

Name \_\_\_\_\_

**SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.**

1) How should a wire repair be done if the repair is under the hood where it is exposed to the outside?

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2) What is the difference between a wire and a cable?

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3) What is the difference between the American wire gauge (AWG) system and the metric system?

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4) How do fuses, PTC circuit protectors, circuit breakers, and fusible links protect a circuit?

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5) What is the difference between a terminal and a connector?

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## Answer Key

Testname: SHORT 44

1) A wire repair should include the following steps:

- a. Strip the ends of the wire.
- b. Make a mechanical connection using solder or a crimp-and-seal fastener.
- c. Protect the repair using heat shrink tubing or heating the connector to melt the glue inside.

Page Ref: 510-511

2) While there is no real standard, the usual practice is to designate any wire AWG 4 or larger (smaller number) as a cable and smaller wire as wire.

Page Ref: 504

3) The AWG system uses numbers to represent the size of the conductor and the higher the number, the smaller the wire. The metric system states the actual size of the conductor in square millimeters (mm<sup>2</sup>).

Page Ref: 503-504

4) Fuses melt if current flow exceeds the rating of the fuse. A PTC circuit protector increases in resistance if the current exceeds the rating of the device. Fusible links will melt if excessive current flows through the link, destroying the device.

Page Ref: 505-508

5) A terminal is the metal part attached to the end of a wire and makes the electrical connection to another terminal or a component. A connector is the plastic part that houses the terminal(s) and provides the mechanical (not the electrical) connection to another connector or component.

Page Ref: 509