

Subject:

Year.

Month.

Date.

عبدالله - ٩٥٤١.٠١

برهان

$$a) f(m, y, w, z) = \sum m(0, 1, 2, 3, 4, 5, 6, 7, 8, 9)$$

(PI)

(EPI)

wz	00	01	11	10
00	0	1	0	1
01	0	1	0	1
11	0	0	1	1
10	1	1	0	0

PI: $n'w'z'$, $y'z'$, xyz , nwz , $ny'z'$, $n'yw'$, $yw'z'$,

EPI: $y'z'$

$$f(m, y, w, z) = n'w'z' + yw'z' + nwz + y'wz' + y'w'z'$$

$$b) f(m, y, w, z) = \sum m(1, 2, 4, 5, 9) + d(10, 11)$$

wz	00	01	11	10
00	0	0	0	1
01	1	1	0	1
11	0	1	0	1
10	0	1	0	0

PI: $ny'z$, $y'w'z$, $n'w'z$, $n'y'z$, $x'yw$, $ny'w$

EPI: $x'yw$, $ny'w$

$$f(m, y, w, z) = n'yw + ny'w + n'w'z$$

$$c) f(m, y, w, z) = \sum m(4, 5, 12) + d(1, 5, 8, 9, 10, 13)$$

wz	00	01	11	10
00	0	0	0	0
01	0	0	1	1
11	0	0	1	0
10	1	1	1	1

PI: nyz , nyw , wz'

EPI: wz'

$$f(m, y, w, z) = wz' + nyz$$

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a) $f(x,y,z) = \sum (x',x',x',x',x',x',x',x') + d(x,x')$

(a) (2)

stage 1

Implicant Table

Column I	Column II	Column III
000✓	0-0✓	0--*
001✓	00-✓	-01*
1000✓	-010✓	
0011✓	001-✓	
0010✓	10-0*	
1100	1-0*	
1010✓	-011✓	
	01-1✓	
1011✓	110-*	
1101✓	101-✓	
0111✓	-101*	
	0-11	

stage 2

	x	y	z	x'	y'	z'
1,0 (0,0)					✓	✓
1,0 (1,00)					✓	
1,0 (1,0)						✓
0,1 (0,1)			✓			✓
1,0 (0,1)	✓	✓	✓			
1,0 (1,0)	✓	✓				✓
	✓	✓	✓			✓

- 10-0 : $xy'z'$ 1,0
- 1-00 : $xw'z'$ 1,15
- 110- : xyw' 15,15
- 01 : $yw'z$ 0,15
- 0-1 : $x'z$ 1,15,0,15
- 011 : $y'w$ 15,15,1-0,11

$f = xy'z + xyw + x'z + y'w$

b) $f(x,y,w,z) = \prod M(8,9,14,15) \cdot D(0,1,8,9)$

(b)

Column I	Column II	Column III		x	y	z	w
0000✓	000-	00--*	0,8 (0,00)	✓			
0001✓	00-0	-0-1*	8,15 (-100)				✓
0010✓	0-00*		0,15 (0-11)			✓	
0100✓	00-1✓		0,15 (00-)			✓	
0011✓	-001-		1,15 (0-1)	✓			
1001✓	001-✓						
1100	-100*						
0111✓	0-11*						
1011✓	10-1✓						

$(y'w+z)(x+w+z)(y+z)$

OMID

0-00 (1,15,15)	100 (8,15)	0-11 (15,15)	00-- (0,15)	-0-1 (1,15,15)
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b) $L(w, y, z) = \pi M(8, 9, 11, 15) \cdot D(0, 1, 5, 0)$
 $L(w, y, z) = \sum m(0, 4, 8, 10, 12, 13, 14, 15) + \sum d(0, 1, 5, 0)$

Column I	Column II	Column III	
0000 ✓	0000 ✓	0000 *	0000 : (0, 1)
0001 ✓	0001 ✓	0001 *	0001 : (1, 9)
0010 ✓	0010 ✓	0010 *	0010 : (0, 10)
0011 ✓	0011 *	0011 *	0011 : (8, 4, 10, 15)
0100 ✓	0100 ✓	0100 *	0100 : (10, 10)
0101 ✓	0101 *	0101 *	0101 : (15, 10)
0110 ✓	0110 *	0110 *	0110 : (0, 1, 5, 0)
0111 ✓	0111 *	0111 *	
1000 ✓	1000 ✓	1000 *	
1001 ✓	1001 *	1001 *	
1010 ✓	1010 *	1010 *	
1011 ✓	1011 *	1011 *	
1100 ✓	1100 ✓	1100 *	
1101 ✓	1101 *	1101 *	
1110 ✓	1110 *	1110 *	
1111 ✓	1111 *	1111 *	

	0	4	8	10	12	13	14
$(0, 1) = 0000$			✓				
$(1, 9) = 0001$							
$(0, 10) = 0010$		✓		✓		✓	
$(8, 4, 10, 15) = 0011$							
$(10, 10) = 0100$					✓		✓
$(15, 10) = 0101$						✓	✓
$(0, 1, 5, 0) = 0110$							
$(0, 1, 5, 0) = 0111$							
$(10, 10) = 1000$	✓	✓	✓	✓	✓	✓	✓

$L(w, y, z) = y'wz' + ywz + yw'z$

$L(w, y, z) = (y + z)(y' + w + z)$

Date.

Scanned by CamScanner

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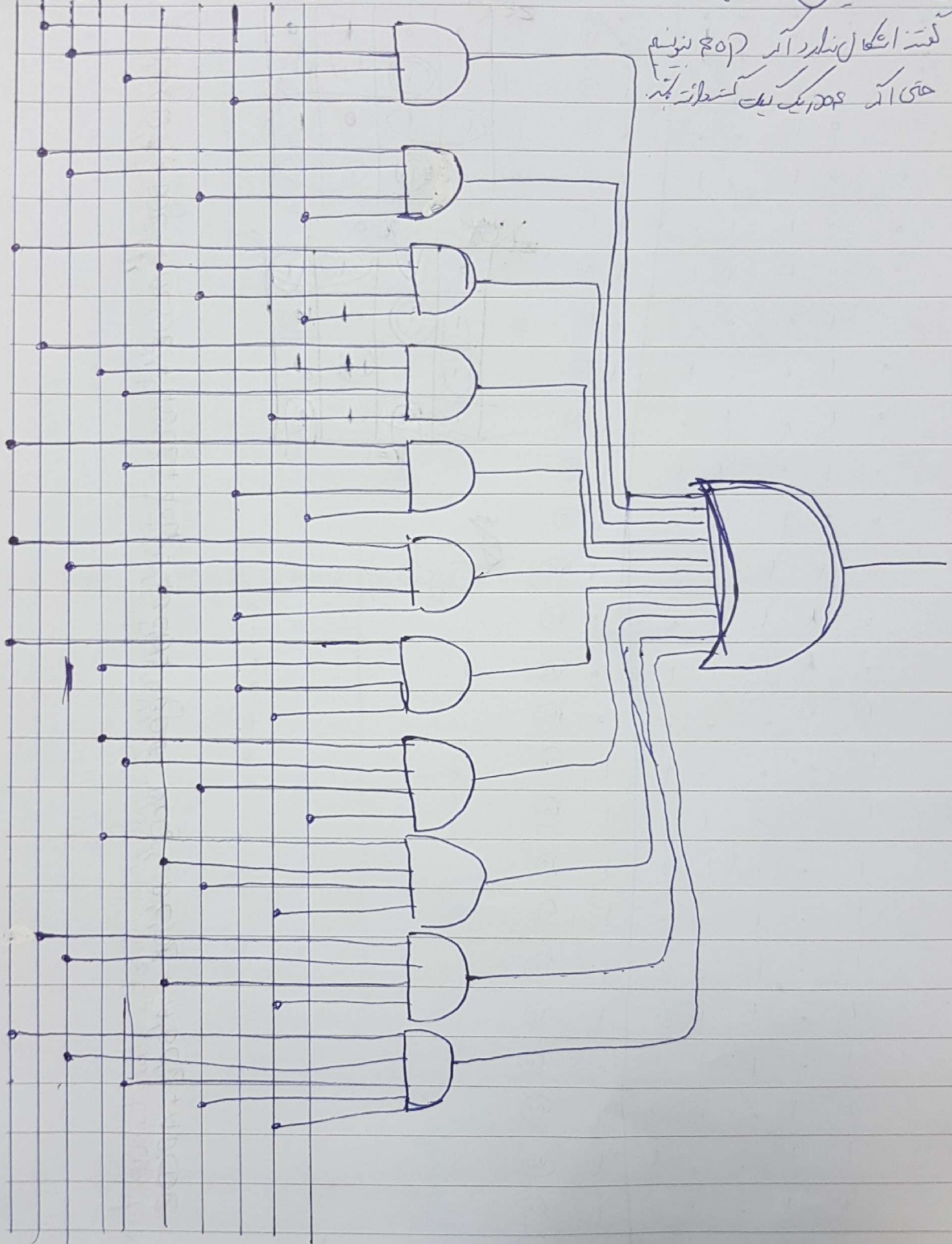
Month.

Date.

مکانیسم عملکرد

از دسترس برطرف می شود

گفته اشکان بنده در آن ۸۵۲ نویسنده
حتی آن ۸۵۲ نویسنده یک گستره است



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$$f(x, y, w, z) = y'w'z' + x'y'w' + x'w'z + ywz + xyw$$

(a)

a) canonical sop

$$x'y'w'z' + x'y'w'z + x'yw'z + x'w'z + ywz + xywz + xywz' + xyw'z'$$

b) canonical pos

$$(x' + y + w' + z)(x + y' + w' + z)(x + y' + w + z')(x' + y' + w + z)(x' + y + w' + z)(x + y + w' + z')$$

c) minimized sop

$$x'y'w' + x'y'z + xyw + y'w'z'$$

d) minimized pos

$$(y' + w + z)(x' + w' + z')(y + w')(x + w' + z)$$

$$f(a, b, c, d, e) = a'b'ce + b'c'd'e' + a'b'd' + b'cd' + a'cd + a'bd' + abc'd$$

bc

de

1	1	0	0
1	1	0	0
0	1	1	1
0	1	1	1

a=0

bc

de

1	1	0	0
0	1	0	0
1	0	0	0
1	0	0	0

a=1

$$f = a'b'd' + a'b'c + a'bd + b'd'e' + ab'e'd + b'cd'$$

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$$L(n, y, w, z, t) = MM(0, 1, 15, 20, 28, 34, 39) \cdot D(1, 10, 19, 14, 11, 0) \quad (b) \textcircled{2}$$

yw	zt	00	01	11	10
00	01	1	1	1	X
01	10	1	1	X	1
10	11	1	1	0	1
11	00	1	1	1	X
n=0					

yw	zt	00	01	11	10
00	01	X	1	1	0
01	10	1	1	0	1
10	11	1	0	X	1
11	00	X	1	1	0
n=1					

$$L = (w + t)(y' + w' + t')(n' + w' + z' + t')$$

سوال است

در حالتی که کار از به حالت خارج نیست: ① در هیچ صفت / نشانه ② منفی نشانه ③ مثبت نشانه
پس هر طبع ۲ حالت طبع و جدول کار از به نظر داده پس: ۳۶ حالت تعداد کل در حالت