

Digital Logic Design

Quiz 04

2024/04/30

姓名:

學號:

系級:

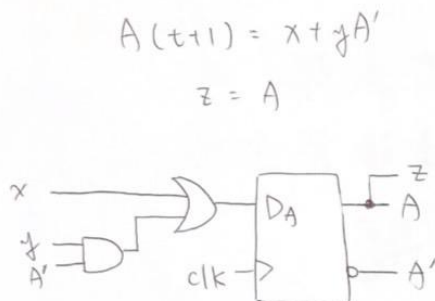
1. A sequential circuit with one DFF A, two inputs x and y , and one output z is specified by the following next-state and output equations.

$$A(t+1) = x + yA'$$

$$z = A$$

- (a) Draw the logic diagram of the circuit. (40%)
- (b) List the state table for the sequential circuit. (20%)
- (c) Draw the corresponding state diagram. (40%)

(a)



(b)

PS A	Input x y		NS A(t+1)	z
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	1	0
1	0	0	0	1
1	0	1	0	1
1	1	0	1	1
1	1	1	1	1

(c) x, y, z

