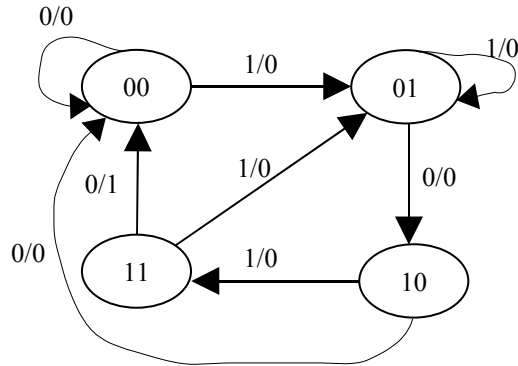


**(0360-265) Computer Architecture**  
**QUIZ – 4 IS 2008 (Time: 20 mins)**

Student's Name:
Student Number:

- Q1. A sequential circuit has
- two Trigger flip-flops A and B with inputs  $T_A$ , and  $T_B$  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 T Flip-flops | (ii) Input           |
| (iii) Next State of the two T Flip-flops  | (iv) Output          |
|   | (v) $T_A$ (vi) $T_B$ |

Solution

QA(t)	QB(t)	X	QA(t+1)	QB(t+1)	Y	TA	TB
0	0	0	0	0	0	0	0
0	0	1	0	1	0	0	1
0	1	0	1	0	0	1	1
0	1	1	0	1	0	0	0
1	0	0	0	0	0	1	0
1	0	1	1	1	0	0	1
1	1	0	0	0	1	1	1
1	1	1	0	1	0	1	0