

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.
2. How does a DSO differ from an analog scope in terms of capturing and displaying voltage patterns?
3. Explain the importance of a high sampling rate in a DSO. Why might a technician prefer a DSO with a high sampling rate?
4. Describe the concept of "time base" in an oscilloscope. How does adjusting the time base affect the display of waveforms?
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?

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

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

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

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