Automotive Electricity and Electronics, 6th Edition
Chapter 10

Name_____

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

1) What is the difference between an oscilloscope and a graphing multimeter?

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2) What are the differences between an analog and a digital oscilloscope?

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3) What is the difference between a positive trigger and a negative trigger?

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4) Why are DC signals that change called pulse trains?

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5) What is the difference between DC coupling and AC coupling?

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1) The difference between an oscilloscope and a graphing multimeter is that a graphing multimeter (GMM) simply displays the reading of the meter on a graph, whereas an oscilloscope displays the voltage directly and faster.
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2) An analog oscilloscope shows voltage changes as they occur and the waveform cannot be captured or saved. A digital storage oscilloscope (DSO) records the voltage measurements as a series of dots and then connects the dots to display a waveform, which can be stored and viewed later after the event.
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3) A positive trigger is a trigger that occurs at a rising (positive) edge of the signal (waveform).
A negative trigger is a trigger that occurs at a falling (negative) edge of the signal (waveform).
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4) DC signals that change are called pulse trains because the voltage remains positive. Alternating current (AC) voltage signals are both positive and negative voltage. Therefore, when a DC voltage signal changes from high to low, the most commonly used term to describe that type of signal is a pulse train.
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5) DC coupling allows the scope to display both AC and DC voltage signals whereas AC coupling allows the scope to display only AC voltage signals and blocks all DC signals.
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