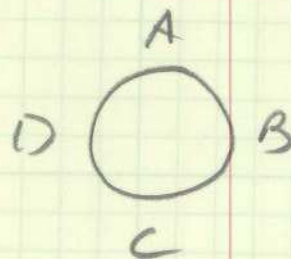


①	A	B	C	D	F
0	0	0	0	0	0
1	0	0	0	1	0
2	0	0	1	0	0
3	0	0	1	1	0
4	0	1	0	0	0
5	0	1	0	1	1
6	0	1	1	0	0
7	0	1	1	1	1
8	1	0	0	0	0
9	1	0	0	1	0
10	1	0	1	0	1
11	1	0	1	1	1
12	1	1	0	0	0
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	1



$$F = \sum m(5, 7, 10, 11, 13, 14, 15)$$

$$F = \prod M(0, 1, 2, 3, 4, 6, 8, 9, 12)$$

② $F(x, y, z) = \sum m(1, 2, 3, 6)$

x \ yz	00	01	11	10
0	0	1	1	0
1	0	1	1	0

$$F = x'z + yz'$$

$$\textcircled{3} F(A, B, C, D) = \sum m(1, 4, 6, 9, 10, 14) + \sum d(0, 2, 7)$$

a)

AB \ CD	00	01	11	10
00	X ₀	1 ₁		
01	1 ₄			1 ₉
11		X ₂		
10	X ₆	1 ₅	1 ₁₄	1 ₁₀

$$F = A'D' + CD' + B'C'D$$

group 0	0	0	0000	✓	0, 1	000-	0, 2, 4, 6	0--0
group 1	1	1	0001	✓	0, 2	00-0	✓	
	2		0010	✓	0, 4	0-00	✓	
	4		0100	✓	1, 9	-001		
group 2	6		0110	✓	2, 6	0-10	✓	2, 6, 10, 14 --10
	9		1001	✓	2, 10	-010	✓	
	10		1010	✓	4, 6	01-0	✓	
group 3	7		0111	✓	6, 7	011-		
	14		1110	✓	6, 14	-110	✓	
					10, 14	1-10	✓	

PIs	ABCD		✓ 1	✓ 4	mt/ 6 9	✓ 10	✓ 14
* 0, 2, 4, 6	0--0	A'D'		⊗	X		
* 2, 6, 10, 14	--10	CD'			X	⊗	⊗
0, 1	000-	A'B'C'	X				
* 1, 9	-001	B'C'D	X			⊗	
6, 7	011-	A'BC			X		

$$F = A'D' + CD' + B'C'D$$