 - c) Both Technicians A and B
 - d) Neither Technician A nor B

3. What is the function of braided ground straps in an automotive electrical system?
 - a) They provide insulated paths for grounding
 - b) They limit the current flow in sensitive circuits
 - c) They are used to connect high-voltage components
 - d) They offer flexibility for grounding to moving parts

4. Which color coding on an automotive fuse signifies a 20-amp rating?
 - a) Blue
 - b) Yellow
 - c) Green
 - d) Red

5. The primary purpose of a fusible link in a vehicle's wiring system is to:

- a) Protect the circuit from short circuits by melting and disconnecting
- b) Provide an alternative grounding path
- c) Supply current to high-power components
- d) Serve as a low-resistance connection

6. Technician A says PTC circuit protectors increase resistance with rising temperature to limit current flow. Technician B claims PTC protectors instantly open the circuit like a fuse. Who is correct?

- a) Technician A only
- b) Technician B only
- c) Both Technicians A and B
- d) Neither Technician A nor B

7. In a crimp-and-seal connector, the sealant serves to:

- a) Improve the electrical connection by reducing resistance
- b) Provide a waterproof seal around the splice
- c) Increase the wire's flexibility at the connection
- d) Facilitate a stronger physical crimp

8. A high-quality jumper cable should have which characteristics to minimize voltage drop?

- a) Aluminum conductors and thick insulation
- b) Large gauge copper conductors
- c) Thin gauge copper with light insulation
- d) Low-quality insulation and aluminum strands

9. During repair, what tool should be used to release terminals from connectors without damaging them?

- a) Wire stripper
- b) Crimping tool
- c) Terminal pick
- d) Soldering iron

10. Orange conduit in an automotive wiring system usually indicates:

- a) Low-voltage circuits
- b) 12-volt circuits
- c) Circuits carrying above 60 volts (high voltage)
- d) Insulated ground paths only

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Answer Key Quiz B

Correct Answers:

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