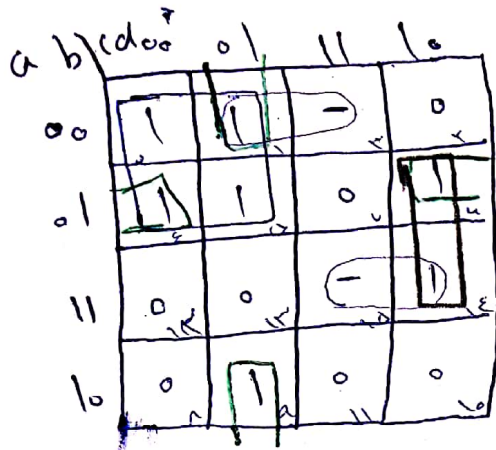


حسن بازار



EPI

$\bar{a}\bar{c}$

+1.5 $bcd\bar{a}$

$\bar{b}\bar{c}d$

-0.5 for surplus EPI

PI

$\bar{a}\bar{c}$

$b\bar{a}c$

+4.5 (الف)

$\bar{b}\bar{c}d$

$\bar{a}b\bar{c}d$

$\bar{a}\bar{b}d$

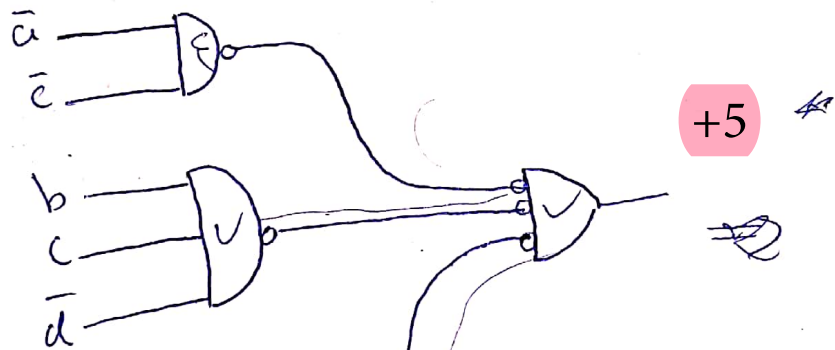
abc

-0.5 for surplus PI

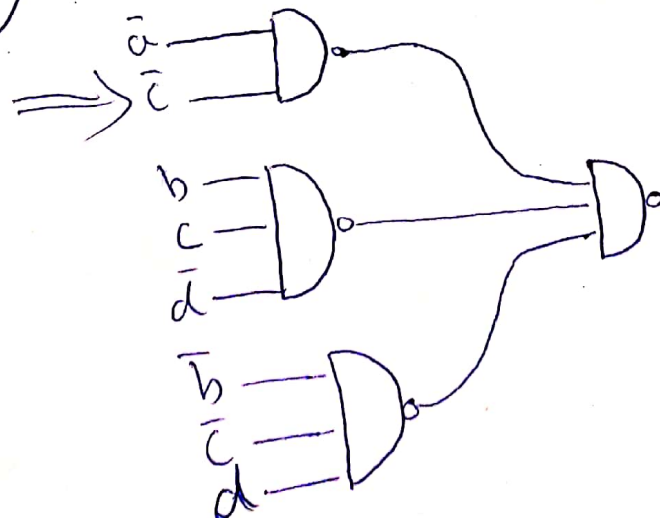
$SOP = (\bar{a}\bar{c}) + (bcd\bar{a}) + (\bar{b}\bar{c}d)$

$POS = (\bar{a} + \bar{b} + c) \cdot (b + \bar{c}) \cdot (a + \bar{c} + d) \cdot (\bar{a} + b + d)$

ب) $NAND$ $\bar{a}\bar{c}$



-5 for did not implement OR-AND-INV



$$SOP = \overline{a} \cdot b \cdot \bar{c} + (\bar{b} \cdot c) + (\bar{a} \cdot c \cdot d) + (a \cdot \bar{b} \cdot \bar{d})$$

AN-OR-1

✓ 0
✓ 1
✓ 2
✓ 3
✓ 4
✓ 5
✓ 6
✓ 7
✓ 8
✓ 9
✓ 10
✓ 11
✓ 12
✓ 13
✓ 14
✓ 15

✓ (0,1) 1
✓ (0,2) 1
✓ (1,2) 1
✓ (1,3) 1
✓ (1,4) 1
✓ (1,5) 1
✓ (2,4) 1
✓ (2,5) 1
✓ (3,4) 1
✓ (3,5) 1
✓ (4,5) 1
✓ (4,6) 1
✓ (4,7) 1
✓ (4,8) 1
✓ (4,9) 1
✓ (4,10) 1
✓ (4,11) 1
✓ (4,12) 1
✓ (4,13) 1
✓ (4,14) 1
✓ (4,15) 1
✓ (5,6) 1
✓ (5,7) 1
✓ (5,8) 1
✓ (5,9) 1
✓ (5,10) 1
✓ (5,11) 1
✓ (5,12) 1
✓ (5,13) 1
✓ (5,14) 1
✓ (5,15) 1
✓ (6,7) 1
✓ (6,8) 1
✓ (6,9) 1
✓ (6,10) 1
✓ (6,11) 1
✓ (6,12) 1
✓ (6,13) 1
✓ (6,14) 1
✓ (6,15) 1
✓ (7,8) 1
✓ (7,9) 1
✓ (7,10) 1
✓ (7,11) 1
✓ (7,12) 1
✓ (7,13) 1
✓ (7,14) 1
✓ (7,15) 1
✓ (8,9) 1
✓ (8,10) 1
✓ (8,11) 1
✓ (8,12) 1
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✓ (8,15) 1
✓ (9,10) 1
✓ (9,11) 1
✓ (9,12) 1
✓ (9,13) 1
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✓ (9,15) 1
✓ (10,11) 1
✓ (10,12) 1
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✓ (10,15) 1
✓ (11,12) 1
✓ (11,13) 1
✓ (11,14) 1
✓ (11,15) 1
✓ (12,13) 1
✓ (12,14) 1
✓ (12,15) 1
✓ (13,14) 1
✓ (13,15) 1
✓ (14,15) 1

(0,1,2,3) (1,2,3,4)

(0,1,2,3) (1,2,3,4)

(0,1,2,3) (1,2,3,4)

001

A a b c d

0001

0101

0110

1111

0101

+8

D=3,10

SPI | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

$\bar{a} \bar{b} d$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
$\bar{b} \bar{c} d$															
$\bar{a} b \bar{c}$															
$b c \bar{d}$															
$a b c$															
$\bar{a} \bar{c}$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

+6

-6

$$F = \bar{a} \bar{c} + b c \bar{d} + \bar{b} \bar{c} d$$

$$(V+V) - (V+V) = 0$$

-12

(5)

چون تاثير دگيت آخر نسبت به عرض ياليس بيست است Potential است و به electrical Hazard

-6

خبر نمي شود