Quiz 1

This quiz was locked Sep 15 at 1:10pm.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	16 minutes	19 out of 20

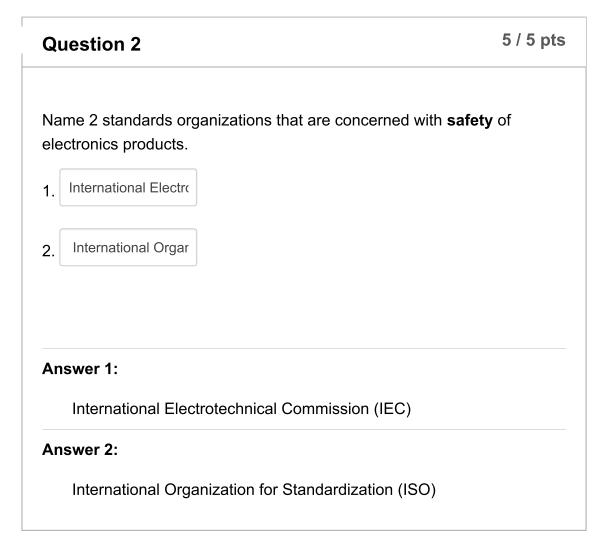
(!) Correct answers are hidden.

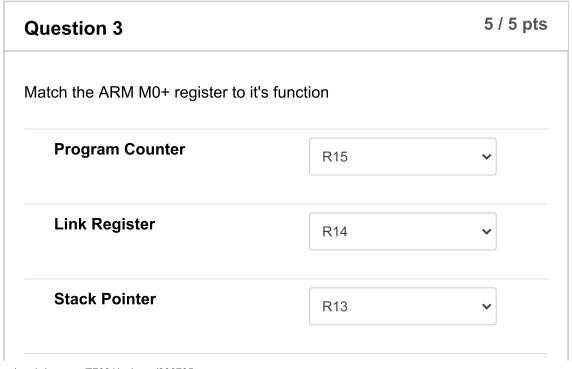
Score for this quiz: **19** out of 20 Submitted Sep 15 at 12:58pm This attempt took 16 minutes.

Incorrect

Provide 2 of the 4 reasons for designing embedded systems from an Architectural POV (point of view): It allows even non t It enables reuse of . Answer 1: It allows even non technical people the ability to estimate risks of a project. Answer 2: It enables reuse of components

Incorrect





Low General Purpose REgister

R0		~

Partial

Question 4	4 / 5 pts
Circle, True or false about the ARM Cortex M0+	
✓ It has a register bank of at least 16 32-bit registers T F	
It has a Link Register used to store the return addresss of a subroufunction call. T F	utine or
On reset the processor loads the program counter (PC) with the value the reste vector at 0x0000. T F	alue of
☐ It is a Harvard Architecture CPU. T F	
☑ It is a RISC Architecture CPU. T F	

Quiz Score: 19 out of 20

Quiz 2

This quiz was locked Oct 6 at 1:10pm.

Attempt History

	Attempt	Time	Score	
LATEST	Attempt 1	26 minutes	19 out of 20	

① Correct answers are hidden.

Score for this quiz: **19** out of 20 Submitted Oct 6 at 1:08pm This attempt took 26 minutes.

Question 1	2 / 2 pts
d. Answer the following questions about the APM programs	ning model:
d. Answer the following questions about the ARM programnWhere is the program counter kept in the register bank?	ning model:
R15	

Incorrect

Question 2 2 / 2 pts

b. Answer the following questions about the ARM programming model:

What is the purpose of the T bit?

The T bit reflects the operating state: when the T bit is set, the processor is

Incorrect

Question 3 2 / 2 pts

c. Answer the following questions about the ARM programming model: What is the purpose of the C bit?

C is set if the result of an unsigned operation overflows the 32 bit result reg

Question 4 2 / 2 pts

Answer the following questions about the ARM programming model:

a. How many general purpose registers are there?

13

Partial

Question 5 2 / 2 pts

b. Your Company has been asked to build an embedded system that controls a dishwashing machine. The customer is most concerned about longevity, reliability over temperature, and design cost. These are not expensive machines, so the unit cost of the embedded system is a major concern. Size, Weight, and Power are not a concern within reason.

Quiz 2: ECEN 5803-001,001B:Mastering Embedded Systems Processing speed required is moderate, 30 MIPs should be sufficient. A major concern is the ease of bug fixes, these must be easy to do. This is all the information you have been given. Choose 2 of the several standards organizations that your customer will need to respond to regarding this product:

FCC	
☑ UL/CSA	
✓ IEC	
DOD	
Telcordia	
□ IEEE	

2 / 2 pts **Question 6**

c. Your Company has been asked to build an embedded system that controls a dishwashing machine. The customer is most concerned about longevity, reliability over temperature, and design cost. These are not expensive machines, so the unit cost of the embedded system is a major concern. Size, Weight, and Power are not a concern within reason. Processing speed required is moderate, 30 MIPs should be sufficient. A major concern is the ease of bug fixes, these must be easy to do. This is all the information you have been given.

Would the Freescale (NXP) KL25Z128M4 be a workable processor choice for this product?

O No

Yes

Question 7	2 / 2 pts
2. Your Company has been asked to build an embedded system controls a dishwashing machine. The customer is most concerne longevity, reliability over temperature, and design cost. These ar expensive machines, so the unit cost of the embedded system is concern. Size, Weight, and Power are not a concern within rease Processing speed required is moderate, 30 MIPs should be suffic major concern is the ease of bug fixes, these must be easy to do is all the information you have been given.	ed about e not a major on. cient. A
a. Choose which implementation architecture is the most appropriate this design.	riate for

Discrete
O ASIC
○ FPGA
○ MPU
MCU
Embedded PC

Partial

Question 8 5 / 6 pts

Select all that are true about Simulink

/]	Simulink is used to model systems as part of model-based design
	nulink is a language for technical computing based in matrix thematics
2	Simulink can be used to simulate sampled-data systems
	Simulink does not allow previous designs to be reused

Quiz Score: 19 out of 20