Automotive Electricity and Electronics, 6th Edition
Chapter 13

Name_____

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

1) How should two capacitors be electrically connected if greater capacitance is needed?

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2) Why is a large capacitor used in some high-powered sound systems?

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3) How does a capacitor store an electrical charge?

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4) How can a capacitor be used as a power source?

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5) How can a capacitor be used as a noise filter?

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1) To increase the capacitance, two capacitors should be connected in parallel.
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2) A capacitor can be used to supply electrical power for short bursts in an audio system to help drive the speakers. Woofers and subwoofers require a lot of electrical current that often cannot be delivered by the amplifier itself.
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3) A capacitor stores an electrical charge by using a condenser, such as aluminum foil separated by an insulator, where electrons are stored at a voltage potential.
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4) A capacitor can be used as a power source if it is first changed by being connected to an electrical circuit. When the circuit is opened, the capacitor can supply electrical current when it is discharged through a circuit.
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5) A capacitor is used on a noise filter because most radio noise is AC and a capacitor passes AC voltage. A capacitor connected to the power lead will then pass the AC voltage to ground through the capacitor without affecting the DC power line.
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