

1. A light sensor (photoresistor) is an analog sensor.

☒ True

☐ False

2. A microphone is a digital sensor.

☐ True

☒ False

3. A push button is an analog sensor.

☐ True

☒ False

4. A keyboard is a digital sensor.

☒ True

☐ False

5. Which of the following components are actuators? Select all that apply.

☒ A servo motor

☐ A thermometer

☒ An LED

☐ A CMOS camera

☒ A heating element

6. The component of an embedded system that executes a program is:

- An FPGA
- An analog-to-digital converter
- A microcontroller
- A sensor/actuator pair

7. An analog-to-digital converter is common in embedded systems because

- Many sensors are analog while the microcontroller is digital.
- Analog computation is faster than digital
- Analog computation uses less battery power than digital computation
- Digital data is generally more compact than analog

8. Consider the anti-lock braking system in a car. What are the main sensors and actuators of this system from the perspective of the driver?

- Accelerator pedal and turn signal
- Gearshift and dashboard monitor
- Brake pedal and steering wheel
- Brake pedal and brake calipers and pads