VAME: JAWAD AHMED ROLL No: 20P-0165 SECTION: 2A TEACHER NAME: SHAKIR - ULLAH ASSIGNMENT No 4

Digital Logic Design.

QUESTION # 1

Convert Enpression AC+ (A+B'c)(AC+B) to Standard SOP and Standard Pos.

X = AC+ A.AC+ AB+AB'CC+BB'C

X = A(+ A(+AB+ AB'C + D

X = AC+ AB+ AB' C

X= AC(1) + AB(1) + AB'C

X = AC(B+B') + AB(1+10) + AB'C

X= ABC+BAC + ABBC+ ABC + ABC

Because B+B'= 1

B. B'= 0

X = ABC + AB'C + ABC + ABC' + AB'C

X= ABC + AB'C + ABC' - is the SSOP.

Domain all variables are present. Because D= { A, B, C}

For converting in Standard, POI we use scop.

We put 1 at 111, 101, 110.

1	AI	B	0		f	
1	0	0	0		0	
	0	0	1		D	
	0	1	1	0	0	
	0	1		1	1	0
	1	0		0		0
	1	- 0		1	1	1 1 1
	1	1		0		1
	1	1	16	1		1

Where 0 coming hote that terms $\overline{A} = 1$, A = 0

Standard Product of Sum Eupression.

Domain = { A, B, C}

19 -6)80+ (8+8)4A -X

0				
1.	1101	tron	No)
Y	ne?	TION	140	-
		(Barrell In St.		_

I	A	B	C	F
T	0	0	0	0
1	0	0	1	1
	0	1	0	0
	0	1	1	1
	1	0	0	0
	1	0	1	1
	1	1	0	0
	1	1	0	0

SOP Enpression

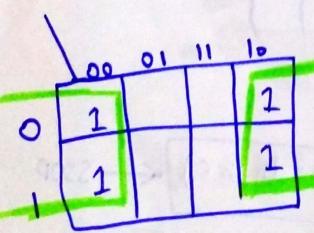
$$X = (\overline{A} \overline{B} C) + (\overline{A} BC) + (\overline{B} C) + (\overline{B} C)$$
 \leftarrow SSOP

Now Pos term

$$X = (A+B+C)(A+B+C)(\overline{A}+B+C)$$

$$(\overline{A}+\overline{B}+C)(\overline{A}+\overline{B}+C)$$

$$(\overline{A}+\overline{B}+C)(\overline{A}+\overline{B}+C)$$



not some sulp

$$8+8=1$$

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