		Course Name:	Computer Architecture	Course Code:	EE204
		Program:	BS(Computer Science)	Semester:	Fall 2019
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Student : Name:_____ Roll No._____ Section:_____

Question 1a [4]

What is the difference between instruction cache and TLB cache?

Question 1b [4]

What is write-back policy? What are the pros and cons of this strategy?

Question 2 [12]

Assume the miss rate of an instruction cache is 20% and the miss rate of the data cache is 10%. If a processor has a CPI of 3 without any memory stalls and the miss penalty is 50 cycles for all misses. Proportion of all loads and stores instructions is 40% of the program.

a. **Calculate the instruction cache stall cycles.**

b. **Calculate the data cache stall cycles.**

c. **Calculate the effective CPI.**

d. **Calculate the execution time for a program of 500 instruction on a processor with frequency of 1Ghz.**