Quiz

Note: It is recommended that you save your response as you complete each question.

Question 1 (1 point)

An accelerometer sensor measures both gravity and linear acceleration. What value will the accelerometer measure while stationary?

○ 0g

○ -1g

◉ 1g

[Save]

Question 2 (1 point)

Silicon Labs humidity and temperature sensors have unique applications and use requirements that are not common to other conventional (non-sensor) IC solutions. Select all that apply.

☑ Prevent contamination of the sensor through-out its product life cycle

☑ Humidity sensor "memory"

☑ The need to protect the sensor during board assembly

☐ Access to the ambient air

[Save]

Question 3 (1 point)

In an aerospace coordinate system, which direction does the Z-axis point?

○ Left

◉ Downward

○ Upward

○ Right

Save

Question 4 (1 point)

If the relative humidity was measured at 70% at 25C, what would be the approximate relative humidity at 24C?

○ 73.5%

○ 75%

○ 70%

○ 65%

◉ 66.5%

Save

Question 5 (1 point)

All accelerometers are not affected by rotations about the vertical axis.

◉ True

○ False

Save

Question 6 (1 point)

Using the Simplicity Energy Profiler, it was measured that the ADC and DMA operation took 44mS. If the ADC is set up to perform 12,500 conversion per second, how many conversions did the ADC perform during the measured 44mS?   550

Save

Question 7 (1 point)

Using the Simplicity Energy Profiler, it was measured that the ADC and DMA operation took 22mS. If the ADC is set up to performed 308 conversions during these 22mS, at what conversion rate is the ADC operating? (Just include the number below)   14000

Save

Question 8 (1 point)

You need to set up the Leopard Gecko's Acquisition time and prescaler of its ADC that requires a minimum of 4uS of acquisition time for the following ADC measurement requirements:

Samples per second: 20,000

Resolution: 12-bits

HFCLK: 14 MHz

What should the ADC prescaler be set to to enable the above sampling requirements? (Answer needs to be a number)

| 50 | abs | How many ADC clock cycles should the ADC Acquisition time be

set to? | 2 | abs |

Save

Question 9 (1 point)

Best practices in ESD protection of the Silicon Labs' humidity and temperature sensors. (select all that apply)

- [x] Environmental access port ground shield

- [ ] Unused leads should be connected to GND

- [x] Unused leads should be connected to VDD

- [x] Placement of the sensor so that high-level ESD events go to an exposed ground trace

Save

Question 10 (1 point)

Using the Simplicity Energy Profiler, it was measured that the ADC and DMA operation took 18mS. If the ADC is set up to perform 18,000 conversion per second, how many conversions did the ADC perform during the measured 18mS? | 324 | abs |

Save

Save All Responses   Go to Submit Quiz