

Answer to the Q no-1

(A)

A_1	B_1	X	A_0	B_0	J_1	K_1	J_0	K_0
0	0	0	1	1	1	X	1	X
0	0	1	0	1	0	X	1	X
0	1	0	1	0	1	X	X	1
0	1	1	0	1	0	X	X	0
1	0	0	1	0	X	0	0	X
1	0	1	1	1	X	0	1	X
1	1	0	0	1	X	1	X	0
1	1	1	0	0	X	1	X	1

J_1	$B_1 X$	00	01	11	10
A					
0		1	0	0	1
1		X	X	X	X

$$\Rightarrow J_1 = \bar{X}$$

K_1	$B_1 X$	00	01	11	10
A					
0		X	X	X	X
1		0	0	1	1

$$\Rightarrow K_1 = B$$

J_0	$B_0 X$	00	01	11	10
A					
0		1	1	X	X
1		0	1	X	X

$$\Rightarrow J_0 = \bar{A} + X$$

K_0	$B_0 X$	00	01	11	10
A					
0		X	X	0	1
1		X	X	1	0

$$\Rightarrow K_0 = \bar{A}\bar{X} + AX$$

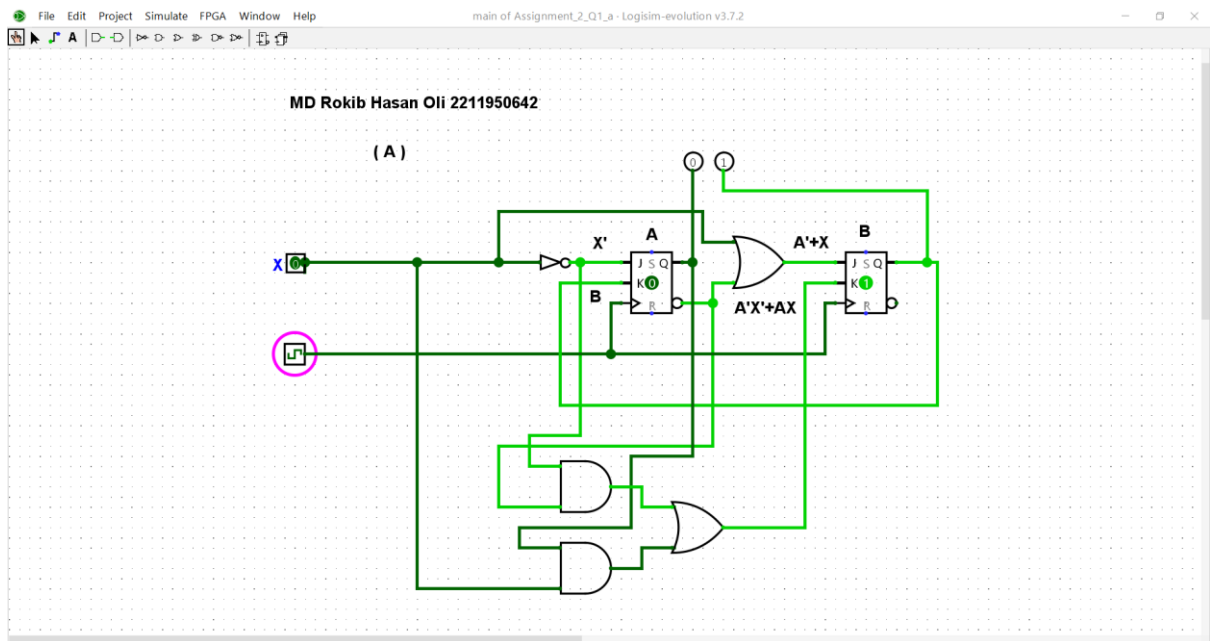


table for B and C;

A_i	B_i	X	A_o	B_o	T_A	T_B	D_A	D_B
0	0	0	1	1	1	1	1	1
0	0	1	0	1	0	1	0	1
0	1	0	1	0	1	1	1	0
0	1	1	0	1	0	0	0	1
1	0	0	1	0	0	0	1	0
1	0	1	1	1	0	1	1	1
1	1	0	0	1	1	0	0	1
1	1	1	0	0	1	1	0	0

B)

T_A	BX	00	01	11	10
0	1	0	0	0	1
1	0	0	0	1	1

$$T_A = \bar{A}\bar{X} + AB$$

T_B	BX	00	01	11	10
0	1	1	1	0	1
1	0	0	1	1	0

$$T_B = \bar{A}\bar{X} + AX + \bar{B}X$$

C)

D_A	BX	00	01	11	10
0		1	0	0	1
1		1	1	0	0

$$D_A = \bar{A}\bar{X} + A\bar{B}$$

$D_B \backslash B_X$	00	01	11	10
0	1	1	1	0
1	0	1	0	1

$$D_B = AB\bar{X} + \bar{A}\bar{B} + \bar{A}X + \bar{B}X$$

