1. $F = A\bar{B}C\bar{D}+A\bar{B}CD+ABC\bar{D}+ABCD+\bar{A}\bar{B}\bar{C}\bar{D}+\bar{A}BC\bar{D}+AB\bar{C}\bar{D}+\bar{A}BCD$

$=\bar{A}\bar{B}\bar{C}\bar{D}+\bar{A}BC\bar{D}+\bar{A}BCD+A\bar{B}C\bar{D}+A\bar{B}CD+AB\bar{C}\bar{D}+ABC\bar{D}+ABCD$

$=\sum m\ (4,6,7,10,11,12,14,15)$

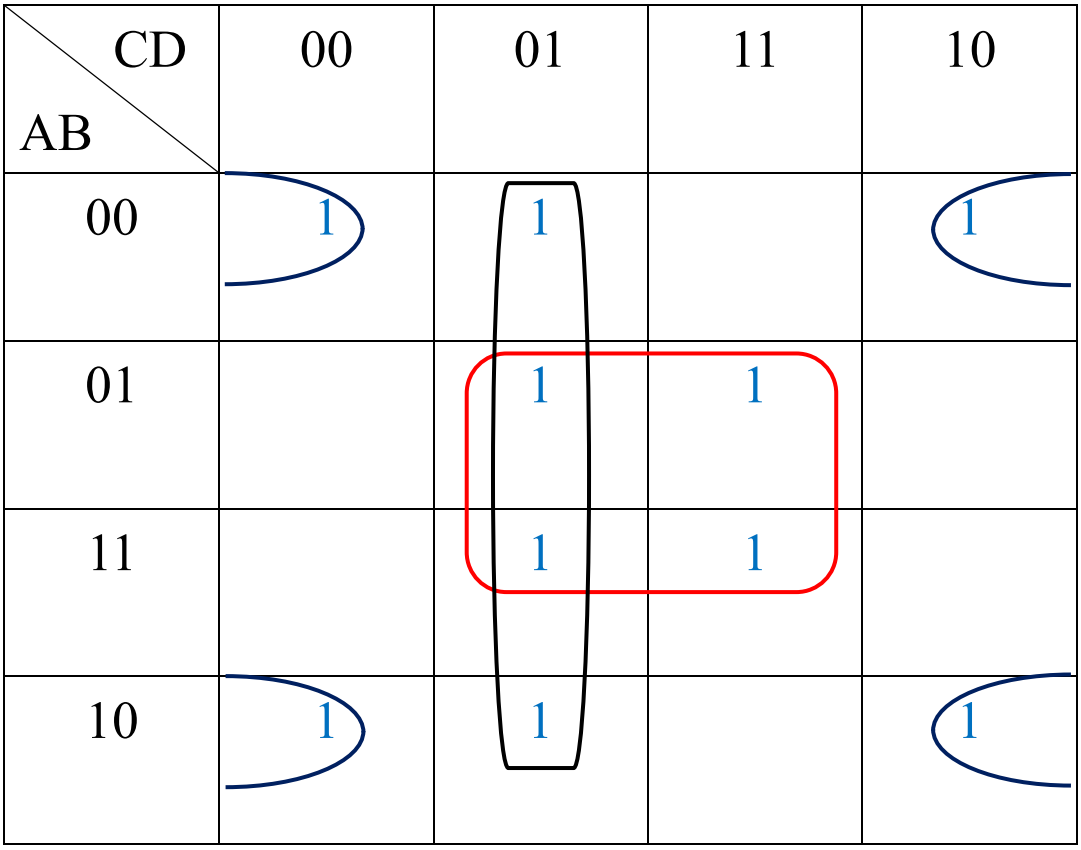
2.

BC / A	00	01	11	10
0	1	1	1	1
1		1	1	

3.

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

4.(1)



$$F=BD+\overline{C}D+\overline{B}\,\overline{D}$$

4.(2)

AB \ CD	00	01	11	10
00				
01	1	1		1
11	1			1
10				

$$F=B\overline{D}+\overline{A}B\overline{C}$$