sw7 sw6 sw5 sw4
A_1 A_2 B_1 B_2

xnor and not

Question 1

A_1	A_2	B_1	B_2	L	E	G
0	0	0	0	0	1	0
0	0	0	1	1	0	0
0	0	1	0	1	0	0
0	0	1	1	1	0	0
0	1	0	0	0	0	1
0	1	0	1	0	1	0
0	1	1	0	1	0	0
0	1	1	1	1	0	0
1	0	0	0	0	0	1
1	0	0	1	0	0	1
1	0	1	0	0	1	0
1	0	1	1	1	0	0
1	1	0	0	0	0	1
1	1	0	1	0	0	1
1	1	1	0	0	0	1
1	1	1	1	0	1	0

$E = (A_1 \odot B_1)(A_2 \odot B_2)$

	B_1B_2	B_1B_2'	$B_1'B_2$	$B_1'B_2'$
A_1A_2	1	0	0	0
A_1A_2'	0	1	0	0
$A_1'A_2$	0	0	1	0
$A_1'A_2'$	0	0	0	1

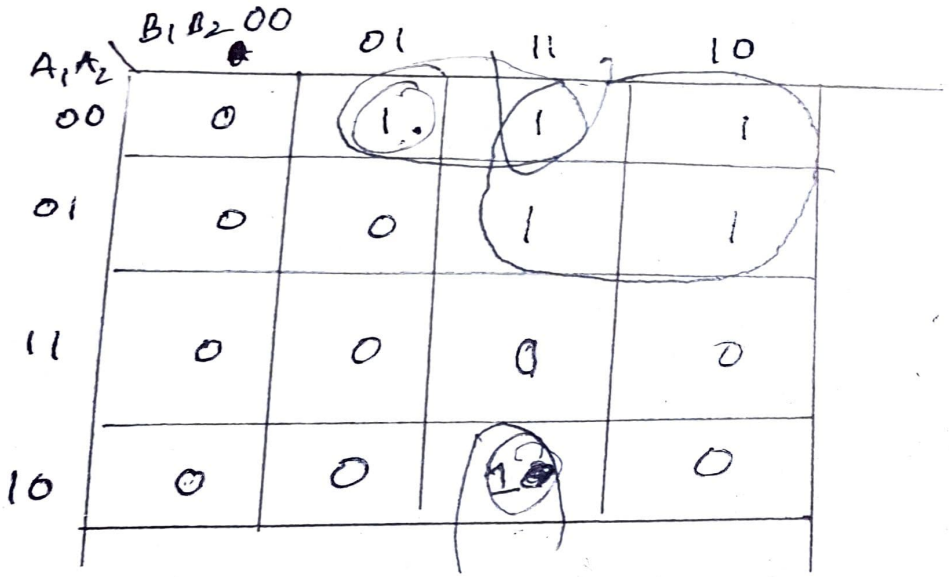
00 1

10 0

11

$A_1 \odot A_2 \odot B_1 \odot B_2$

$A_1A_2B_1B_2 + A_1A_2'B_1B_2' + A_1'A_2' + B_1'B_2' + A_1A_2B_1'B_2$



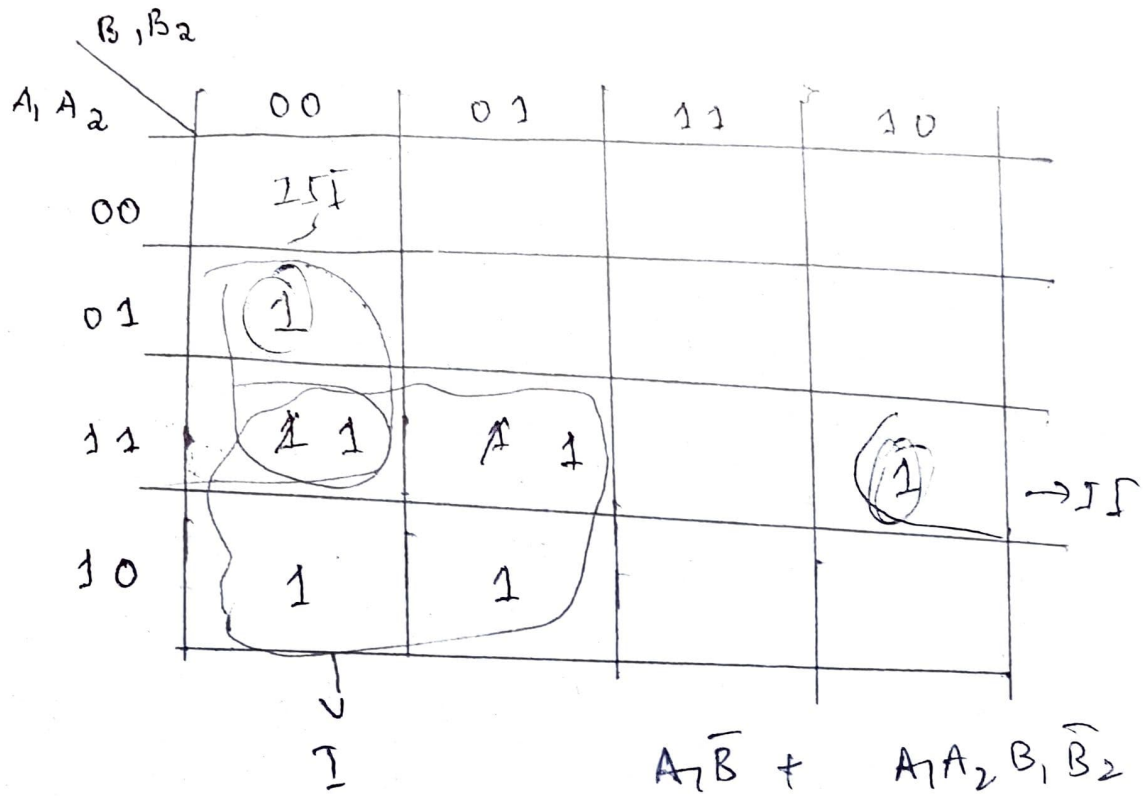
$$\Rightarrow \bar{A}_1 B_1 + \bar{A}_1 \bar{A}_2 B_2 + \bar{A}_2 B_1 B_2$$

$$\bar{A}_1 B_1 + \bar{A}_1 \bar{A}_2 \bar{B}_1 B_2 + A_1 \bar{A}_2 B_1 B_2$$

$$\bar{A}_1 B_1 + \bar{A}_2 B_2 (\bar{A}_1 \bar{B}_1 + A_1 B_1)$$

↓

xnor



$A_1\bar{B}$ + $A_1A_2B_1\bar{B}_2$ + $\bar{A}_1A_2\bar{B}_1\bar{B}_2$

$G_1 = I + II + III$

$A_2\bar{B}_2(A_1B_1 + \bar{A}_1\bar{B}_1)$

$G_1 = A_1\bar{B}_1 + A_1A_2\bar{B}_2 + A_2\bar{B}_1\bar{B}_2 \Rightarrow A_2\bar{B}_2(A_1B_1 \odot A_1B_1)$

$\bar{A}\bar{B} + \bar{A}B$

$A \oplus B$

$A \odot B$

$\bar{A}\bar{B} + AB$

$A \odot B$

1 1

$G_1 = A_1\bar{B}_1 + A_2\bar{B}_2(A_1 \odot B_1)$

$\bar{A}_1A_2\bar{B}_1\bar{B}_2 + A_1A_2B_1\bar{B}_2$

$A_2(\bar{A}_1\bar{B}_1\bar{B}_2 + A_1B_1\bar{B}_2)$

$A_2($