

Name _____

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

1) What is the purpose of dedicated short-range communications?

2) What is the purpose of the actuators in an autonomous vehicle?

3) When is the calibration of a camera on an autonomous vehicle required?

4) How does radar operate?

5) Why does Lidar work poorly in foul weather?

Answer Key

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- 1) Dedicated short-range communication (DSRC) is used for vehicle-to-vehicle communication, as well as the vehicle to the infrastructure.
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- 2) The multi-domain controller processes the information from the many different inputs in the advanced driver assistance program. It is used to control the vehicle through actuators in the engine, transmission, steering, brakes, human-machine interface (HMI), and vehicle-to-everything (V2X) systems.
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- 3) Calibration of the camera is required when one or more cameras are replaced or a mounting component, such as a windshield, bumper cover, mirror, or door, is replaced. The calibration is an in-shop static process.
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- 4) Radar transmits a radio wave at a specific frequency. When the radio wave contacts an object, the radio wave bounces off that object and returns to the radar. All radar uses the Doppler Effect to calculate position and speed of another object.
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- 5) The operation of LiDAR is diminished by bad weather. The light pulses reflect off rain or snow, making the object difficult to define.
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