

e) $F = ABCD + ABC\bar{D} + \bar{A}BCD + \bar{A}\bar{B}CD + \bar{A}\bar{B}\bar{C}D$

1111	1110	0111	0101	0011	0001
(F)	(14)	(7)	(5)	(3)	(1)
E					

$$F = \sum_{ABCD} (1, 3, 5, 7, E, F)$$

0000	
0001	(1)
0010	(2)
0011	(3)
0100	(4)
0101	(5)
0110	(6)
0111	(7)
1000	
1001	
1010	
1011	
1100	
1101	
1110	
1111	

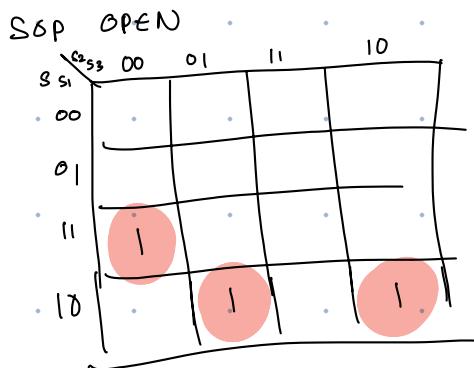
f)

$$G = (\bar{A} + B + C + D)(\bar{A} + B + \bar{C} + \bar{D})(\bar{A} + \bar{B} + C + \bar{D})(A + B + \bar{C} + \bar{D})(\bar{A} + \bar{B} + C + D)(\bar{A} + \bar{B} + \bar{C} + D)$$

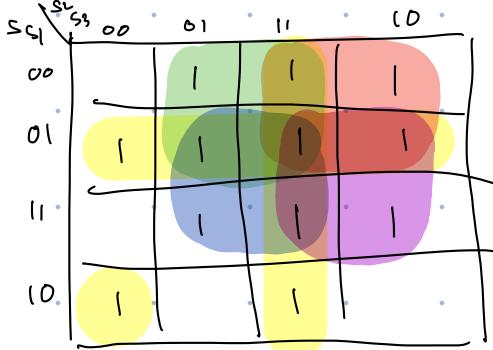
$$G = \sum_{ABCD} (8, 9, 10, 11, 12, 13, 14, 15)$$

Part 2

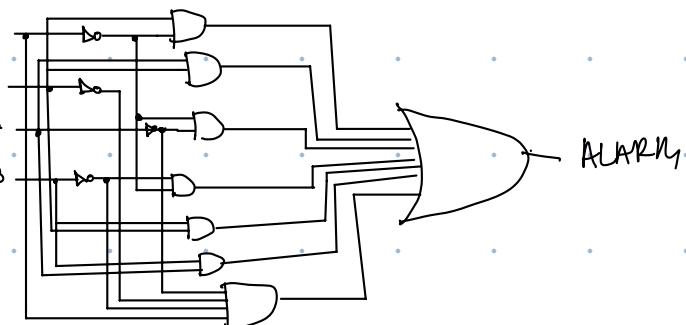
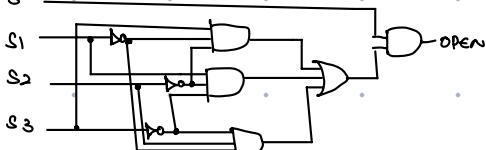
(1 stop) (0 moving)



$$\begin{aligned} SOP &= \bar{s}_1\bar{s}_2\bar{s}_3 + \bar{s}_1\bar{s}_2s_3 + \bar{s}_1s_2\bar{s}_3 \\ OPEN &= \bar{s}_1(\bar{s}_1\bar{s}_2\bar{s}_3 + \bar{s}_1\bar{s}_2s_3 + \bar{s}_1s_2\bar{s}_3) \end{aligned}$$

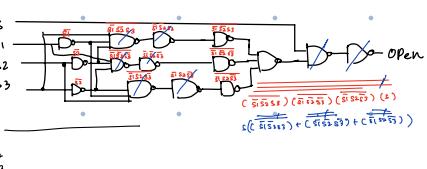
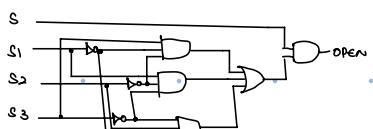


$$\begin{aligned} SOP &= \bar{s}_1\bar{s}_2 + \bar{s}_1s_2 + s_1\bar{s}_3 + s_1s_2 + \bar{s}_1\bar{s}_2\bar{s}_3 + \bar{s}_1s_2\bar{s}_3 + s_1\bar{s}_2s_3 \\ ALARM &= \checkmark \quad \checkmark \quad \checkmark \quad \checkmark \quad \checkmark \quad \checkmark \quad \checkmark \end{aligned}$$



① Karnaugh

0000	-	01	01
0001	-	01	0
0010	-	11	0
0011	-	01	0
0100	-	01	0
0101	-	01	0
0110	-	01	0
0111	-	01	0
1000	-	10	1
1001	-	10	1
1010	-	11	1
1011	-	10	1
1100	-	10	1
1101	-	01	1
1110	-	01	1
1111	-	01	1



A · B

$$\bar{A} \cdot (B + C)$$

$$B \cdot (\bar{B} + c)$$

1



$$(A \cdot B) + (\bar{A} \cdot (B + C)) + (B \cdot (\bar{B} + C)) + \bar{D}$$

A	B	C	D	E	F	G	H
AB	$\bar{A}B$	$\bar{A}\bar{C}$	$\bar{B}\bar{C}$	$\bar{B}C$	\bar{D}		
1100	0100	0010	0110	0111	0000		
1110	0110	0110	1110	1111	0100		
1111	0101	0011	0111	0111	0100	0100	1000
1101	0111	0111	1111	1111	1000		

\overline{AB}	00	01	11	10
00	1	.	1	1
01	1	1	1	1
11	1	1	1	1
10	1	.	1	1

$$= \bar{A}\bar{B}c + \bar{B}\bar{D} + B \quad \#$$

0100
0101
0111
0110
1100
1101
1111

$$P_0 = F_B + \bar{F}_C + \frac{\partial}{\partial t} \bar{F}_B + \bar{F}_C + \frac{\partial}{\partial t}$$

	00	01	11	10
00	1		1	1
01	1	1	1	1
11	1	1	1	1
10	1			1

B
BD

