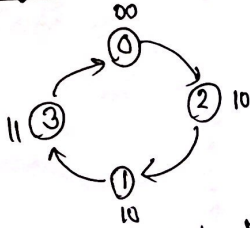


Roll: 1805098

$S_3 = 3, 0, 2, 1, 3, 0, 2, 1, \dots$

State Diagram:



00, 10, 01, 11, 00, 10, 01, 11

State Table:

PS	NS
0	2
2	1
1	3
3	0

State Diagram:

PS	NS
00	10
01	11
10	01
11	00

Excitation Table:

PS	NS
$y_2 y_1$	$Y_2 Y_1$
00	10
01	11
10	01
11	00

$T_2 T_1$
1 0
1 0
1 1
1 1

K-map:

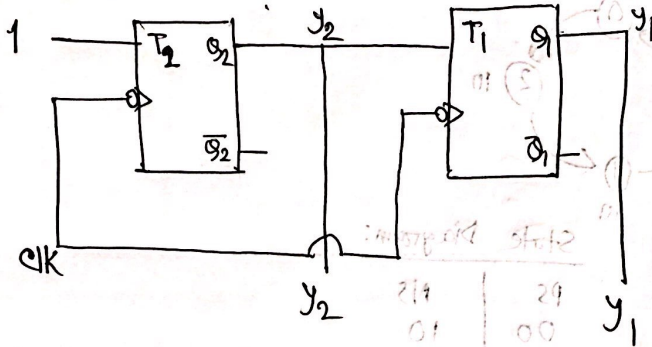
$y_2 \backslash y_1$	0	1
0	1	1
1	1	1

$\therefore T_2 = 1$

$y_2 \backslash y_1$	0	1
0	0	0
1	1	1

$T_1 = y_2$

# Circuit Diagram



$y_1$	$y_2$
00	00
01	10
10	01
11	11

$y_1$	$y_2$
00	00
01	10
10	01
11	11

$y_1$	$y_2$
00	00
01	10
10	01
11	11

$y_1$	$y_2$
00	00
01	10
10	01
11	11

$y_1$	$y_2$
00	00
01	10
10	01
11	11

$$y^T = 1^T$$

$y_1$	$y_2$
00	00
01	10
10	01
11	11

$$1 = y^T$$