Automotive Technology 7th Edition
Chapter 40: Digital Storage Oscilloscopes
Short Answer Quiz

Name: _____ Date: _____

1. Describe the significance of the graticule in an oscilloscope display and how it aids in measurements.

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2. How does a DSO differ from an analog scope in terms of capturing and displaying voltage patterns?

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3. Explain the importance of a high sampling rate in a DSO. Why might a technician prefer a DSO with a high sampling rate?

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4. Describe the concept of "time base" in an oscilloscope. How does adjusting the time base affect the display of waveforms?

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5. When setting up an oscilloscope to observe a throttle position sensor waveform, how should the volts per division be set to view the entire waveform from 0 to 5 volts?

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6. What is an external trigger in the context of an oscilloscope, and when might it be used?

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7. Define a pulse train signal and provide an example of its application in automotive systems.

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8. Differentiate between duty cycle and pulse width. How are they measured, and why are they significant in automotive diagnostics?

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9. Explain the advantages of using a multi-channel oscilloscope, such as a two-channel or four-channel scope, in automotive diagnostics.

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10. If a DSO displays a signal showing the voltage of a battery, what would the display typically show in terms of horizontal lines?

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