

Quiz #6

Due Apr 21 at 9:52am	Points 100	Questions 5	Available Apr 21 at 9:35am - Apr 21 at 9:54am 19 minutes	Time Limit 10 Minutes
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This quiz was locked Apr 21 at 9:54am.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	10 minutes	40 out of 100

Score for this quiz: **40** out of 100
Submitted Apr 21 at 9:45am
This attempt took 10 minutes.

Question 1

20 / 20 pts

Microcontroller with integrated 10-bit AD converter uses 1.5V internal voltage reference as Vr+ and Ground as Vr-.

What is the maximum error of the AD conversion in **MILLIVOLTS**?
Please use 4 digits of precision!

Correct!

1.4663

Correct Answers 1.4663 (with margin: 0.001)

Question 2

0 / 20 pts

How many megabytes (MB) of memory do you need to store one hour of a STEREO audio recording with 16-bits per sample and sampling frequency of 11,025 Hz?

Please note that 1KB = 1,024B!
Please use 2 digits of precision.

You Answered

Correct Answers

151.41 (with margin: 0.01)

Question 3

0 / 20 pts

Amplitude of the output signal is $A_{out}=0.001*A_{in}$, where A_{in} is amplitude of the input signal.

What is attenuation of the system in [dB]?

Don't forget to include sign of the result!

You Answered

Correct Answers

-60 (with margin: 0)

Question 4

20 / 20 pts

A signal is sampled at $F_s=20$ Hz and processed by FIR filter of length $N_B=80$.

What is the latency of output signal in **seconds** introduced by filtering?

Correct!

Correct Answers 2 (with margin: 0)

Question 5

0 / 20 pts

What is the value of the second coefficient ($b[1]$) of the 4-point moving average FIR filter?

You Answered

Correct Answers 0.25 (with margin: 0.01)

Quiz Score: **40** out of 100