

ECE2031 In-Class Exam Summer 2007

ANSWER SHEET

Name SOLUTION Section L0 _____ Student No. _____

Closed Books, Closed Notes, No computers or calculators.

Having read the Georgia Institute of Technology Academic Honor Code, I understand and accept my responsibility as a member of the Georgia Tech Community to uphold the Honor Code at all times. In addition, I understand my options for reporting honor violations as detailed in the code.

(Signature)

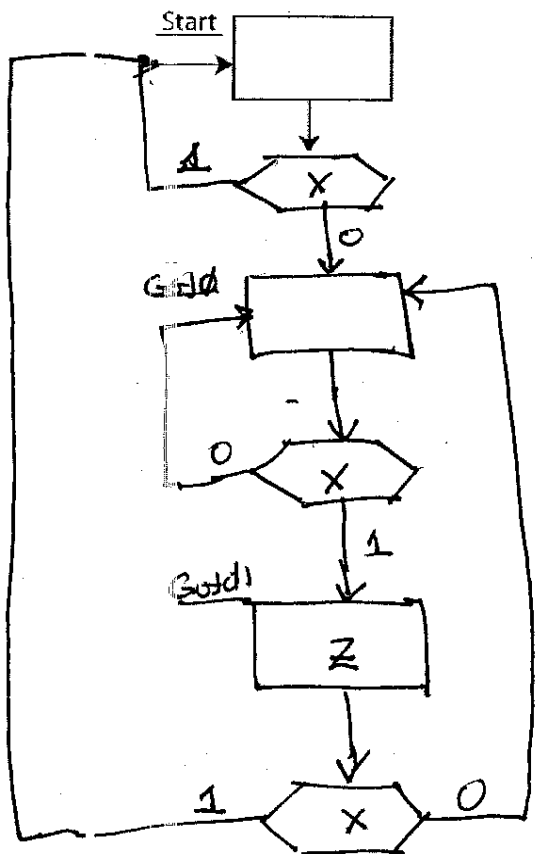
(Date)

CIRCLE YOUR SELECTED ANSWERS OR FILL IN AS NEEDED

1. a b c d e f g h i j k l m n (2 pts)
2. a b c d e f g h i j k l m n (2 pts)
3. a b c d e f g h i j k l m n (2 pts)
4. a b c d e f g h i j k l m n (2 pts)
5. a b c d e f g h i j k l m n (2 pts)
6. a b c d e f g h i j k l m n (2 pts)
7. a b c d e f g h i j k l m n (2 pts)
8. a b c d e f g h i j k l m n (2 pts)
9. a b c d e f g h i j k l m n (2 pts)
10. a b c d e f g h i j k l m n (2 pts)
11. a b c d e (5 pts)
12. a b c d e (5 pts)
13. a b c d e (5 pts)
14. a b c d e (5 pts)
15. a b c d e (5 pts)
16. a b c d e (5 pts)
17. a b (5 pts)
18. a b c d e (5 pts)
19. a b c d e (5 pts)

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20. Draw ASM diagram here (20 pts)



21. (15 pts)

	AB	00	01	11	10
CD	00	0	0	1	0
	01	0	1	1	0
	11	0	1	1	1
	10	1	1	0	0

$$Y = BD + ABC + ACD + \bar{A}C\bar{D}$$

There are two possible interpretations for the ASM problem. If your graded exam seems to have been regraded, it was because I realized that the alternate interpretation was reasonable. The problem stated "asserts its output Z if and only if the two most recent values of X have been 0, followed by 1," which I intended to mean "two most recent values of X have been: 0, followed by 1," where the colon is inserted here for clarity. But if you interpreted this to mean that the three most recent values have been two zeros, followed by 1, you got full credit. (In that case, you would have an extra state not shown here.) IN EITHER CASE, there can be more zeros before the 1, as long as Z is not asserted until the 1 comes. Probably the most common mistake was not staying in the "waiting for the 1" state when zeros kept coming.