Q6

Due Sep 30 at 11:59pm **Points** 80 **Questions** 4
Available until Sep 30 at 11:59pm **Time Limit** 20 Minutes

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	18 minutes	0 out of 80 *

* Some questions not yet graded

ⓘ Correct answers will be available on Oct 1 at 12pm.

Score for this quiz: **0** out of 80 *
Submitted Sep 30 at 11:34pm
This attempt took 18 minutes.

Question 1 — Not yet graded / 20 pts

Briefly compare CISC and RISC in terms of their impacts on CPU performance.

Your Answer:

Well, CISC has more complex instruction set where RISC is a reduced instruction set. The avg CPI on a CISC CPU will be higher but does more with one instruction than a RISC CPU. RISC CPI will be lower but requires multiple instructions in order to achieve the same task. Its really application specific but generally CISC is better overall for high end performance (compute intensive tasks) while RISC is good for low power devices like smart phones and embedded stuff.

CPI IC Cycle time CISC higher lower longer RISC lower higher shorter

Ok if no mention of cycle time.

Question 2

Not yet graded / 20 pts

Show two reasons why more registers may not be better?

Your Answer:

1. You would have slower access time due to the larger delay from implementing the logic gates required for it to work. You could also take up more space on the die.

2. The cost is also an aspect(SRAM is expensive) as well as the actual bits of the CPU. You want the register count to be directly proportional to bits of the CPU and larger ones wont work.

1. slower access time

2. more bits required in instruction encoding to encode register names.

Question 3

Not yet graded / 20 pts

What is aligned memory access?

Your Answer:

Aligned memory access is when the address % byteSize == 0.

Memory access aligned if A mod s = 0 where

A is memory address

s is the number of bytes in a word.

Question 4

Not yet graded / 20 pts

Is it true that the number of addressing modes supported in ISA does not matter? briefly explain your answer.

Your Answer:

Flase, Im am pretty sure that the addressing modes do matter. The reason they increased the standard desktop from 32 bits to 64 bits is due to the memory and hard disk size requirements, as 32 bit couldnt handle mem/hdd sizes that we would consider small today. 2^64 is quite a bit more address space and I do not see us hitting that upper limit for a while, but eventually it will happen and thats when we will get 128 bit CPUs.

False, as more bits required in the instruction encoding to encode all addressing modes.

Quiz Score: **0** out of 80