

Automotive Electrical and Engine Performance 9th Edition
Chapter 16 – Charging System Diagnosis and Service
Multiple Choice Questions Quiz B

1. During a charging voltage test, what is the normal voltage range expected at 2,000 RPM?
 - a. 10.5 to 12 volts
 - b. 13.5 to 15 volts
 - c. 15.5 to 17 volts
 - d. 11.5 to 13 volts

2. What is the acceptable AC ripple voltage output from a good alternator?
 - a. Below 0.1 volts
 - b. Above 1.0 volts
 - c. Below 0.5 volts
 - d. Equal to 0.8 volts

3. If a digital multimeter shows a negative reading when connected to the battery, what could be the cause?
 - a. The alternator is faulty.
 - b. The battery is overcharged.
 - c. The meter leads are connected backward.
 - d. The alternator has excessive ripple voltage.

4. When inspecting a serpentine belt, how many cracks in a 3-inch span warrant replacement?
 - a. One crack
 - b. Two cracks
 - c. Three cracks
 - d. More than three cracks

5. Which of the following tools is required to measure alternator output during a load test?
- a. Ohmmeter
 - b. Load tester
 - c. Torque wrench
 - d. Belt tension gauge
6. What indicates defective diodes in an alternator during a ripple voltage test?
- a. Voltage above 0.4 volts AC
 - b. Voltage below 0.3 volts AC
 - c. Voltage above 0.5 volts AC
 - d. Voltage exactly 0.2 volts AC
7. Technician A states that a voltage drop test measures the ground-side resistance. Technician B says a voltage drop test measures power-side resistance. Who is correct?
- a. Technician A only
 - b. Technician B only
 - c. Both Technicians A and B
 - d. Neither Technician A nor B
8. What tool is used to measure the AC ripple current output from an alternator?
- a. Digital voltmeter
 - b. Torque wrench
 - c. Belt tension gauge
 - d. Clamp-on ammeter

9. What step must be performed before removing an alternator from a vehicle?
- a. Disconnect the negative battery cable.
 - b. Remove the positive battery cable.
 - c. Turn off the headlights.
 - d. Run the engine to drain excess voltage.
10. What is the procedure for confirming a replacement alternator is correctly installed?
- a. Ensure the battery voltage is above 12.4 volts before installation.
 - b. Verify proper drive belt tension.
 - c. Check alternator wiring for resistance before installation.
 - d. Both a and b.

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Answer Key Quiz B

Correct Answers:

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