

CSE 360 Sec 3 (QUIZ-3)

Total points 9/15 ?

Sensors and Modern Development Board

✓ Which statement(s) is/are true for active and passive sensors? * 2/2

- ☐ Passive sensors always need to emit something to sense.
- ☐ Active sensor is called active because it is installed with a motor.
- ☐ Active sensors emit signals to sense the environment but it is not required.
- ☒ The same passive sensor can be used as an active sensor when it uses an emitter to sense properly. ✓

✓ All transducers are sensors but not all sensors are transducers. Is the statement true or false? * 1/1

- ☒ False ✓
- ☐ True

✗ Suppose I want to measure the resistance of a component and for that I attach a device to it. I noticed that the value of resistance increased during nighttime unlike day time. What type of device I might have used to get this type of result? * 0/1

- ☐ Resistance Temperature Detector
- ☐ Positive Temperature Coefficient Thermistor
- ☐ Negative Temperature Coefficient Thermistor
- ☒ Light Dependent Resistor ✗

Correct answer

- ☒ Negative Temperature Coefficient Thermistor

Student ID *

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✗ Which one is required for doing Specific Task * 0/1

- ☐ Arduino
- ☒ Both ✗
- ☐ Raspberry Pi

Correct answer

- ☒ Arduino

✓ Main difference between RTD and Thermistor is: * 2/2

- ☐ RTD use junction of two material but Thermistor use single material
- ☒ Type of material- one is metal and other one is polymer or ceramic ✓
- ☐ Both are same- used to measure temperature
- ☐ RTD is used in IC where Thermistor is not

✓ On which parameter Sensor effectiveness depends? * 1/1

- ☐ Resistivity
- ☐ Radiation
- ☒ Sensitivity ✓
- ☐ Accuracy

✓ How many USB Ports does Raspberry Pi has? * 1/1

☐ 2

☐ 5

☒ 4 ✓

☐ 1

✗ Assume a scenario, where some coal miners want to work deep under the ground base where they don't know how deep they have to work under. / For this situation which sensor(s) can be used? * 2

☐ Electromagnetic Radiation of IR sensor

☐ Resistivity of LDR sensor

☐ time and distance measurement of Sonar Sensor

☒ Mechanism of Proximity sensors ✗

Correct answer

☒ time and distance measurement of Sonar Sensor

✓ Which rays are used to measure the oxygen saturation in blood? *

☒ IR ✓

☐ UV

☐ Light

☐ Photo Emission

✓ Which of the following variants of Raspberry Pi comes with an inbuilt wi-fi? * 1

☐ Raspberry Pi 2

☒ Raspberry Pi 3 ✓

☐ Raspberry Pi Zero

☐ Raspberry Pi 2 B

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✗ LDR used to sense: * 0/1

☐ Infrared

☐ X-Ray

☒ None of above ✗

☐ Electromagnetic radiation

Correct answer

☒ Electromagnetic radiation

✗ Which material has the property of generating AC voltage due to vibration? * 0/1

- ☐ Pyro electric Material
- ☐ Electromagnetic Material
- ☐ Piezoelectric Material

☒ Conductive Material ✗

Correct answer

☒ Piezoelectric Material

✓ On which principal does an IR Sensor work? * 1/1

- ☐ Object breaking
- ☐ All the above
- ☐ Object radiation

☒ Object detection ✓

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