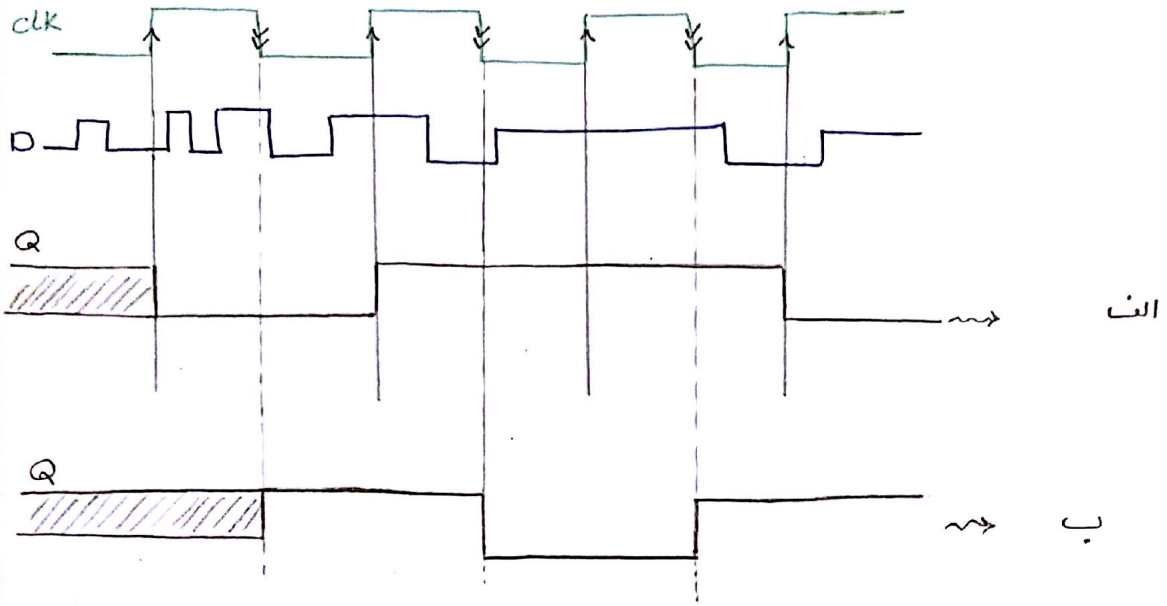
۹۸۲۱۴۱۳ حوری دهش

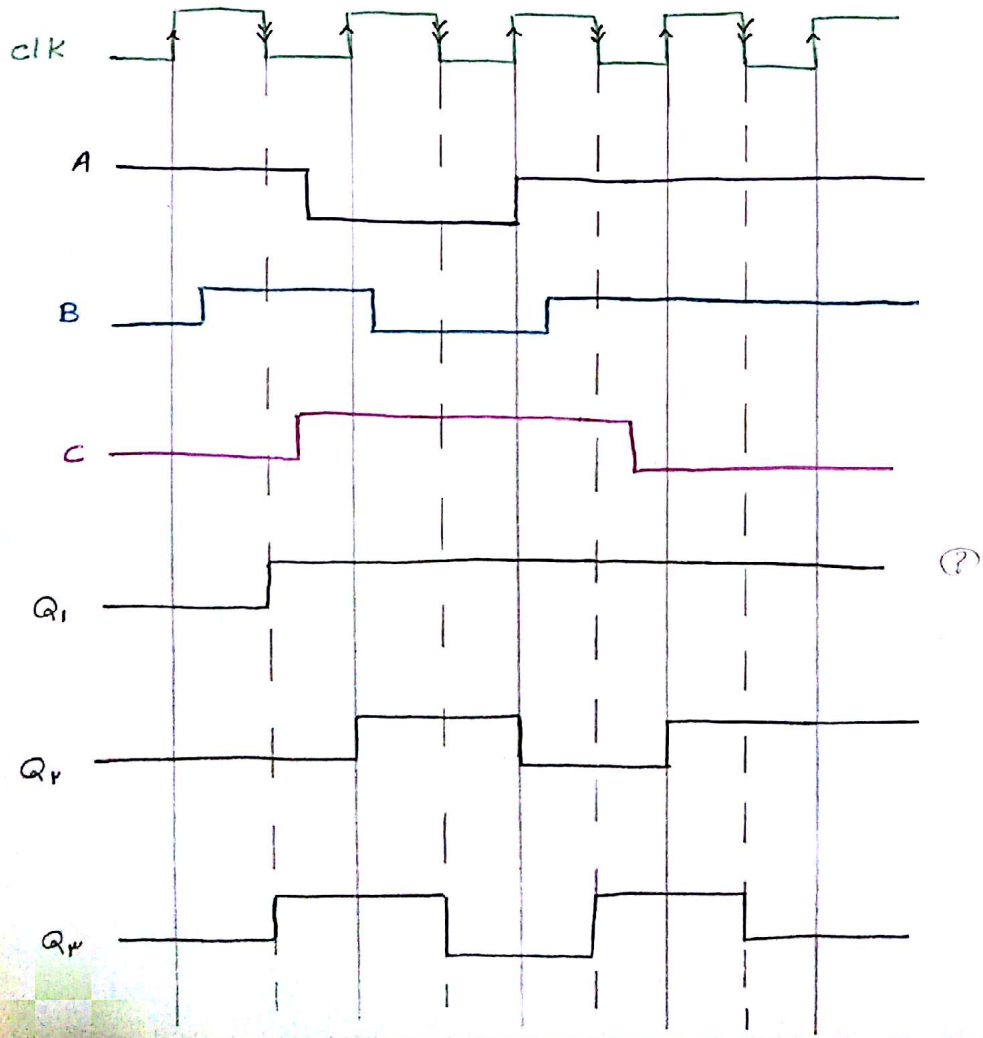
س ۱ ←

الف ← لبه بالا رونده؟

ب ← لبه پایین رونده؟

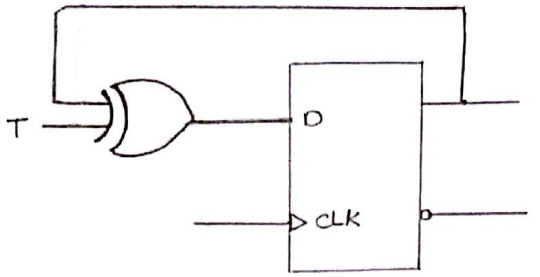


س ۲ ←

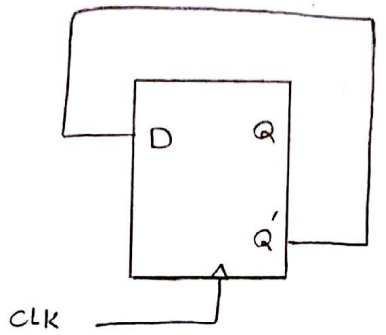


س ۳ ←

فلیپ فلاپ نوع T ←



نقشه کشیده شده ←



س ۴ ←

الف ← $Q_1(t+1) = J_1 Q_1' + K_1' Q_1 =$

$J_1 = Q_1 + Q_0$

$K_1 = x$

$Q_1 Q_1' + Q_0 Q_1' + x' Q_1 = Q_0 Q_1' + x' Q_1$

$J_0 = Q_1$

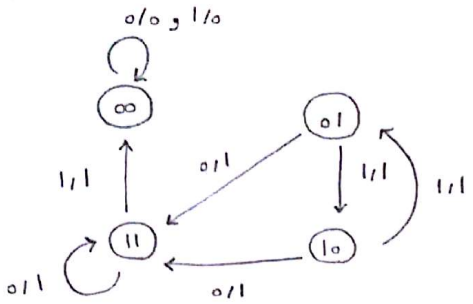
$K_0 = x$

$Q_0(t+1) = J_0 Q_0' + K_0' Q_0 = Q_0' Q_1 + x' Q_0$

$y(t) = Q_0 + Q_1$

ب ←

Q_1	Q_0	x	$Q_1(t+1)$	$Q_0(t+1)$	$y(t)$
0	0	0	0	0	0
0	0	1	0	0	0
0	1	0	1	1	1
0	1	1	1	0	1
1	0	0	1	1	1
1	0	1	0	1	1
1	1	0	1	1	1
1	1	1	0	0	1



→ مدل میلی

۰۰ → A
۰۱ → B
۱۰ → C
۱۱ → D

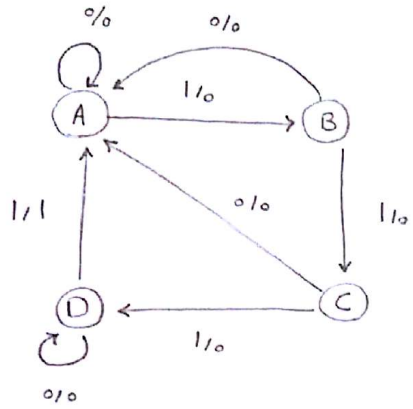
ج →

Time :	۰	۱	۲	۳	۴	۵	۶	۷	۸	۹
present state:	A	A	A	A	A	A	A	A	A	A (حالت نهایی)
Input :	۰	۰	۱	۱	۰	۱	۰	۱	۱	
next state:	A	A	A	A	A	A	A	A	A	
out put :	۱	۱	۱	۰	۰	۰	۰	۰	۰	

* از state ← A شروع می کنیم.

س ۴ ←

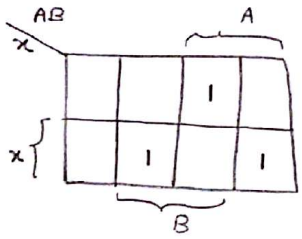
الف ← الگوی ؟ 1111



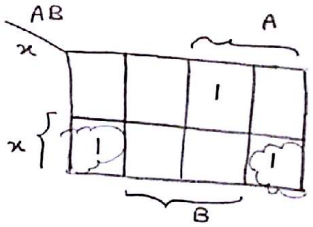
A	B	x	A(+1)	B(+1)	y(+)
0	0	0	0	0	0
0	0	1	0	1	0
0	1	0	0	0	0
0	1	1	1	0	0
1	0	0	0	0	0
1	0	1	1	1	0
1	1	0	1	1	0
1	1	1	0	0	1

$Q(t+1) = DQ \longrightarrow \quad A(+1) = D_A(A,B,x) = \sum m(3,5,7)$

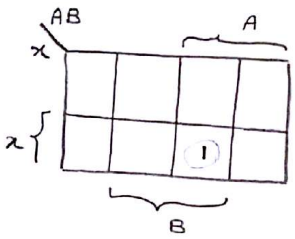
$B(+1) = D_B(A,B,x) = \sum m(1,5,7) \qquad y(A,B,x) = \sum m(7)$



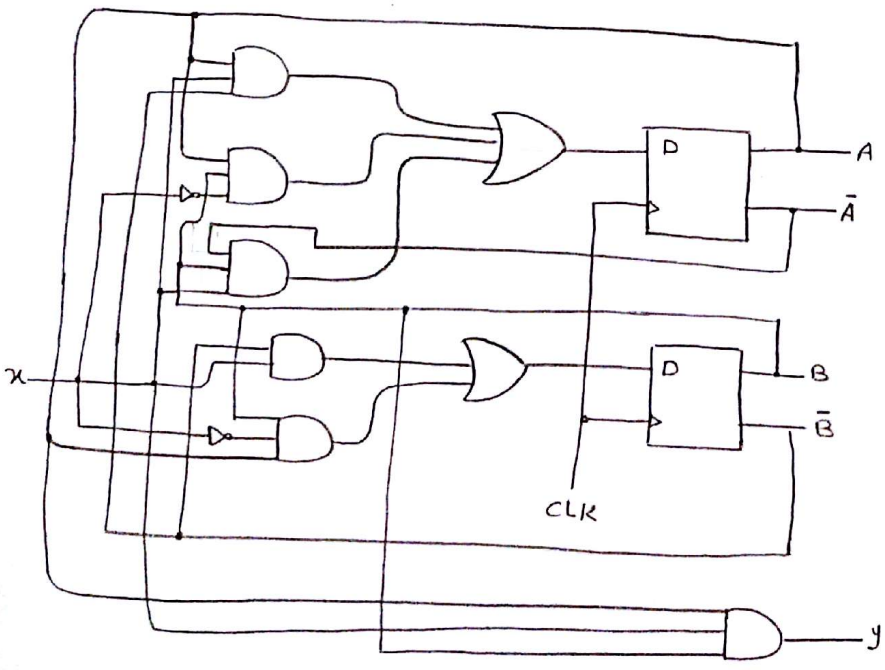
$D_A = Bx\bar{A} + A\bar{B}x + AB\bar{x}$



$D_B = x\bar{B} + AB\bar{x}$



$y = xBA$

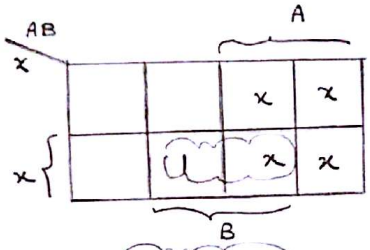


D_FF

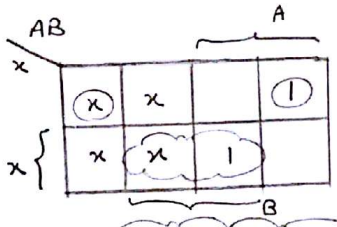
JK - FF

الف

A	B	x	A(t+1)	B(t+1)	y	J_A	K_A	J_B	K_B
0	0	0	0	0	0	0	x	0	x
0	0	1	0	1	0	0	x	1	x
0	1	0	0	0	0	0	x	x	1
0	1	1	1	0	0	1	x	x	1
1	0	0	0	0	0	x	1	0	x
1	0	1	1	1	0	x	0	1	x
1	1	0	1	1	0	x	0	x	0
1	1	1	0	0	1	x	1	x	1

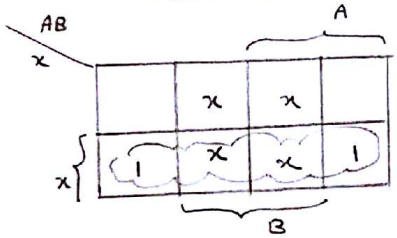


$J_A = Bx$

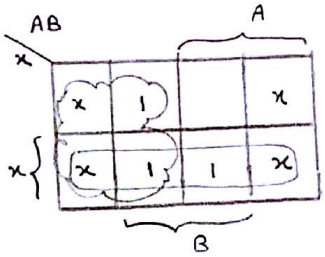


$K_A = \bar{B}\bar{x} + Bx$

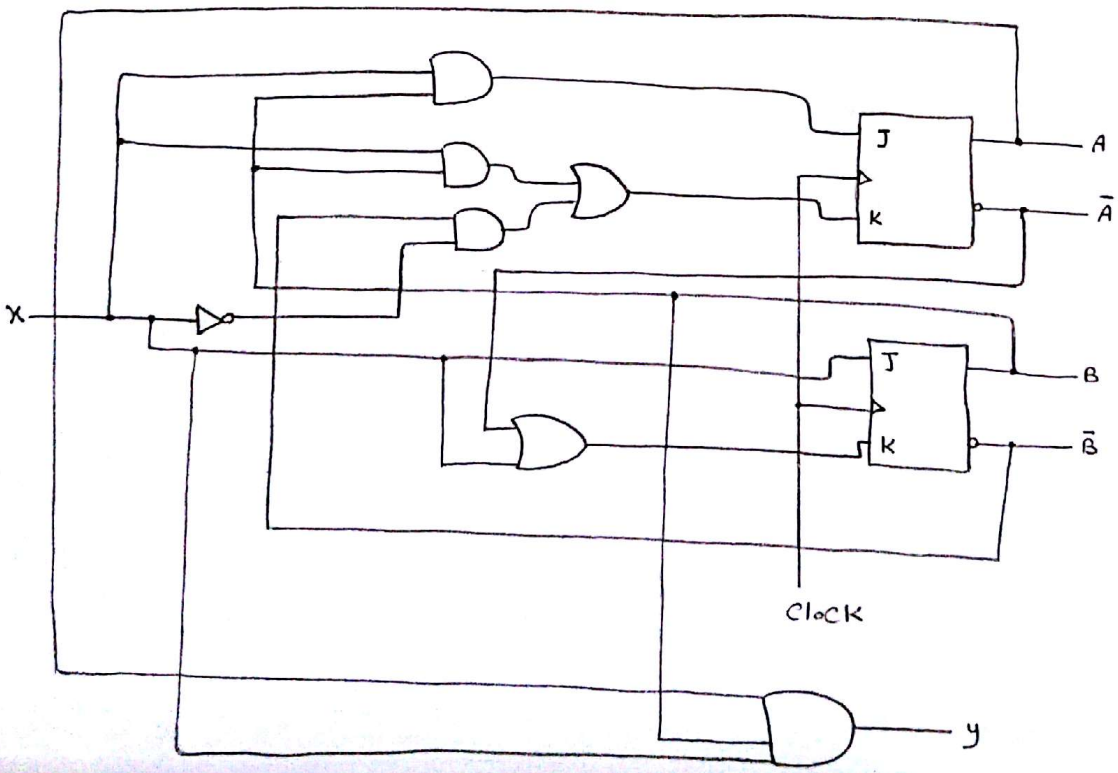
$y = ABx$



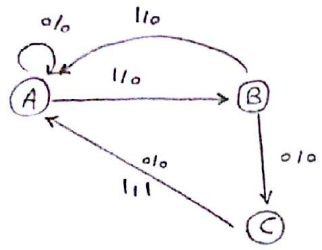
$J_B = x$



$K_B = x + \bar{A}$



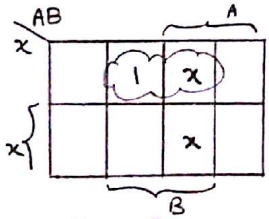
? 101 ← ب



D-FF

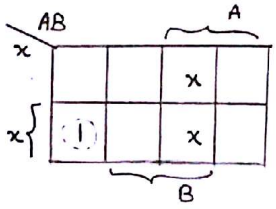
A	B	x	A(t+1)	B(t+1)	y(t)
0	0	0	0	0	0
0	0	1	0	1	0
0	1	0	1	0	0
0	1	1	0	0	0
1	0	0	0	0	0
1	0	1	0	0	1
1	1	0	x	x	x
1	1	1	x	x	x

$A(t+1) = D_A(A,B,x) = \sum m(2) + d(4,5)$



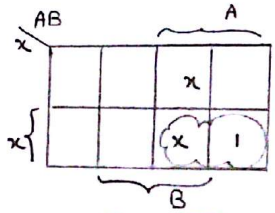
$D_A = B\bar{x}$

$B(t+1) = D_B(A,B,x) = \sum m(1) + d(4,5)$

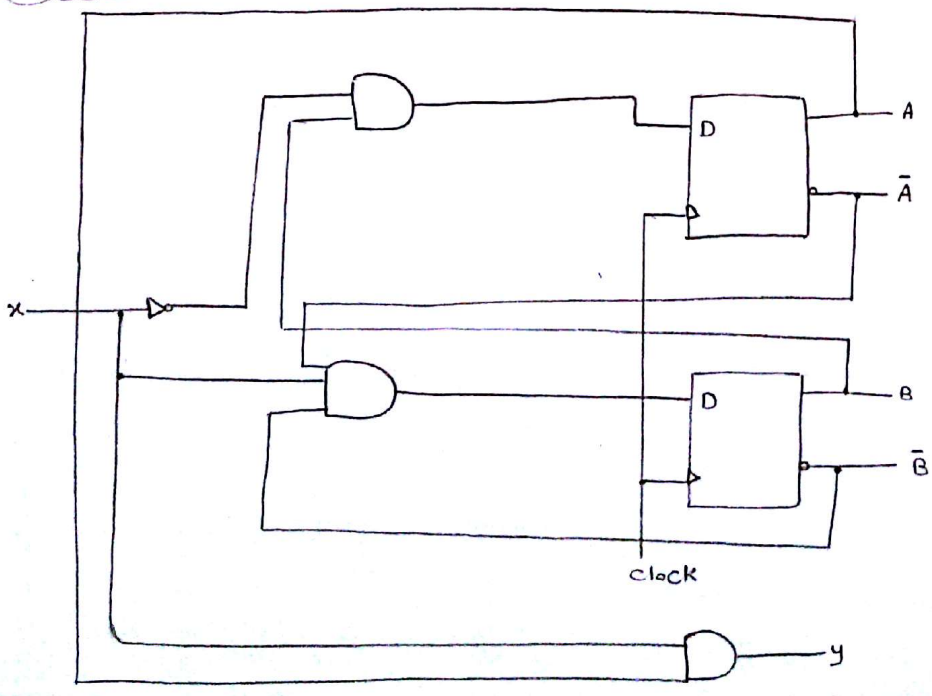


$D_B = \bar{A}\bar{B}x$

$y(t) = \sum(3) + d(4,5)$

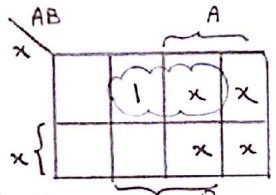


$y(t) = Ax$

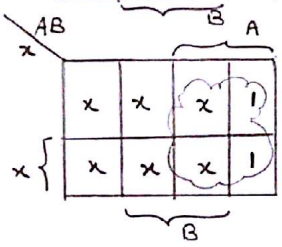


JK - FF

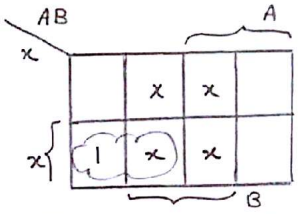
A	B	x	A(t+1)	B(t+1)	y	J_A	K_A	J_B	K_B
0	0	0	0	0	0	0	x	0	x
0	0	1	0	1	0	0	x	1	x
0	1	0	1	0	0	1	x	x	1
0	1	1	0	0	0	0	x	x	1
1	0	0	0	0	0	x	1	0	x
1	0	1	0	0	1	x	1	0	x
1	1	0	x	x	x	x	x	x	x
1	1	1	x	x	x	x	x	x	x



$J_A = B\bar{x}$

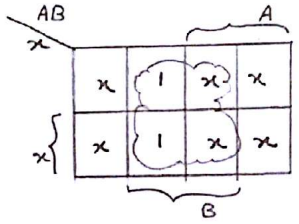


$K_A = A$

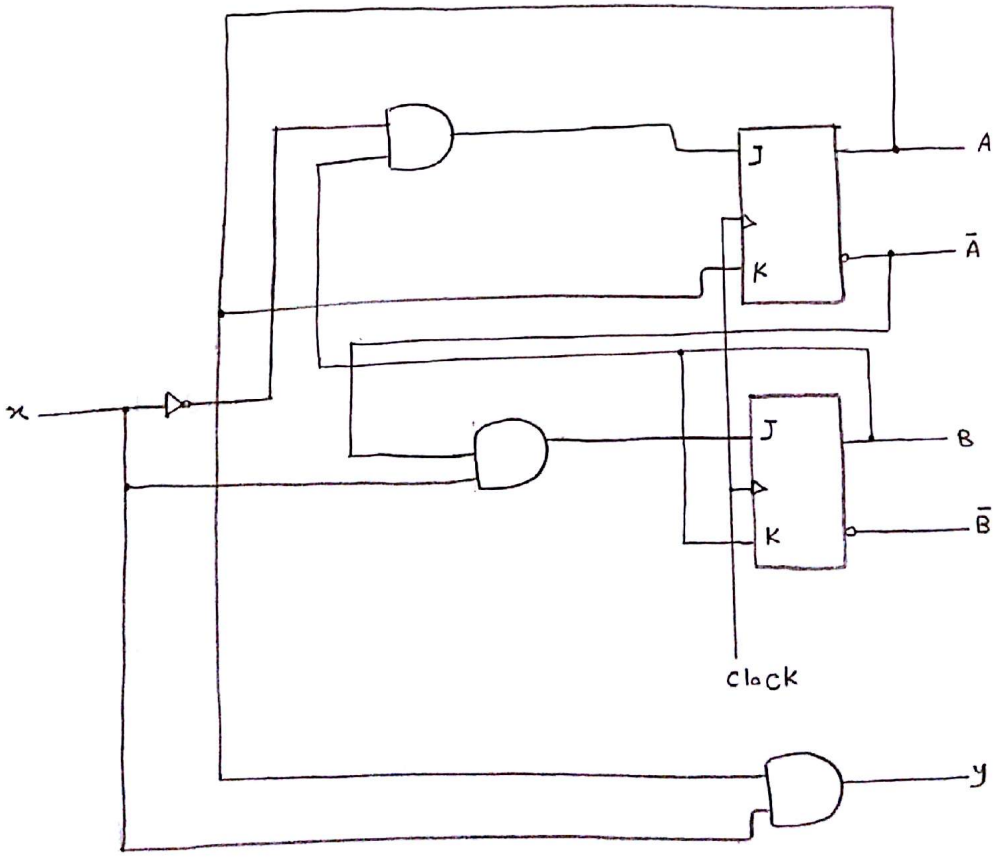


$J_B = \bar{A}x$

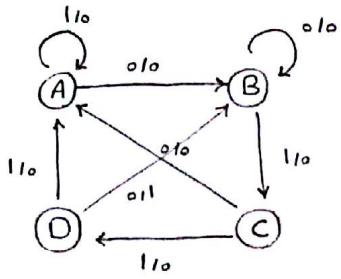
$y = Ax$



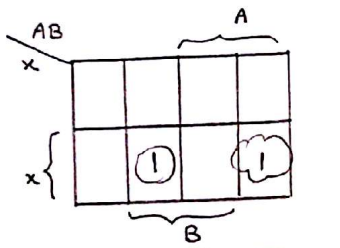
$K_B = B$



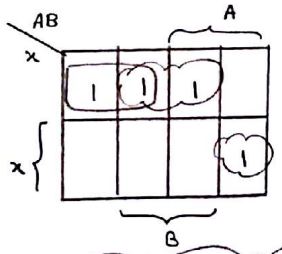
D - FF



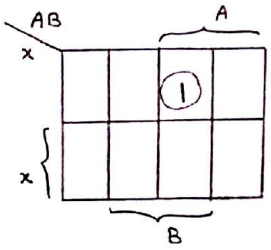
A	B	x	A(t+1)	B(t+1)	y(t)
0	0	0	0	1	0
0	0	1	0	0	0
0	1	0	0	1	0
0	1	1	1	0	0
1	0	0	0	0	0
1	0	1	1	1	0
1	1	0	0	1	1
1	1	1	0	0	0



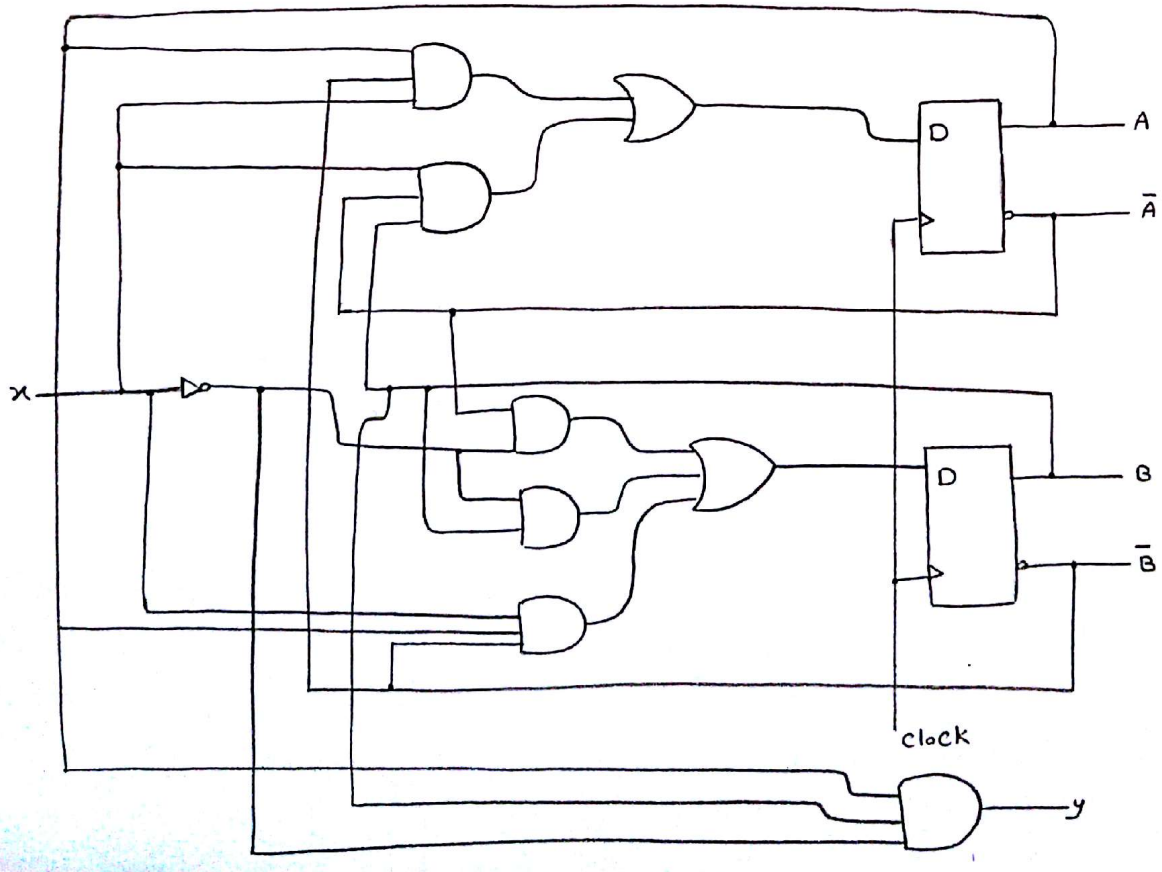
$D_A = \bar{A}Bx + A\bar{B}x$



$D_B = \bar{A}\bar{x} + B\bar{x} + A\bar{B}x$

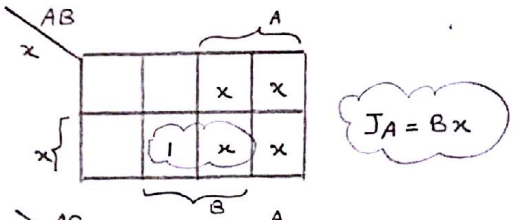


$y(t) = AB\bar{x}$

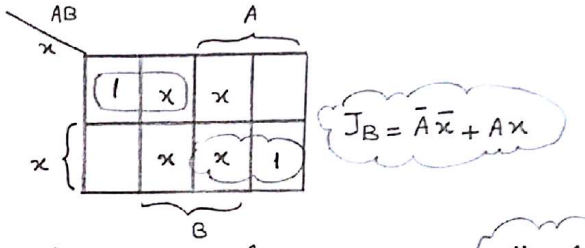


JK-FF

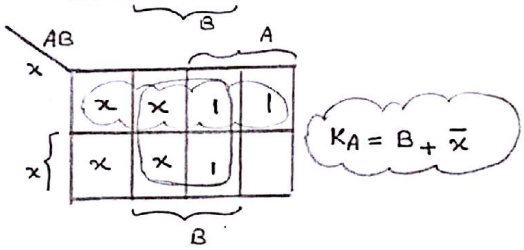
A	B	x	A(t+1)	B(t+1)	y	J_A	K_A	J_B	K_B
0	0	0	0	1	0	0	x	1	x
0	0	1	0	0	0	0	x	0	x
0	1	0	0	1	0	0	x	x	0
0	1	1	1	0	0	1	x	x	1
1	0	0	0	0	0	x	1	0	x
1	0	1	1	1	0	x	0	1	x
1	1	0	0	1	1	x	1	x	0
1	1	1	0	0	0	x	1	x	1



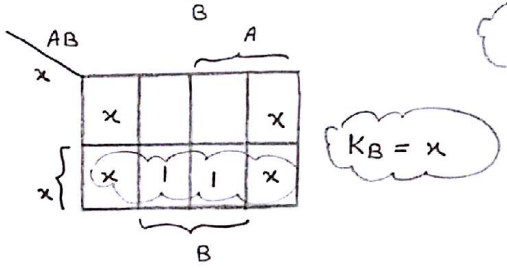
$J_A = Bx$



$J_B = \bar{A}\bar{x} + Ax$

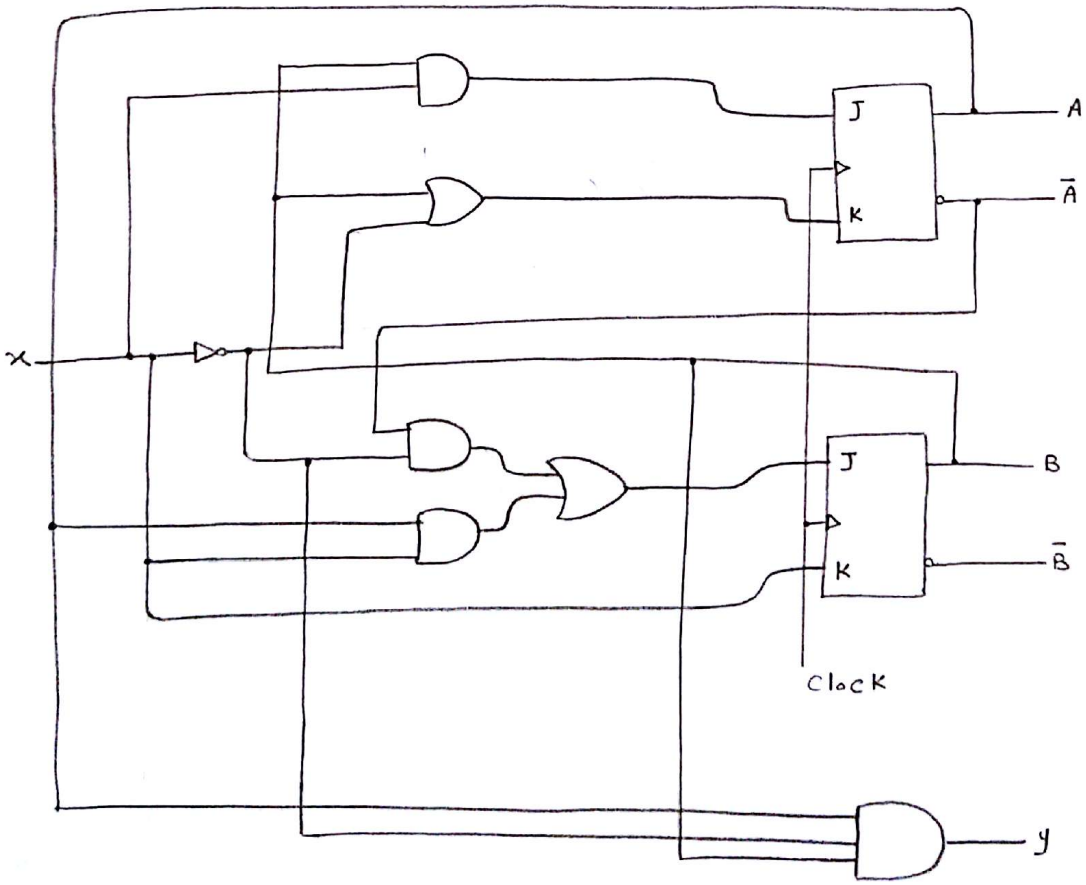


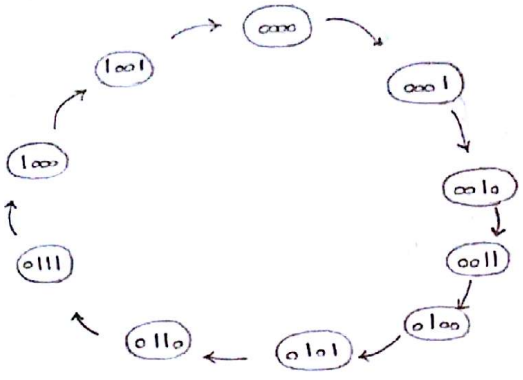
$K_A = B + \bar{x}$



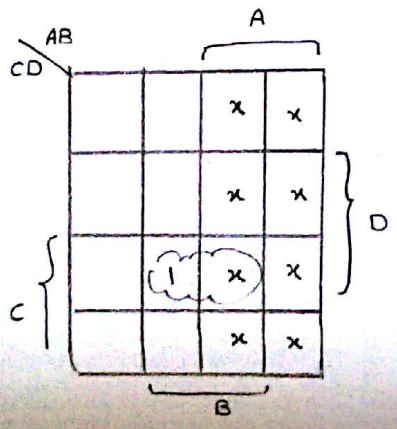
$K_B = x$

$y = AB\bar{x}$

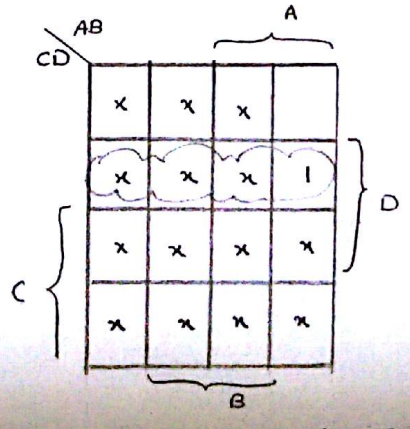




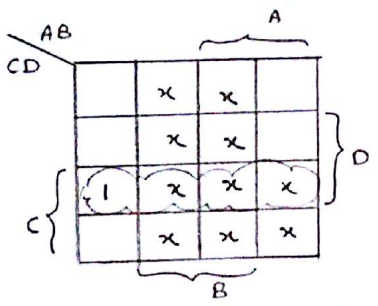
present state				Next state				J_3	K_3	J_2	K_2	J_1	K_1	J_0	K_0
A	B	C	D	A	B	C	D								
0	0	0	0	0	0	0	1	0	x	0	x	0	x	1	x
0	0	0	1	0	0	1	0	0	x	0	x	1	x	x	1
0	0	1	0	0	0	1	1	0	x	0	x	x	0	1	x
0	0	1	1	0	1	0	0	0	x	1	x	x	1	x	1
0	1	0	0	0	1	0	1	0	x	x	0	0	x	1	x
0	1	0	1	0	1	1	0	0	x	x	0	1	x	x	1
0	1	1	0	0	1	1	1	0	x	x	0	x	0	1	x
0	1	1	1	1	0	0	0	1	x	x	1	x	1	x	1
1	0	0	0	1	0	0	1	x	0	0	x	0	x	1	x
1	0	0	1	0	0	0	0	x	1	0	x	0	x	x	1
1	0	1	0	x	x	x	x	x	x	x	x	x	x	x	x
1	0	1	1	x	x	x	x	x	x	x	x	x	x	x	x
1	1	0	0	x	x	x	x	x	x	x	x	x	x	x	x
1	1	0	1	x	x	x	x	x	x	x	x	x	x	x	x
1	1	1	0	x	x	x	x	x	x	x	x	x	x	x	x
1	1	1	1	x	x	x	x	x	x	x	x	x	x	x	x



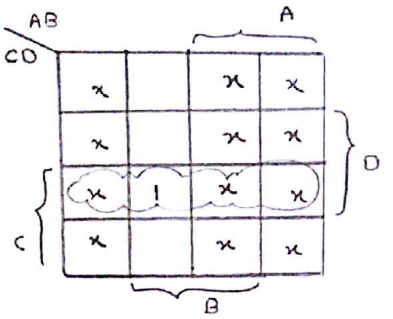
$J_3\ (A, B, C, D) = BCD$



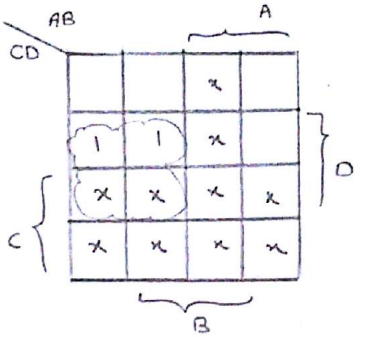
$K_3\ (A, B, C, D) = \bar{C}D$



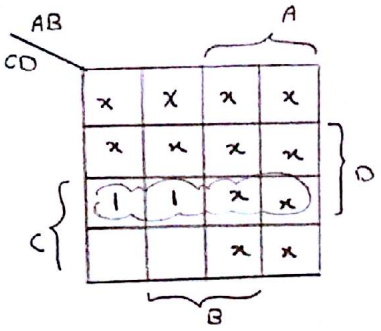
$J_Y(A,B,C,D) = CD$



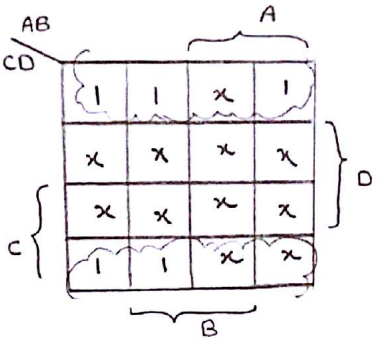
$K_Y(A,B,C,D) = CD$



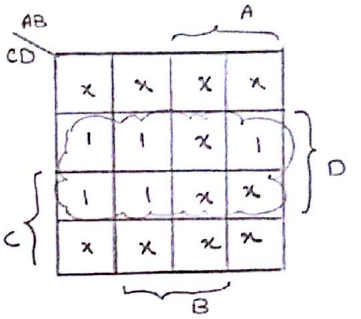
$J_1(A,B,C,D) = \bar{A}D$



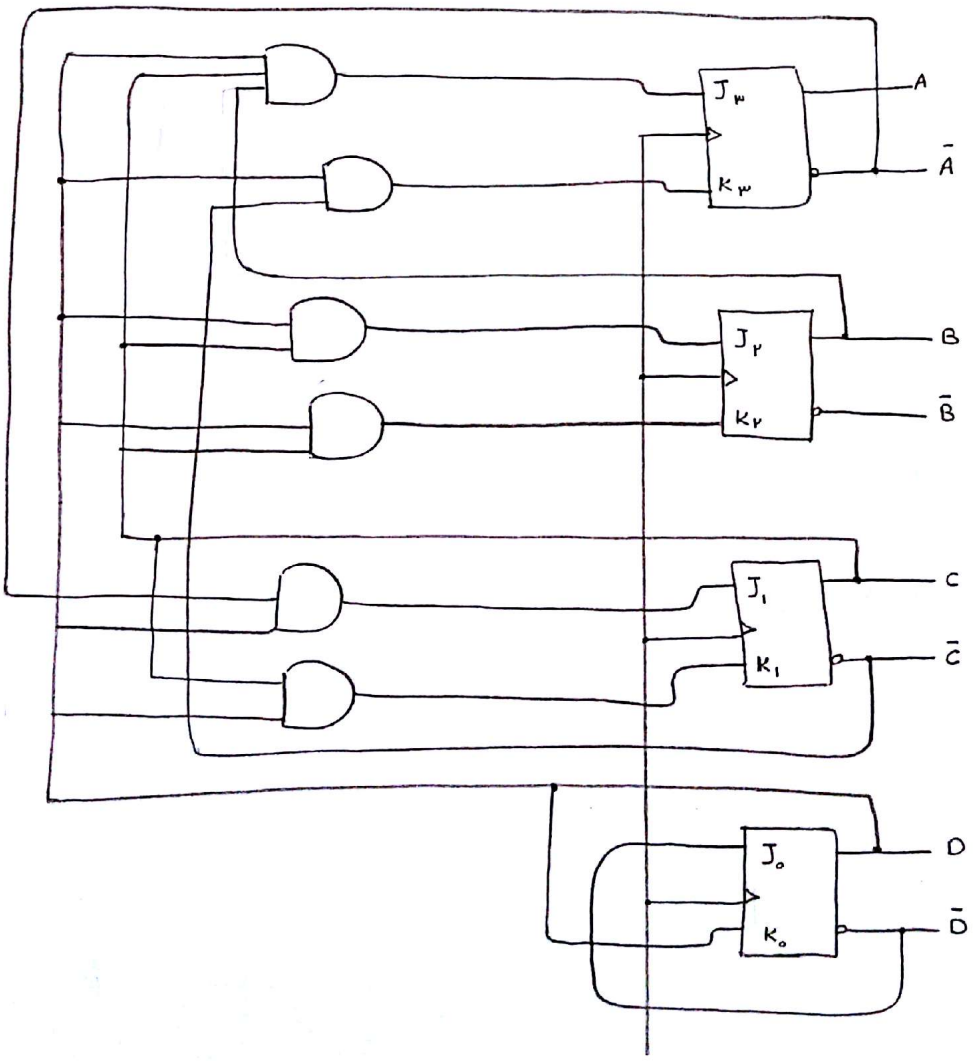
$K_1(A,B,C,D) = CD$



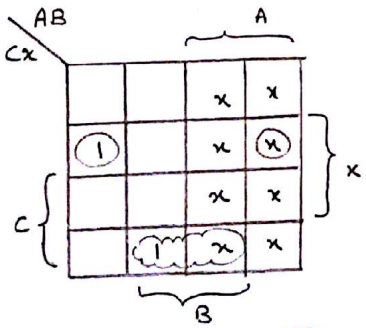
$J_0(A,B,C,D) = \bar{D}$



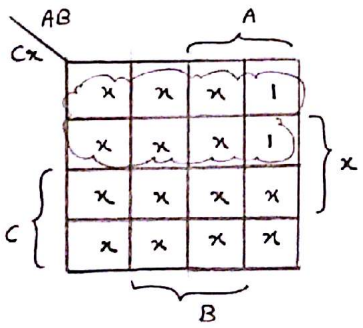
$K_0(A,B,C,D) = D$



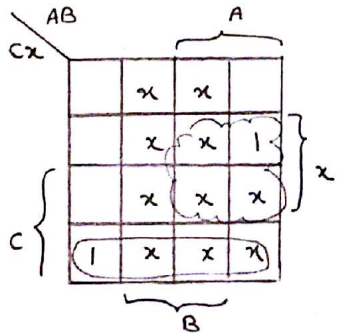
present state			x	next state			y	J_A	K_A	J_B	K_B	J_C	K_C
A	B	C		A	B	C							
0	0	0	0	0	0	1	0	0	x	0	x	1	x
0	0	0	1	1	0	0	0	1	x	0	x	0	x
0	0	1	0	0	1	0	0	0	x	1	x	x	1
0	0	1	1	0	0	0	0	0	x	0	x	x	1
0	1	0	0	0	1	1	1	0	x	x	0	1	x
0	1	0	1	0	0	1	1	0	x	x	1	1	x
0	1	1	0	1	0	0	0	1	x	x	1	x	1
0	1	1	1	0	1	0	0	0	x	x	0	x	1
1	0	0	0	0	0	0	1	x	1	0	x	0	x
1	0	0	1	0	1	0	1	x	1	1	x	0	x
1	0	1	0	x	x	x	x	x	x	x	x	x	x
1	0	1	1	x	x	x	x	x	x	x	x	x	x
1	1	0	0	x	x	x	x	x	x	x	x	x	x
1	1	0	1	x	x	x	x	x	x	x	x	x	x
1	1	1	0	x	x	x	x	x	x	x	x	x	x
1	1	1	1	x	x	x	x	x	x	x	x	x	x



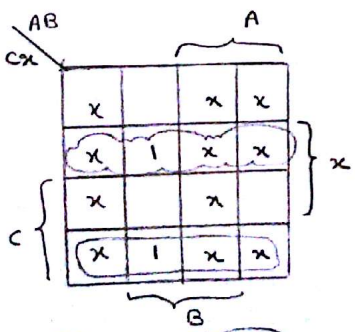
$J_A = x\bar{C}\bar{B} + BC\bar{x}$



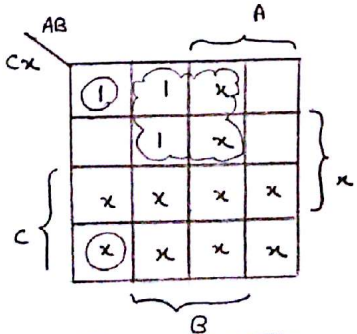
$K_A = \bar{C}$



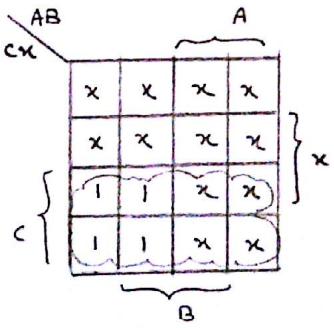
$J_B = C\bar{x} + Ax$



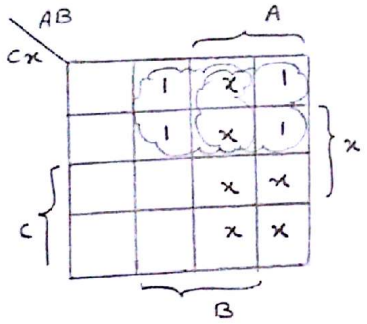
$K_B = C\bar{x} + \bar{C}x$



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



$K_C = C$



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