

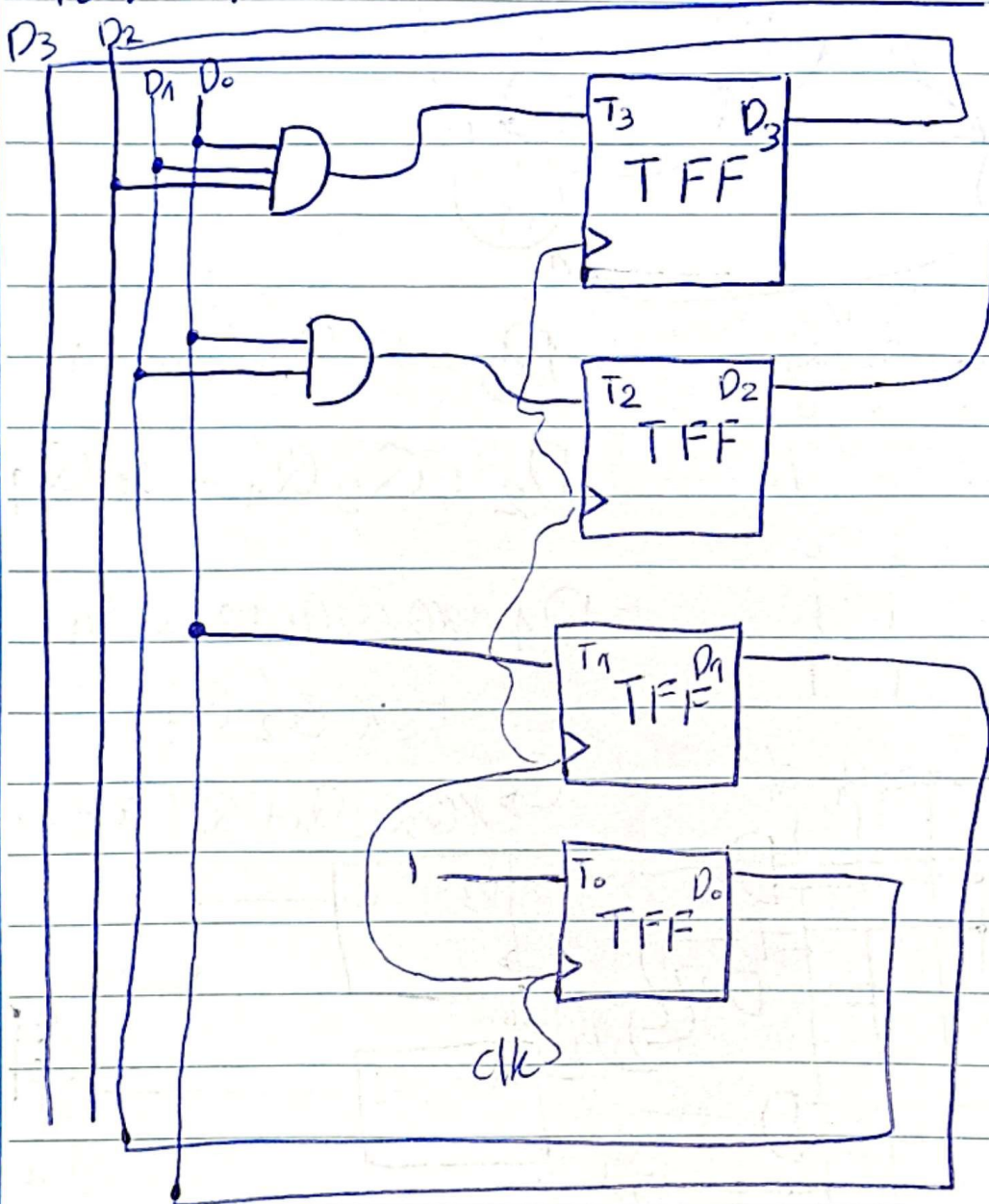
(۴ بیت عدد  $D_3 D_2 D_1 D_0$ ) : Ripple counter - 1

$T_3 : D_0 D_1 D_2$

$T_2 : D_0 D_1$

$T_1 : D_0$

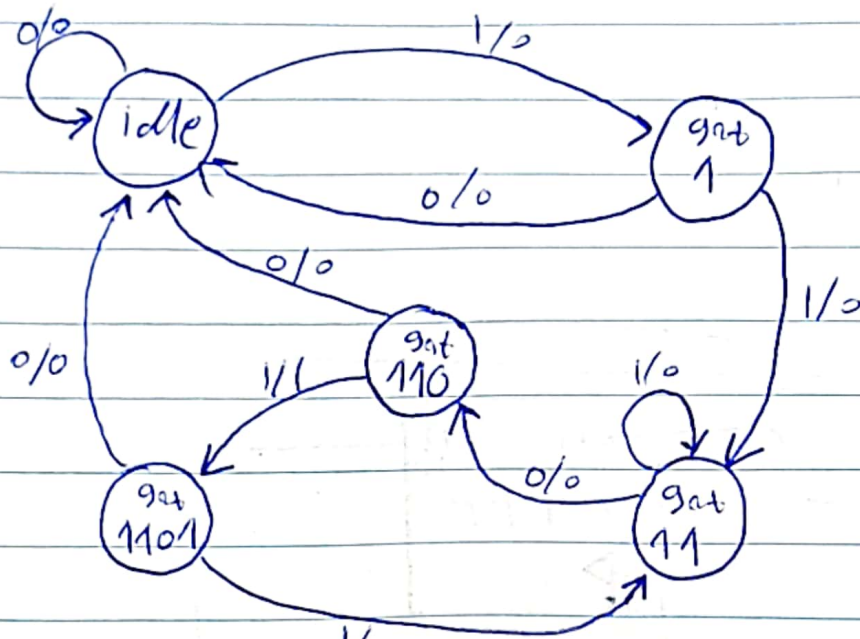
$T_0 : 1$



آشنا

1101 sequence detector:

-2



5/19/2

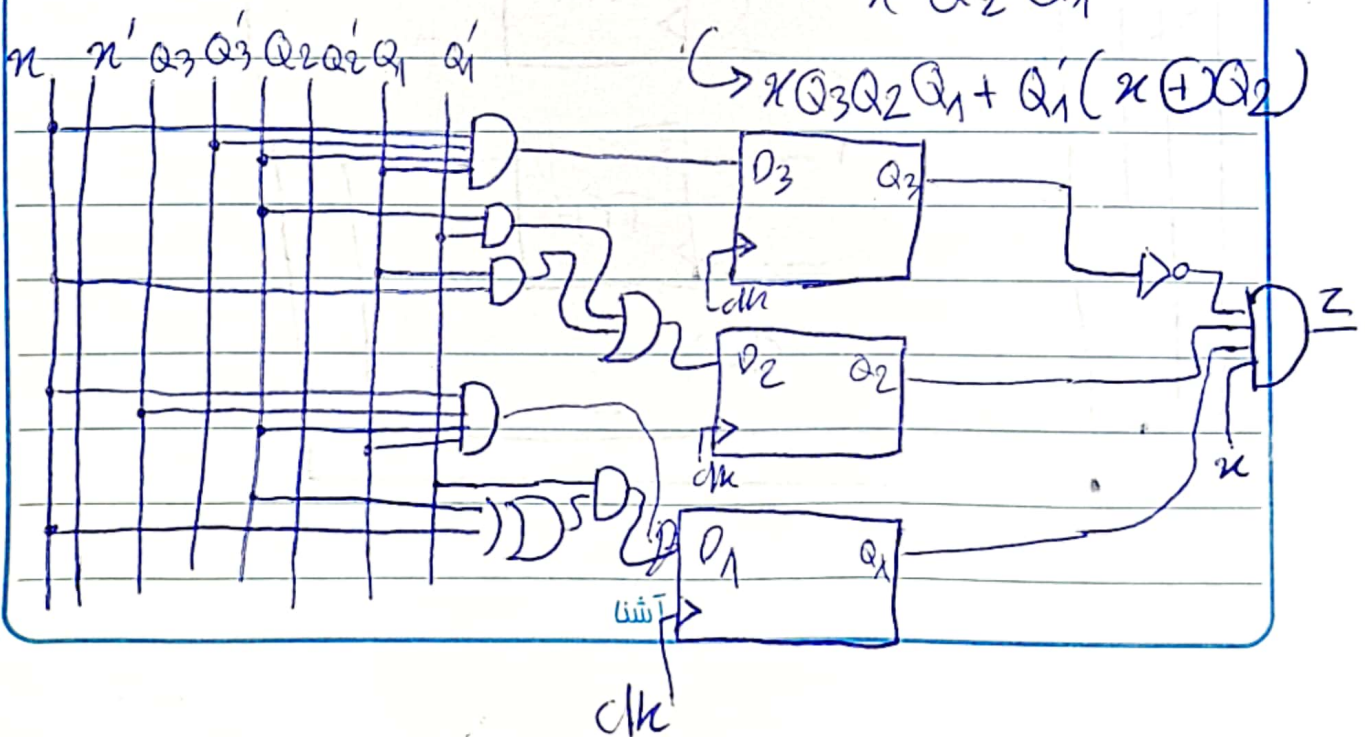
	$Q_3$	$Q_2$	$Q_1$
idle	0	0	0
got 1	0	0	1
got 11	0	1	0
got 110	0	1	1
got 1101	1	1	1

$$D_3 = \pi Q_3 Q_2 Q_1$$

$$D_2 = Q_2 Q_1' + \pi Q_1$$

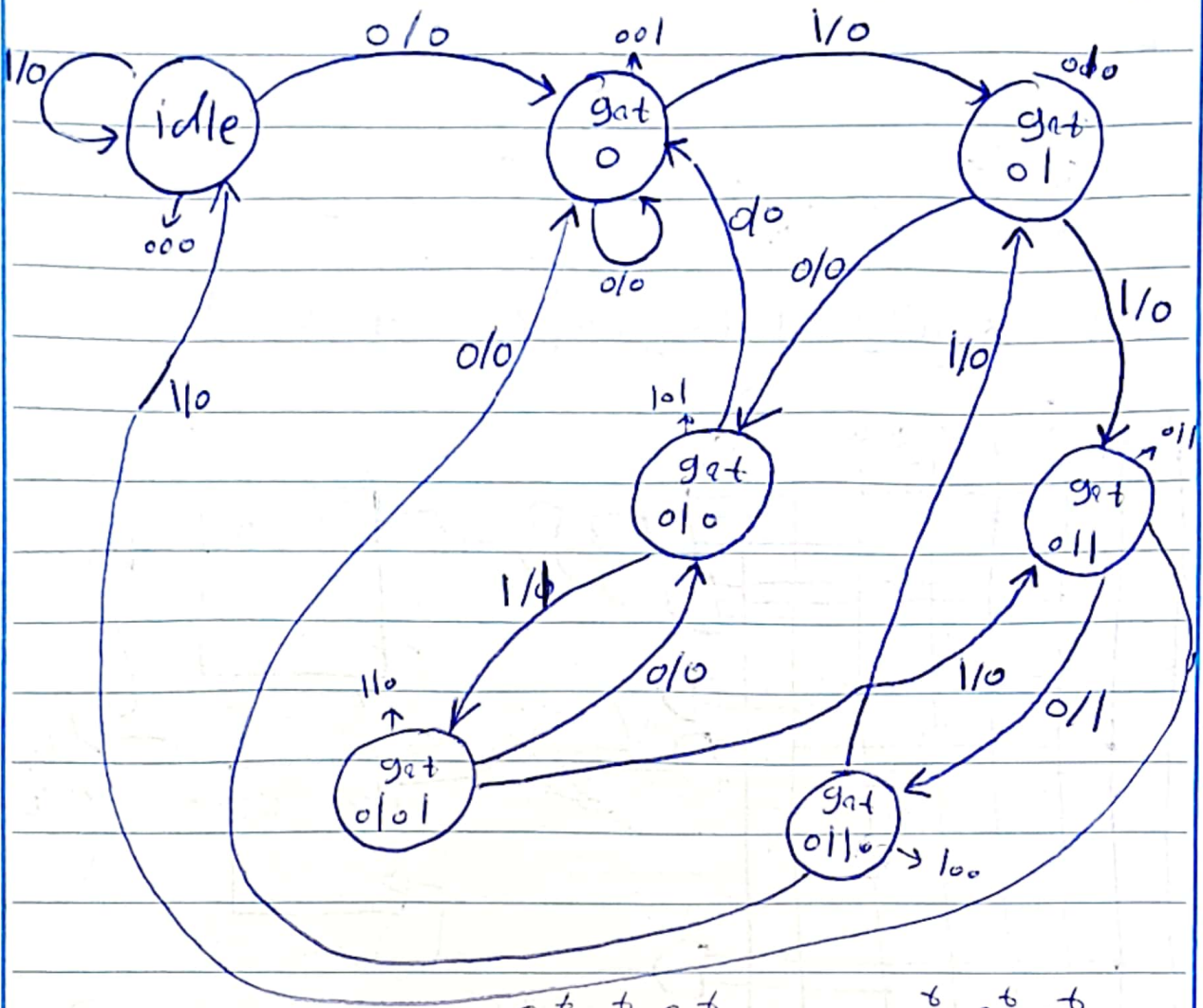
$$D_1 = \pi Q_3 Q_2 Q_1 + \pi' Q_2 Q_1' + \pi Q_2' Q_1'$$

$$\hookrightarrow \pi Q_3 Q_2 Q_1 + Q_1' (\pi + Q_2)$$





0101 and 0110 sequence detector: (M)



$Q_3 \ Q_2 \ Q_1$

$Q_3^b \ Q_2^b \ Q_1^b$   
 $n=0$

$Q_3^b \ Q_2^b \ Q_1^b$   
 $n=1$

0 0 0

0 0 1

0 0 0

0 0 1

0 0 1

0 1 0

0 1 0

1 0 1

0 1 1

0 1 1

1 0 0

0 0 0

1 0 0

0 0 1

0 1 0

1 0 1

0 0 1

1 1 0

1 1 0

0 1 0

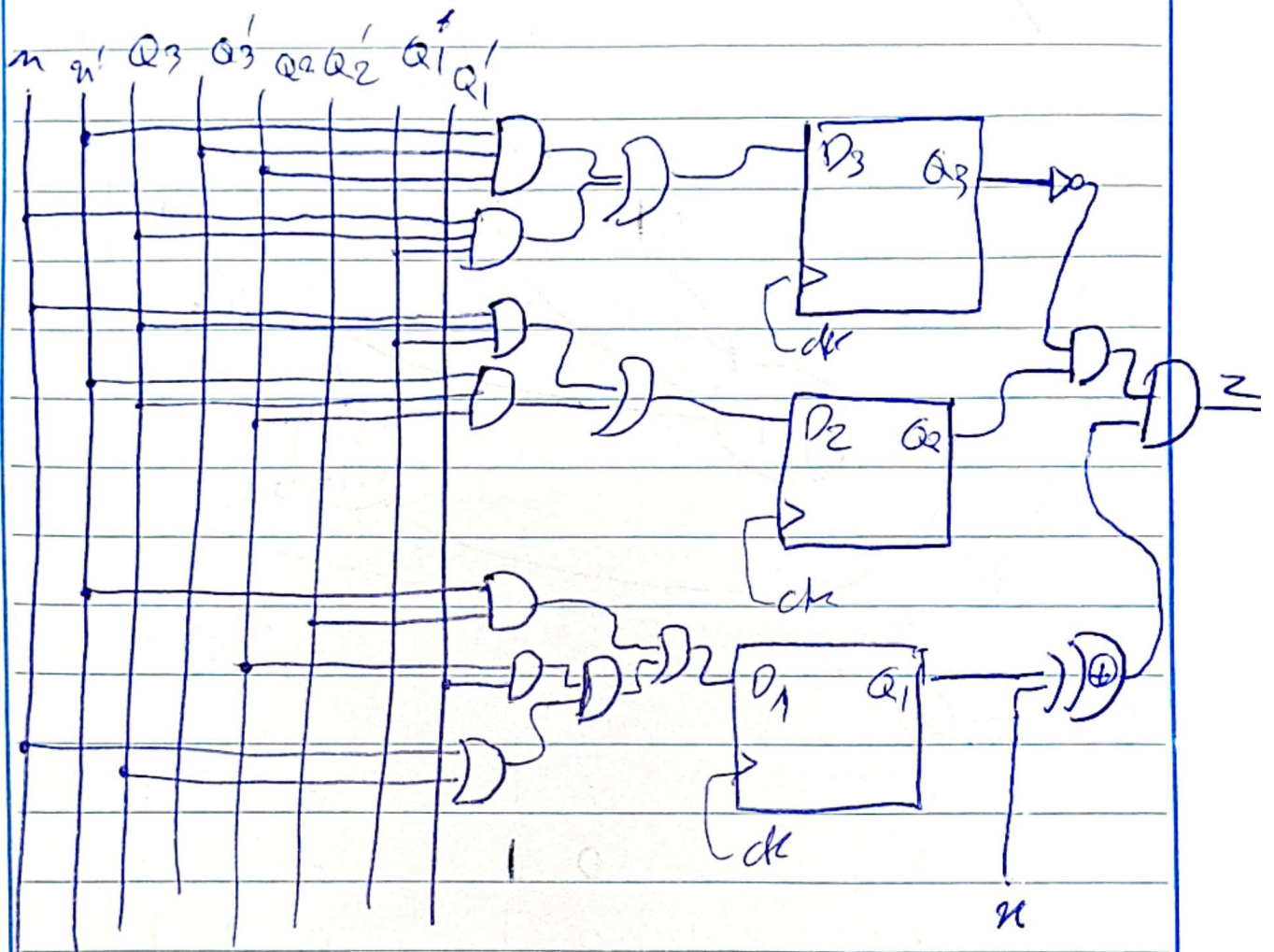
0 1 1

آشنا

$$D_3: x' Q_3' Q_2 + x Q_3 Q_1$$

$$D_2: x Q_3 Q_1 + x' Q_3 Q_2$$

$$D_1: x' Q_2' + Q_2 Q_1' (x + Q_3')$$



$$Z: Q_3 Q_2 (x \oplus Q_1)$$

آشنا