

REVIEW QUESTIONS

A6 Test Preparation

Note: *The lessons, exercises and tests in this manual are great preparation for taking the ASE A6 (electrical) certification test. However, that's only for the topics we've covered. We haven't covered the basic battery, starting, and charging systems, so we recommend a dedicated A6 test preparation guide if you feel weak in those areas.*

1. Which one of these is NOT needed for a complete circuit?
 - a. Conductor (wire)
 - b. Load
 - c. Power and ground
 - d. Switch

2. What will result from adding resistance to a series circuit?
 - a. Total resistance to decrease
 - b. Less current flow
 - c. More current flow
 - d. None of the above

3. What best describes Voltage?
 - a. It resists (prevents or limits) current flow in a circuit
 - b. It is measured in Amps
 - c. It is the pressure that forces current to flow in a circuit
 - d. All of the above

4. Current flow is:
 - a. Resistance in a circuit
 - b. Voltage drop in a circuit
 - c. The flow of electrons in a circuit
 - d. None of the above

5. A short in a circuit could cause a:
 - a. Fuse to blow
 - b. Circuit breaker to close
 - c. Battery to discharge
 - d. Both 'a' and 'c'

6. Voltage drop is:
 - a. Current consumed to push through a load
 - b. Resistance used to increase current flow
 - c. Voltage consumed to push current through a resistance
 - d. All of the above

SAMPLE ELECTRICAL TEST

REVIEW QUESTIONS

A6 Test Preparation – Continued

- 7. Current is measured in:
 - a. Ohms
 - b. Amps
 - c. Volts
 - d. Watts

- 8. Resistance is measured in:
 - a. Amps
 - b. Ohms
 - c. Watts
 - d. Volts

- 9. An example of a load is a:
 - a. Battery
 - b. Fuse
 - c. Switch
 - d. Motor

- 10. Which is an example of a power source?
 - a. Starter
 - b. Alternator
 - c. Battery
 - d. Both b and c

- 11. Which represents circuit protection?
 - a. Fuse
 - b. Circuit breaker
 - c. Fusible link
 - d. All of the above

True or False?

- 12. You must have a complete circuit for current to flow _____
- 13. In a series circuit, current flows in multiple paths _____
- 14. An open circuit will cause current to flow _____
- 15. Total resistance in a parallel circuit adds all the loads _____
- 16. Loads in a series circuit are added together to find total resistance _____
- 17. To find resistance, divide voltage by amperage _____
- 18. Voltage will drop over each load in a series circuit _____
- 19. Total Amps in a parallel circuit can be measured in a branch _____
- 20. A relay is both a load and a switch _____

REVIEW QUESTIONS

A6 Test Preparation – Continued

Match

- | | |
|----------------------|--------------------------|
| 21. Series circuit | a. electrical pressure |
| 22. Parallel circuit | b. prevents current flow |
| 23. Conductor | c. one path |
| 24. Insulator | d. passes current easily |
| 25. Amperage | e. volts times amps |
| 26. Voltage | f. unit of resistance |
| 27. Relay | g. more than one path |
| 28. Resistance | h. quantity of electrons |
| 29. Ohm | i. control device |
| 30. Wattage | j. slows current flow |

31. A DVOM is generally connected in _____ with a load.
- Series
 - Parallel
 - Both connections show the same results
 - None of the above
32. An Ammeter is always connected in _____ with a load.
- Series
 - Parallel
 - Both connections show the same results
 - None of the above
33. An Ammeter connected between the battery posts will result in:
- Battery discharge
 - Accurate readings
 - A voltage reading of the battery
 - A damaged meter
34. An Ohmmeter is connected to both sides of a circuit and reads infinity (or 'OL'). What does this indicate?
- A good circuit
 - An open
 - Low resistance
 - Good current flow

SAMPLE ELECTRICAL TEST

REVIEW QUESTIONS

A6 Test Preparation – Continued

35. A 0 (zero) Ohm reading indicates:
- High amperage
 - Low resistance
 - Incorrect meter hook up
 - A good voltage drop measurement
36. When choosing a DVOM:
- Use one with high impedance
 - Ensure the proper rating for voltage being measured
 - Choose one with MIN/MAX recording
 - All of the above
37. Prior to using your DVOM:
- Verify Ammeter fuses are good
 - Test on a known good power source to ensure accuracy
 - Verify test leads are properly connected
 - All of the above
38. Five 20-Ohm resistors are wired in Parallel. Total resistance is:
- 0 Ohms
 - 100 Ohms
 - 4 Ohms
 - 5 Ohms
39. How much current will flow in a 12 Volt circuit with 4 Ohms of resistance?
- 48 Amps
 - 3 Amps
 - .33 Amps
 - 4.8 Amps
40. In a series circuit:
- Current flow is equal at all points in the circuit
 - Voltage drops in proportion to the individual loads
 - Total resistance is the sum of all individual resistance
 - All of the above
41. In a parallel circuit:
- Current flow is proportional to the branch resistors
 - Voltage drops are equal in all branches
 - Total resistance is less than the smallest branch resistance
 - All of the above

REVIEW QUESTIONS

A6 Test Preparation – Continued

- 42. A switch with an N.C. designation indicates
 - a. Natural color
 - b. Normally closed
 - c. Neutral contact
 - d. Never closed

- 43. Location codes are generally given for:
 - a. Splices
 - b. Connectors
 - c. Components
 - d. All of the above

- 44. A dashed line around a component indicates:
 - a. A complete component view
 - b. A partial component view
 - c. A computerized component
 - d. High voltage is present

True or False?

- 45. Infinity is displayed as ‘---’ or ‘OL’ on a DVOM _____
- 46. DVOM voltage measurements are polarity sensitive _____
- 47. Maximum current flow is measured in kilowatts _____
- 48. You never have to convert a DVOM reading to other units _____
- 49. Ammeters are always connected in parallel _____
- 50. A short circuit will always cause a fuse to blow _____
- 51. A short can occur before or after a load _____
- 52. Circuits in modern vehicles are always series circuits _____
- 53. Computer controlled circuits can be tested with a test light _____
- 54. Circuit protection is always located on the ground side _____
- 55. A jumper wire can be used to bypass a load _____
- 56. A jumper wire can be used to bypass a switch _____
- 57. A fused jumper should always be used during circuit testing _____
- 58. Voltage drops as ‘work’ is done _____

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A6 Test Preparation Answers

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True or False?

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