Automotive Electricity and Electronics, 6th Edition
Chapter 8

Name_____

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

1) Explain why an increase in resistance in the series part of a series-parallel circuit will affect the current (amperes) through the parallel legs (branches).

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2) What would be the effect of an open circuit in a series portion of a series-parallel circuit?

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3) What would be the effect of an open circuit in one leg of a parallel portion of a series-parallel circuit?

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4) Why are series-parallel circuits used in automotive applications?

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5) What automotive circuits are in series-parallel?

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1) If the resistance increases in the series portion of a series-parallel circuit, the voltage is dropped and the current is reduced through the circuit.
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2) If an open circuit were to occur in the series portion of a series-parallel circuit, it would stop the flow of current through the rest of the circuit or the parallel leg where the open occurred.
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3) An open in one branch of a parallel leg of a series-parallel circuit will affect only those components in the parallel leg that has the open.
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4) If a conventional parallel circuit, such as a taillight circuit, had an electrical fault that increased the resistance in one branch of the circuit, the amount of current flow through that branch will be reduced.
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5) A headlight and starter circuit is an example of this type of series–parallel circuit. A headlight switch is usually connected in series with a dimmer switch and in parallel with the dash light dimmer resistors. The headlights are also connected in parallel along with the taillights and side-marker lights.
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