

$$f(A, B, C) = \sum m(7, 8, 12, 13, 14, 15).$$

1. SOP

Tabela Verdade

	A	B	C	D	S
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	0
6	0	1	1	0	0
7	0	1	1	1	1
8	1	0	0	0	1
9	1	0	0	1	0
10	1	0	1	0	0
11	1	0	1	1	0
12	1	1	0	0	1
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	1

a)Escreva a SOP Padrao

$$f(A, B, C) = (m7+m8+m12+m13+m14+m15)$$

b)Apresente o K-map para SOP Padrao

AB CD	00	01	11	10	
00	0	0	1	1	
01	0	0	1	0	
11	0	1	1	0	
10	0	0	1	0	

c)Marque as aglutinacoes possiveis no K-map, empregando replicacoes onde for necessario.

AB CD	00	01	11	10	
00	0	0	1	1	
01	0	0	1	0	
11	0	1	1	0	
10	0	0	1	0	

d)Obtenha a SOP minima, a partir do K-map.

$$\begin{aligned} &\bullet A=1 \quad B=0/1 \quad C=0 \quad D=0 \quad A.\bar{C}.\bar{D} \\ &\bullet A=1/0 \quad B=1 \quad C=1 \quad D=1 \quad B.C.D \\ &\bullet A=1 \quad B=1 \quad C=0/1 \quad D=0/1 \quad A.B \end{aligned}$$

$$f(A, B, C) = A.\bar{C}.\bar{D} + B.C.D + A.B$$

2. POS

a)Escreva a POS Padrao

$$f(A, B, C) = (M0.M1.M2.M3.M4.M5.M6.M9.M10.M11)$$

b)Apresente o K-map para POS Padrao

AB CD	00	01	11	10	
00	0	0	1	1	
01	0	0	1	0	
11	0	1	1	0	
10	0	0	1	0	

c)Marque as aglutinacoes possiveis no K-map, empregando replicacoes onde for necessario.

AB CD	00	01	11	10	
00	0	0	1	1	0
01	0	0	1	0	0
11	0	1	1	0	0
10	0	0	1	0	0
	0	0	1	1	0

d)Obtenha a POS minima, a partir do K-map.

$$\begin{aligned} &\bullet A=0 \quad B=0/1 \quad C=0 \quad D=0/1 \quad A+C \\ &\bullet A=0 \quad B=0/1 \quad C=0/1 \quad D=0 \quad A+\bar{D} \\ &\bullet A=0/1 \quad B=0 \quad C=1 \quad D=0/1 \quad B+\bar{C} \\ &\bullet A=0/1 \quad B=0 \quad C=0/1 \quad D=1 \quad B+\bar{D} \end{aligned}$$

$$f(A, B, C) = (A+C).(A+\bar{D}).(B+\bar{C}).(B+\bar{D})$$