f(A, B, C) = ∑m(5, 6, 8, 11, 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	1
6	0	1	1	0	1
7	0	1	1	1	0
8	1	0	0	0	1
9	1	0	0	1	0
10	1	0	1	0	0
11	1	0	1	1	1
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) = (m5+m6+m8+m11+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	1	1	0
11	0	0	1	1
10	0	1	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	1	1	0
11	0	0	1	1
10	0	1	1	0

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

- A=1 B=0/1 C=0 D=0 — $A.\bar{C}.\bar{D}$
- A=1/0 B=1 C=0 D=1 — $B.\bar{C}.D$
- A=1 B=0/1 C=1 D=1 — $A.C.D$
- A=0/1 B=1 C=1 D=0 — $B.C.\bar{D}$

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

2. POS

a) Escreva a POS Padrao

f(A, B, C) = (M0.M1.M2.M3.M4.M7.M9.M10)

b) Apresente o K-map para POS Padrao

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

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

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

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

- A=0 B=0/1 C=0 D=0 — $A+C+D$
- A=0/1 B=0 C=0 D=1 — $B+\bar{C}+\bar{D}$
- A=0 B=0/1 C=1 D=1 — $A+\bar{C}+\bar{D}$
- A=0/1 B=0 C=1 D=0 — $B+\bar{C}+D$

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