
Introduction to Sensors

Final Assessment Participant Guide

Introduction

The purpose of this assessment is to determine your understanding of sensors after having completed the *Introduction to Sensors Learning Module*.

1. Which of the following is a mechanical sensor?
 - a. Oxygen detector
 - b. Infrared thermometer
 - c. Barometer
 - d. Geiger counter

2. Which of the following BEST describes a sensor? A device that
 - a. produces a readable output representative of a change.
 - b. quantifies a value on its input and produces a readable output.
 - c. converts one form of energy to another form of energy.
 - d. converts a change on the input into a proportional movement.

3. What type of MEMS sensor is currently used for detecting analytes for biohazard detection, medical diagnosis, and food processing?
 - a. Mechanical Sensor
 - b. Chemical Sensor
 - c. Electrical Sensor
 - d. Thermal Sensor

4. An airbag deployment sensors use micro-_____ to sense a particular motion requiring the need for airbag deployment.
 - a. accelerometers
 - b. gyroscopes
 - c. photodetectors
 - d. barometers

5. Which of the following is NOT a sensor?
 - a. Infrared thermometer
 - b. Geiger counter
 - c. Enose
 - d. Thermocouple

6. A thermal sensor that uses a change in a coil's resistance to measure temperature uses _____ as the transducer.
- Infrared detectors
 - diaphragms
 - capsules
 - RTDs
7. A transducer is to a sensor as
- the sun is to a plant
 - a book is to its cover
 - an ear is to the brain
 - wood is to a fire
8. One of the biggest challenges of micro-sensors vs. macro-sized sensors is to develop
- micro-sized devices that are as durable as the macro-sized equivalents.
 - a cheaper process for mass production of micro-sized devices.
 - devices that are more accurate than their macro-equivalents.
 - micro-sized batteries that are as long lasting as macro-sized batteries.

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