You are taking "The Last Fight" as a timed exam. The timer on the right shows the time remaining in the exam. To receive credit for problems, you must select "Submit" for each problem before you select "End My Exam". Show Less

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MCQ

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Q1
1.0 point possible (graded, results hidden)

Suppose you're developing a wild life observation system. And you decide to use two sensors for the project:

1) An Ultra-sonic sensor to observe an object in motion, and to determine how far away it is.

2) An Infrared Camera to create a thermal imagery of the object in focus to better understand, if it is a living object or not.

What are the types of the sensors that are mentioned above?

- ◯ Ultra-sonic sensor: Active Sensor, Infrared Camera: Active Sensor.
- ◯ Ultra-sonic sensor: Passive Sensor, Infrared Camera: Passive Sensor.
- ⬤ Ultra-sonic sensor: Passive Sensor, Infrared Camera: Active Sensor.
- ◯ Ultra-sonic sensor: Active Sensor, Infrared Camera: Passive Sensor.

Submit   You have used 0 of 1 attempt

💾 Save

Q2
1.0 point possible (graded, results hidden)

While using a thermistor, which defines the change in resistance based on the fluctuation of temperature, which of the following statements are true?

- ◯ In a PTC (Positive Temperature Coefficient) Thermistor, temperature is inversely proportional to the resistance.
- ◯ In an NTC (Negative Temperature Coefficient) Thermistor, temperature is directly proportional to the resistance.
- ◯ A thermistor acts as an active circuit component.
- ⬤ None of the above.

Submit   You have used 0 of 1 attempt

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Q3
1.0 point possible (graded, results hidden)

In a Walkie-Talkie the communication between two users is mediated using the following method:

As a user speaks, the voice is picked up by an embedded microphone and encoded onto a radio frequency and transmitted through the help of antennas. Which is then picked up at the other end and decoded from the radio signal to eventually drive a speaker.

Which statement is true?

- ◯ Data is transferred in full duplex mode.
- ⬤ Synchronization is absent from the transmission manner.
- ◯ The data stream flows at a constant rate.
- ◯ Data is transferred in the form of Blocks or Frames.

Submit   You have used 0 of 1 attempt

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Q4
1.0 point possible (graded, results hidden)

In an SPI (Serial Peripheral Interface) protocol, which of the following is true:

- ◯ As the master switches SS (Slave Select) to high, it activates the slave.
- ◯ Slave devices control the clock.
- ◯ Implementation of multiple masters is possible.

( ) Full duplex protocol. Data can be sent and received at the same time.

Submit   You have used 0 of 1 attempt

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Q5

1.0 point possible (graded, results hidden)

While building a smart garden monitoring system, you're trying to grow plants in a controlled atmosphere. And you would like to measure the humidity in a controlled space for your project.

What type of sensor or an aspect a of sensor is essential in measuring the moisture in the atmosphere?

( ) Capacitive Sensor.

( ) Both Resistive and Conductive.

( ) Thermal Conductivity.

( ) Resistive Sensor.

Submit   You have used 0 of 1 attempt

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Q6

1.0 point possible (graded, results hidden)

A doctor in an OT (Operation theater) has a pregnant patient on the table. The doctor now has to check for the pulse, heartbeat and the structure of the baby to generate a report on how healthy the baby is, or how far the patient is, in their duration of pregnancy.

What combination of a sensor setup is the most reliable in this scenario?

( ) An Active and Light-based sensor.

( ) A Passive and Electro-Magnetic sensor.

( ) An Active and Sound-based sensor.

( ) A Passive and Light-based sensor.

Submit   You have used 0 of 1 attempt

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Q7

1.0 point possible (graded, results hidden)

A Thermocouple produces an output voltage based on:

( ) Circuit parameters.

( ) Temperature.

( ) Humidity.

( ) Input Voltage stepping.

Submit   You have used 0 of 1 attempt

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Q8

1.0 point possible (graded, results hidden)

In the direct communication between two UARTs, both must operate at the same baud rate. But what is the maximum threshold of difference for baud rate between the transmitting and receiving UARTs.

( ) 5%.

( ) 10%.

( ) 20%.

( ) There is no specific threshold.

Submit   You have used 0 of 1 attempt

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Q9

1.0 point possible (graded, results hidden)

The process which allocated data among all blocks of SSD and has great influence on life span of SSD is:

Select an option   Wear levelling

Q10

1.0 point possible (graded, results hidden)

In NAND cell, the data are stored as charged state, Electrons are stored in the floating gate, which then reads as charged "1" or not-charged "0". The statement is:

Select an option ▾

False

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Wear leveling