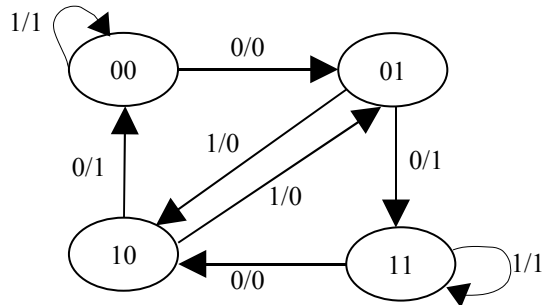


(0360-265) Computer Architecture
QUIZ – 4 IS 2008 (Time: 20 mins)

Student's Name:
Student Number:

- Q1. A sequential circuit has
- two Delay flip-flops A and B with inputs S_A, R_A and S_B, R_B respectively
 - one output Y, and,
 - one input X

The state diagram of the sequential circuit is given as follows:



Draw the State Table showing the following:

- (i) Present State of the two SR Flip-flops (ii) Input
 (iii) Next State of the two SR Flip-flops (iv) Output (v) S_A (vi) R_A

Solution

QA(t)	QB(t)	X	QA(t+1)	QB(t+1)	Y	SA	RA	SB	RB
0	0	0	0	1	0	0	x	1	0
0	0	1	0	0	1	0	x	0	x
0	1	0	1	1	1	1	x	x	0
0	1	1	1	0	0	1	0	0	1
1	0	0	0	0	1	0	1	0	x
1	0	1	0	1	0	0	1	1	0
1	1	0	1	0	0	x	0	0	1
1	1	1	1	1	1	x	0	x	0