

## 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?**

12. You must have a complete circuit for current to flow T
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