Question 1

Not yet answered

Marked out of 1.00

Time left 0:11:52

An Analog to Digital Converter uses a reference voltage of 8V and a resolution of 12 bits. What is the **step size**?

- [ ] A. 8 / 12
- [x] B. $8 / 2^{12}$
- [ ] C. $2^{12} / 8$
- [ ] D. 12 / 8

Question 2

Not yet answered

Marked out of 1.00

Select the best answer. When choosing an Analog to Digital Converter unit for your project, you should consider...

- ○ A. Bandwidth
- ○ B. Conversion Time
- ◉ C. All of the above
- ○ D. Resolution

Clear my choice

Question 3

Not yet answered

Marked out of 1.00

What is the main purpose of the AREF pin in ATmega328p?

- [ ] A. Provide a reference voltage of 1.1V
- [x] B. Configure the resolution of the ADC unit
- [ ] C. Block any interference that the outside environment can have on the conversion process
- [x] D. Provide a reference voltage of your choice

Question 4

Not yet answered

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You need to convert an analog signal to a digital signal. You also need the converted digital signal to resemble the original analog signal as closely as possible. Which of the following should you do?

- [ ] A. Choose the largest step size possible for the ADC process
- [ ] B. Choose a conversion frequency higher than what is recommended by the manufacturer
- [ ] C. Have a V_{ref} value that is smaller than the maximum possible value of the analog input signal
- [x] D. Choose the smallest step size possible for the ADC process

Question 5

Not yet answered

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In Analog to Digital Conversion, what is meant by **acquisition time**?

- [ ] A. Another term for "conversion time"
- [x] B. Time for the converter to properly capture the input voltage level present at the channel
- [ ] C. Total time for the ADC process to finish
- [ ] D. All of the above

Question 6

Not yet answered

Marked out of 1.00

What is the type of Analog to Digital Conversion used in ATmega328p?

- [ ] A. Flash
- [x] B. Successive approximation
- [ ] C. Sigma-Delta conversion
- [ ] D. Direct conversion

Question 7

Not yet answered

Marked out of 1.00

ADC conversion involves

Select one:

- A. None of the above
- B. simulation
- C. Quantization
- D. subtraction
- E. summation

Clear my choice

Question 8

Not yet answered

Marked out of 1.00

ADC input is sampled by

Select one:

- A. None of the above
- B. Nyquist rate
- C. Lens rate
- D. Ohms rate
- E. Newton rate

Clear my choice

Question 9

Not yet answered

Marked out of 1.00

A measurement of the maximum speed at which the DACs circuitry can operate and still produce the correct output is called

Select one:

- A. maximum summation rate
- B. minimum summation rate
- C. minimum sampling rate
- D. maximum sampling rate
- E. None of the above

Clear my choice

Question 10

Not yet answered

Marked out of 1.00

Pulse width modulator is a type of

Select one:

- A. None of the above
- B. DAC
- C. AAC
- D. DDC
- E. ADC

Clear my choice