Практическая работа №5

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Вариант №2

$$F = \bar{A}C + BA\bar{C}\bar{D} + BD\bar{A}$$

	A	B	C	D	F	СДНФ	СКНФ
0	0	0	0	0	0		$\bar{A}\bar{B}\bar{C}\bar{D}$
1	0	0	0	1	0		$\bar{A}\bar{B}\bar{C}D$
2	0	0	1	0	1	$\bar{A}\bar{B}C\bar{D}$	
3	0	0	1	1	1	$\bar{A}\bar{B}CD$	
4	0	1	0	0	0		$\bar{A}B\bar{C}\bar{D}$
5	0	1	0	1	1	$\bar{A}B\bar{C}D$	
6	0	1	1	0	1	$\bar{A}BC\bar{D}$	
7	0	1	1	1	1	$\bar{A}BCD$	
8	1	0	0	0	0		A$\bar{B}\bar{C}\bar{D}$
9	1	0	0	1	0		A$\bar{B}\bar{C}D$
10	1	0	1	0	0		A$\bar{B}C\bar{D}$
11	1	0	1	1	0		A$\bar{B}CD$
12	1	1	0	0	1	AB$\bar{C}\bar{D}$	
13	1	1	0	1	0		AB$\bar{C}D$
14	1	1	1	0	0		ABC$\bar{D}$
15	1	1	1	1	0		ABCD

Таблица 1: Таблица истиности

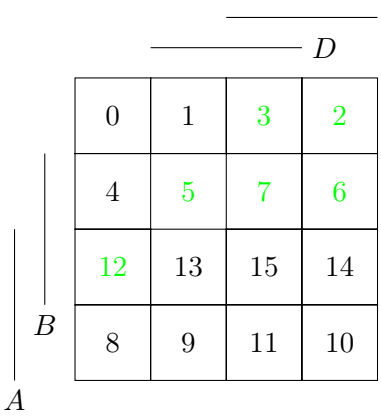
Функии:
СДНФ: $F = \bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}CD + \bar{A}B\bar{C}D + \bar{A}BC\bar{D} + AB\bar{C}\bar{D} + \bar{A}BCD$
СКНФ: $F = ABCD + ABC\bar{D} + A\bar{B}CD + \bar{A}BCD + \bar{A}BC\bar{D} + \bar{A}B\bar{C}D + \bar{A}B\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}\bar{C}D + \bar{A}\bar{B}\bar{C}\bar{D}$

$$F = \sum_{0}^{6}(2, 3, 5, 6, 7, 12)$$

$$F = \prod_{0}^{9}(0, 1, 3, 4, 5, 6, 10, 14, 15)$$

Карты Карно

СДНФ: $F = \bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}CD + \bar{A}B\bar{C}D + \bar{A}BC\bar{D} + AB\bar{C}\bar{D} + \bar{A}BCD$



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