Automotive Electrical and Engine Performance 9th Edition
Chapter 14 – Starting System Diagnosis and Service
Multiple Choice Questions Quiz B

1. What is the primary function of a voltage drop test in a starter circuit?

a) To measure resistance in a circuit

b) To identify high-resistance connections that reduce voltage to the starter motor

c) To calculate the total current flow through the circuit

d) To test battery capacity

2. Which of the following symptoms indicates excessive resistance in the starter motor circuit?

a) Rapidly spinning starter motor

b) Clicking sound from the solenoid

c) Starter motor cranks slowly or not at all

d) Low battery voltage during testing

3. What is the maximum allowable voltage drop in the cranking circuit according to standard testing procedures?

a) 1.0 volt

b) 0.50 volt

c) 0.20 volt

d) 0.75 volt

4. What is the first step when troubleshooting a no-crank condition in a starting system?

a) Check the condition of the battery

b) Inspect the starter motor connections

c) Perform a voltage drop test on the control circuit

d) Verify the customer's concern

5. What could cause a high current draw by the starter motor?

a) Worn starter bushings causing the armature to drag

b) Loose battery connections

c) Corroded battery terminals

d) High internal resistance in the starter solenoid

6. What component prevents the starter drive from engaging with the flywheel after the engine starts?

a) Neutral safety switch

b) Overrunning clutch

c) Starter solenoid

d) Armature windings

7. What is the typical amperage draw for a starter motor on a V6 engine during cranking?

a) 250–300 amperes

b) 150–200 amperes

c) 50–100 amperes

d) 300–350 amperes

8. During a starter motor bench test, the motor fails to spin. What could be the likely cause?

a) Excessive voltage drop in the battery cable

b) A disconnected neutral safety switch

c) An open in the motor windings

d) A short in the vehicle's ignition system

9. What is the primary purpose of the pull-in winding in the starter solenoid?

a) To hold the starter drive in place during cranking

b) To engage the pinion gear with the flywheel

c) To energize the starter motor after engagement

d) To regulate voltage to the ignition system

10. What safety precaution should always be taken before removing a starter motor?

a) Disconnect the positive battery cable

b) Hoist the vehicle and secure it properly

c) Disconnect the negative battery cable

d) Remove the ignition switch fuse

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Answer Key Quiz B

Correct Answers:

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