

Course > Final As... > Final Ex... > Final Ex... < > **Final Exam Honor Code** 0 points possible (ungraded) On this exam, I will not cheat, use unfair means, join intentionally or unintentionally any online or offline group in which exam answers are posted or discussed, or engage in any behavior that would commonly be deemed academically unethical. I acknowledge that I may be suspended or expelled from Brac University if I am found to have engaged in any academically unethical behavior. I further recognize that non-compliance with the above may lead to further disciplinary actions which I accept without complaint. Do you agree with the statement? I agree with the statement Submit You have used 1 of 1 attempt **1** Answers are displayed within the problem



10.0/10.0 points (graded)

Consider below code sequence:

```
i. Subi $2, $1, 3
ii. and $12, $2, $5
iii. or $13, $6, $7
iv. lw $1, 24($13)
v. beq $14, $1, IF
vi. sw $14, 100($16)
```

What should be the value of the RegDST, ALUSrc, MemToReg and MemWrite for instruction vi? Write a 4-bit binary expression where each digit corresponds to the value of each of the mentioned control signals. For example, if the values are 0,0,x,0 respectively then you will write 00x0. Use 'x' for don't care



How many clock cycles would you need if you only used the Stalling method to remove the hazard?



What would be the CPI if you only used the Stalling method to remove the hazard? Write only 2 digits after the decimal without rounding

2.66 **✓** Answer: 2.66

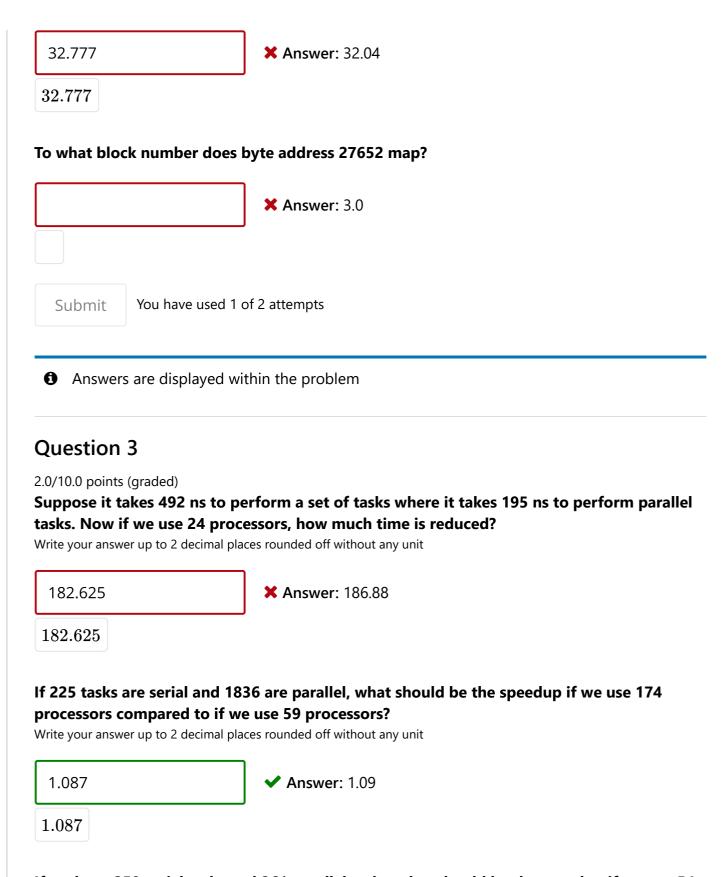
How many clock cycles would you need if you only use Stalling and Forwarding method to remove the hazard?

11 **✓** Answer: 11

1.83	digits after the decimal without rounding  ✓ Answer: 1.83
1.83	
Submit You have	e used 1 of 2 attempts
• Answers are disp	layed within the problem
• •	oped cache can store 32 KiB of data. Each block contains 2048 words th is 106 bit. Now answer the following questions:
How many blocks are	e there in the cache?
4	✓ Answer: 4
How many data bits a	are required for the cache?
15 15	✓ Answer: 15
How many tag bits an	re required for the cache?
91	✓ Answer: 91
What is the actual ca	che size in KiB? (including the valid and tag bit)

Write your answer in KiB up to 2 decimal places. Do not write a unit.

What would be the CPI if you only used the Stalling and Forwarding method to remove the



If we have 259 serial tasks and 261 parallel tasks, what should be the speedup if we use 54 processors compared to a single processor?

Write your answer up to 2 decimal places rounded off without any unit

	X Answer: 1.97
hat should be the percentand	ge of potential based on the previous question information
ite your answer up to 2 decimal plac	es rounded off without any unit
	<b>X</b> Answer: 3.65
	be needed to make the task in the previous question 2 times
ster compared to a single p	rocessor?
	<b>X</b> Answer: 261.0
Submit You have used 1 o	of 2 attempts
• Answers are displayed wit	:hin the problem
	<b>∢</b> Previous
	Next <b>&gt;</b>

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