

**BRAC UNIVERSITY**  
**Department of Computer Science and Engineering**

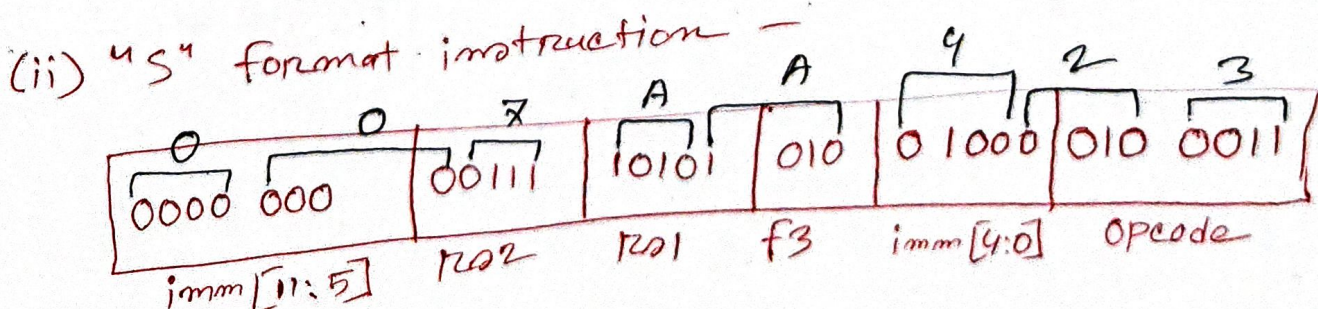
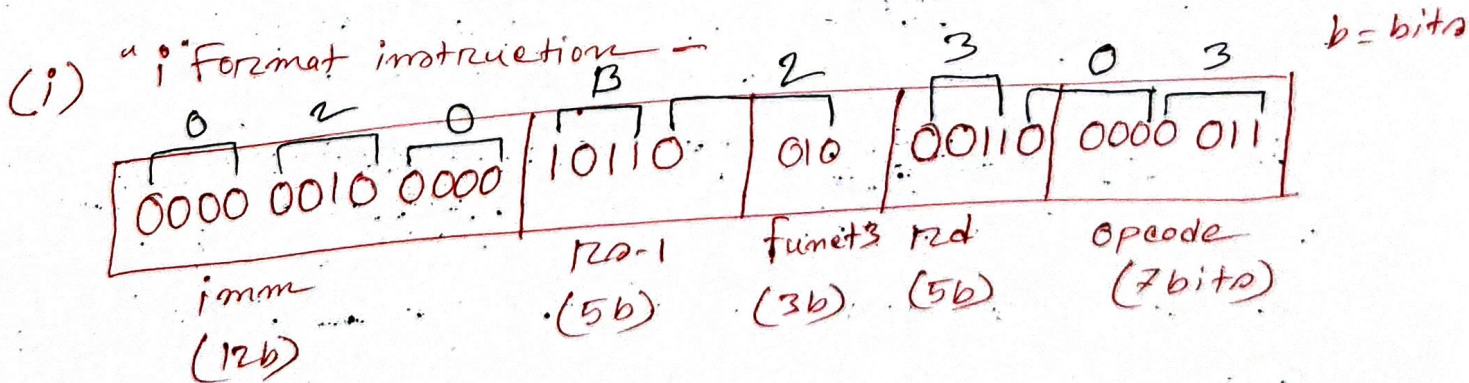
Examination: Surprise Test - 2  
 Duration: 10 minutes

Semester: Fall 2024  
 Full Marks: 05

**CSE 340: Computer Architecture**

Name: <u>Solution</u>	ID:	Section: 0
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Lines of Code	
Label1:	
BNE x24, X25, break	i. LH X6, 32(X22) [Opcode field value is (3) <sub>10</sub> ] <i>imm</i> <i>rd rd</i>
ADD X5, X5, X6	<div style="border: 1px solid black; padding: 5px; display: inline-block;">0x(020B2303)</div>
SUB X5, X22, X5	ii. SD X7, 8(X21) [Opcode field value is (35) <sub>10</sub> ] <i>imm</i> <i>rd rd</i>
SELI x22, X22, 3	<div style="border: 1px solid black; padding: 5px; display: inline-block;">0x(007AA423)</div>
LH X6, 32(X22)	<i>Double Word - 64 bits</i> <i>+ reg to mem</i>
SD X7, 8(X21)	
BEQ x0, x0, Label1	
Break:	<b>Note:</b> i. Refer to the table in the next page to find the funct3 value of Load and Store instruction. ii. Show the necessary calculations in your script. Finally, use the boxes above to write your answers.



	Data Size	Funct3		Data Size	Funct3
Moving data from memory to register. (Signed)	64 bits	000	Moving data from register to Memory.	64 bits ✓	010
	32 bits	001		32 bits	011
	16 bits	010		16 bits	001
	8 bits	011		8 bits	000
Moving data from memory to register. (Unsigned)	64 bits	100			
	32 bits	101			
	16 bits	110			
	8 bits	111			