

①

Δ_0	00	01	11	10
00	1	1		
01	1	1	1	1
11				
10	1	1	1	1

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

② $\overline{(\bar{A}B)(\bar{C}D)} + (\bar{D} + \bar{E})$

$AB \cdot (CD) + (\bar{D} + \bar{E})$

③

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

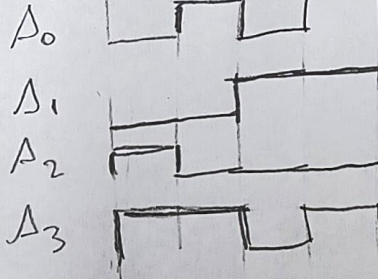
$\Delta_3 \bar{\Delta}_2 \Delta_1 \bar{\Delta}_0$

$\Delta_3 \Delta_2 \bar{\Delta}_1 \bar{\Delta}_0$

$\bar{\Delta}_3 \bar{\Delta}_2 \bar{\Delta}_1 \Delta_0$

$\Delta_3 \bar{\Delta}_2 \Delta_1 \Delta_0$

$\Delta_0 + \Delta_2 + \Delta_2 + \Delta_3$



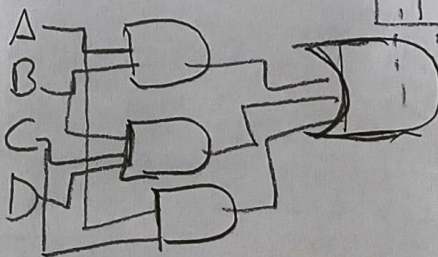
A	B	C	D	S
0	0	0	0	
0	0	0	1	1
0	0	1	0	
0	0	1	1	
0	1	0	0	
0	1	0	1	
0	1	1	0	
0	1	1	1	
1	0	0	0	
1	0	0	1	
1	0	1	0	1
1	0	1	1	1
1	1	0	0	1

④ a) $X = AB + BCD + AC = 1$

1100	0111	1010
1101	1111	1011
1110		1110
1111		1111

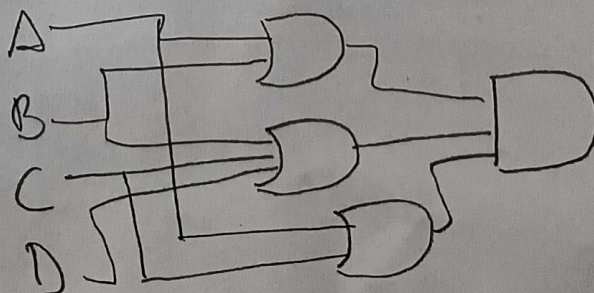
	00	01	11	10
00				
01				
11	1	1	1	1
10	1	1	1	1

$1BCD + AB + AC$



b) $X = (A+B)(B+C+D)(A+C) = 0$

	00	01	11	10
00	0	0	0	0
01	0	0		0
11				
10	0	0		



⑥ $S = (\overline{A}BC) + (A\overline{B}C) + (AB\overline{C}) + (\overline{A}\overline{B}C) + (\overline{A}BC\overline{C}) + (\overline{A}BC\overline{C})$

000
100
110
001
111

A \ B	00	01	11	10
0	1	1		
1	1		1	1

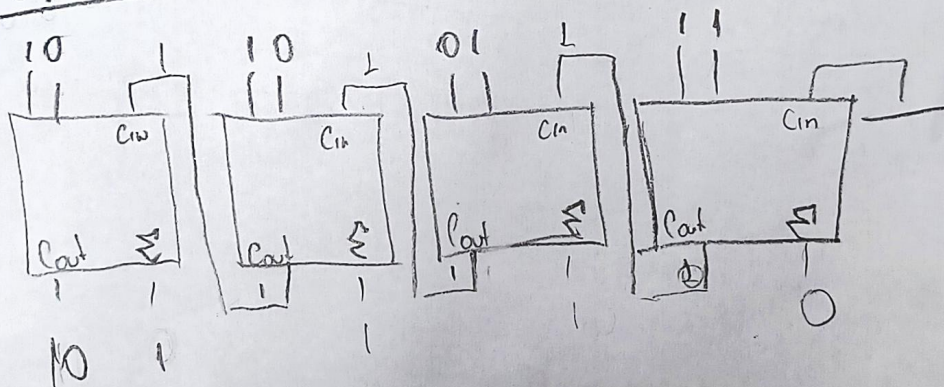
$\Rightarrow \overline{B}\overline{C} + \overline{A}\overline{B} + \Delta B$

⑦

1101

1011

101110



	A	B	Cin	Cout	Σ
1°	1	1	0	1	0
2°	0	1	1	1	1
3°	1	0	1	1	1
4°	1	1	1	1	1

1 0