Nome: Daniel Henrique de Brito (397824)

LISTA 2

① a)

	$\bar{C}\bar{D}$	$\bar{C}D$	CD	$C\bar{D}$
$\bar{A}\bar{B}$	0	1	0	0
$\bar{A}B$	0	1	0	0
AB	0	0	0	0
$A\bar{B}$	0	0	0	0

$Y = \bar{B}\bar{C} + \bar{A}B\bar{D} + \bar{A}C\bar{D}$

b)

	$\bar{B}\bar{C}$	$\bar{B}C$	BC	$B\bar{C}$
$\bar{A}$	0	1	1	0
A	0	0	0	0

$Y = B + \bar{A}C$

c)

	$\bar{C}\bar{D}$	$\bar{C}D$	CD	$C\bar{D}$
$\bar{A}\bar{B}$	1	0	0	0
$\bar{A}B$	1	0	0	0
AB	0	0	0	0
$A\bar{B}$	0	0	0	0

$Y = \bar{A}\bar{C}\bar{D}$

d)

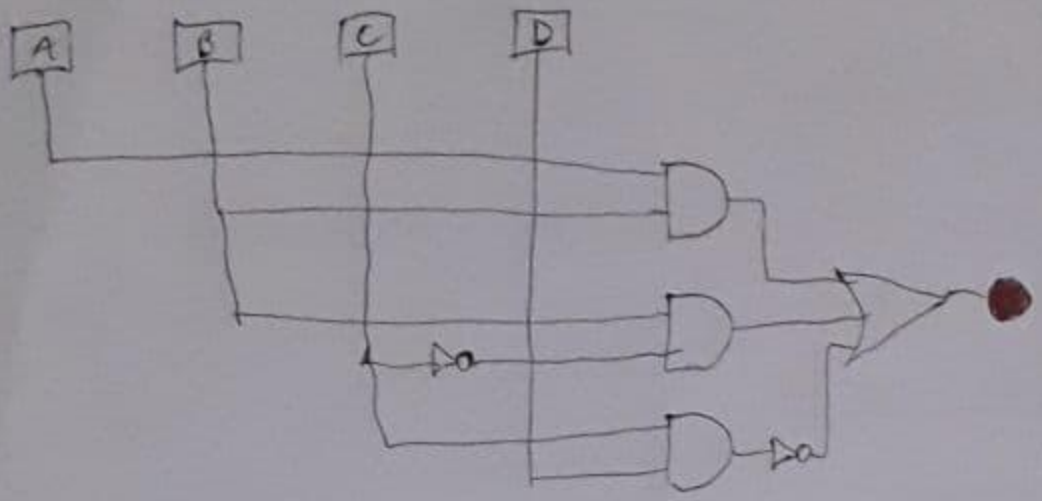
	$\bar{C}\bar{D}$	$\bar{C}D$	CD	$C\bar{D}$
$\bar{A}\bar{B}$	1	0	1	0
$\bar{A}B$	0	0	0	0
AB	0	0	0	0
$A\bar{B}$	0	0	0	0

$Y = \bar{A}\bar{B}\bar{C}\bar{D} + AB\bar{C} + AB\bar{D}$

② a) $a = (0,1,2,5,8,9)$
$b = (1,2,3,6,7)$
$c = (0,4)$
$d = (0,3)$

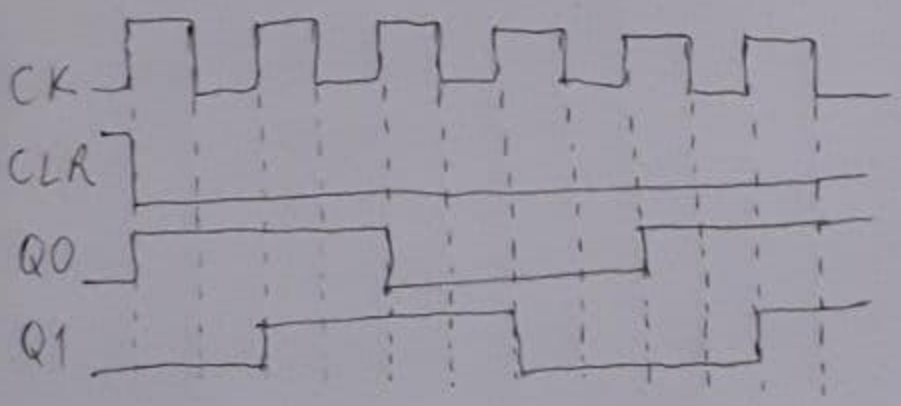
b) $a = (3,4,6,7,10,11,12,13,14,15)$
$b = (0,4,5)$
$c = (1,2,3,5,6,7,8,9,10,11,12,13,14,15)$
$d = (1,2,4,5,6,7,8,9,10,11,12,13,14,15)$

③ $(A \cdot B) + B \cdot \bar{C} + \overline{(C \cdot D)} \Rightarrow (A.B) + (B \cdot \bar{C}) + (\bar{C} + \bar{D})$

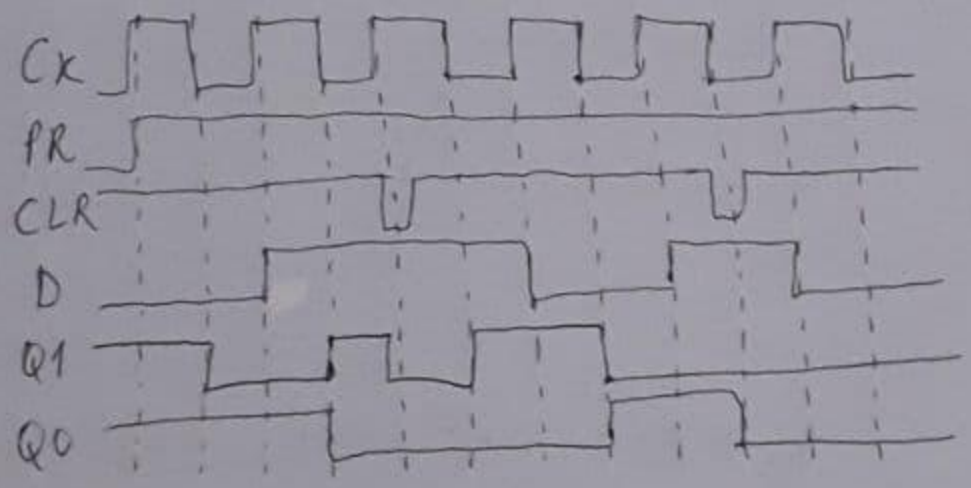


		$\bar{C}$		C	
	1	1	0	1	$\bar{B}$
$\bar{A}$	1	1	0	1	B
	1	1	1	1	
A	1	1	0	1	$\bar{B}$
	$\bar{D}$	D		$\bar{D}$	

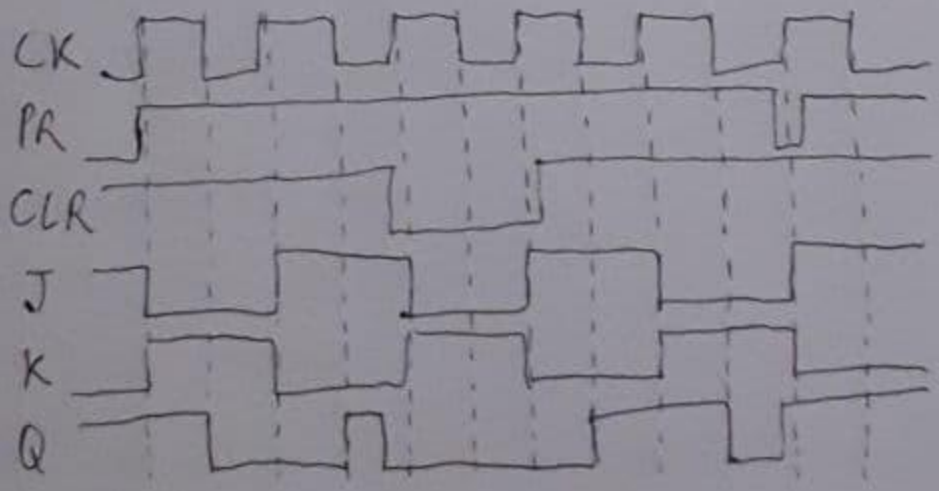
④ a)



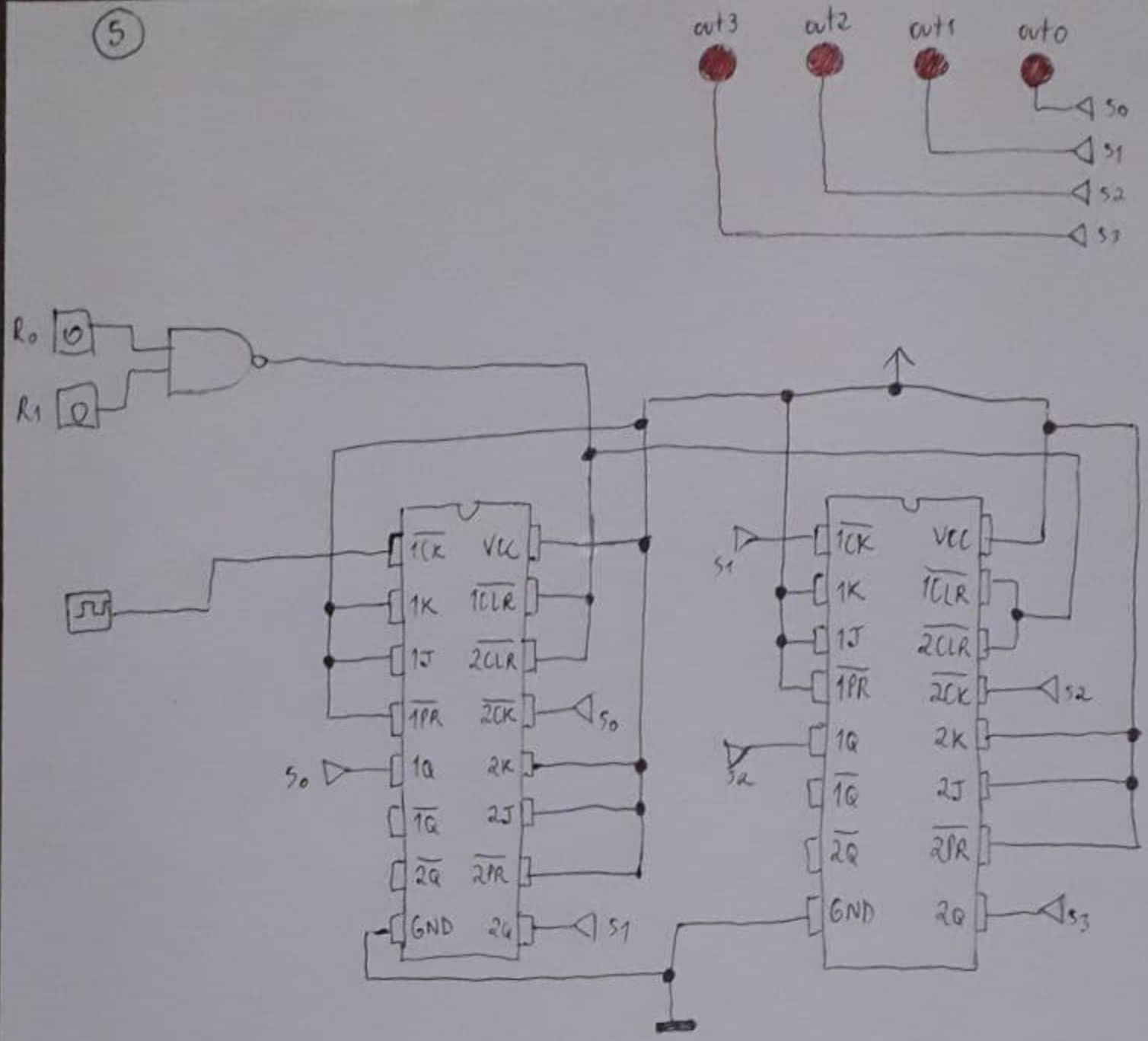
b)



c)



(5)



(6) (a) atraso: 20 ns

(b) setup/hold: 25ns/0ns

(c) clock: 25MHz

(d) largura mínima de pulso. 20ns

(7) (a) atraso: 6ns

(b) setup/hold: 3ns/2ns

(c) clock: 33 MHz

(d) largura mínima de pulso: 6 ns (clock high) / 7.3 (clock low)

Mais rápido em relação ao anterior.