Advanced Automotive Electricity and Electronics
Chapter 11

Name_____

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

1) How is AC voltage inside the alternator changed to DC voltage at the output terminal?

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2) How is the computer is used to control an alternator?

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3) How can a small electronic voltage regulator control the output of a typical 100-ampere alternator?

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4) What is the purpose of an OAP or OAD?

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5) Why do voltage regulators include temperature compensation?

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6) What are the component parts of a typical alternator?

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1) The rectifier diodes change AC from the stator windings to DC at the output terminal of the alternator.
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2) The computer controls the output of the generator by controlling the current flow through the field (rotor).
Page Ref: 137-138
3) The regulator controls the current flow through the field (rotor). Zero field current equals no generator output and maximum field current (about 5 amperes) results in maximum generator output.
Page Ref: 136
4) The purpose of an overrunning alternator pulley (OAP) or an overrunning alternator dampener (OAD) is to reduce noise and vibration in the accessory drive belt system.
Page Ref: 129-130
5) Voltage regulators are temperature compensated to provide a slightly higher charging voltage when the battery is cold and to prevent from overcharging a hot battery.
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6) The components of a typical alternator include the drive-end housing, the slip-ring housing, rotor, rectifier diodes, and a stator.
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