(1) $F = m_4 + m_6 + m_7 + m_{10} + m_{11} + m_{12} + m_{14} + m_{15}$

(2) $F = (A + \bar{C})C + \bar{A}$
$= AC + C\bar{C} + \bar{A}$
$= AC + \bar{A}$

A\C	0	1
0	1	1
1	0	1

(3) $F = A + BD + \bar{B}C + \bar{B}\bar{D}$

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

(4) $F = \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}\bar{C}D + \bar{A}\bar{B}C\bar{D} + \bar{A}B\bar{C}D + \bar{A}BCD + A\bar{B}\bar{C}\bar{D} + A\bar{B}\bar{C}D + A\bar{B}C\bar{D}$
$+ AB\bar{C}D + ABCD$

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

$F = BD + \bar{C}D + \bar{B}\bar{D}$

(5)

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

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