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Determine the minimal sum-of-products form for

 $F(A,B,C,D,E) = \Sigma\{1,2,3,5,9,10,11,18,19,20,21,23,25,26,27\}$

Step 1: Using tabulation method, generating all the prime implicants and construct a prime implicant table, as shown in Table 1.

None	Every	Continuence	THE REAL PROPERTY.	e de la companie de l	//Interior	Management	VINSHAMOONO	**************************************	номплимен	NO WILLIAMS	A MANDOLINI MALIA		Commence of the Commence of th		- Annochments	A P
Name	Expression	- THE PERSONS ASSESSMENT OF THE PERSON ASSESSM	2	3	5	9	10	11	18	19	20	21	23	25	26	27
$\mathbf{p_i}$	C'D	- SETTINGS	X	Х			X	Х	X	Х				anachrotists.	X	X
$\mathbf{p_2}$	BCE	samae.	- OTHER DESIGNATION .	(MANAGEMENT)	TANTAGE	X	ALTERNATION .	X	- Idea - America	SANCHITANA	MOUNTORES		and the same of	X		Х
$-\mathbf{p}_3$	A'C'D	Х		X	-Abdomes	X	HORSONINGHA	X	-pomesma.	TENEROUS SEC	(INDADICTION					
P4	ABDE	X	THE WORLD	displacement.	X	-CHRONIA		MIN SCHOOL ST	-	- SECURITARISM		Harris Candida				
P _S	B,CD,E	Tulkette.	- Contraction	-	X	-	- MONTH AND COMMAN	***********	- AND COLUMN TO SERVICE OF THE SERVI	-	Market Market	X	erg war an			
$-\mathbf{p_6}$.	AB,CD,	-	-	Companying	Stances				************		X	X	gan and a second			
\mathbf{p}_7	AB'DE	-		Controllery			-	-		X		- Action of the	X		-	-
P_8	AB'CE				-			-				X	X			

Table 1

Step 2: From the PI Table, we have to look into each column to find out if any column has only one minterm. If so, circle that minterm.

	Name	Expression	1	2	3	5	9	10	11	18	19	20	21	23	25	26	27
Eby	P1*	C'D		(\mathbf{x})	Х			(x)	Х	(\mathbf{x})	Х)	(x)	Х
562	P2-*	BC'E)			Х		X						(\mathbf{x})		Х
V	P_3	A'C'D	Х		Х		х		Х)		
	P_4	ABDE	Х			Х											
4	P_5	B'CD'E				X							X			-	
662	Pak	AB'CD'			_		,					(x)	X				
•	P ₇	AB'DE								,	Х			Х			
	Pa	AB'CE											X	Х			7.
				1				V		V		1			V	1/	

Name	Expression	1	2	3	5	9	10	11	18	19	20	21	23	25	26	27
*Pt	CD		X	X		-	$\frac{1}{x}$	$\frac{1}{X}$	X	X					x	X
$\star p_2$	BC'E	- Accounts		- MERCHANNE	-	$\overline{\mathbf{x}}$		X	\$ 139h					x	14.5	X
P ₃	A'C'D	X		X		X		X			Control of					
\mathbf{p}_{i}	A'B'D'E	X			$\overline{\mathbf{x}}$					-					TT TO	-
P_5	B'CD'E	-	-		X		7-12	-	2715			X				
*P6	AB'CD'	-		******				-			х	$\frac{x}{x}$		777		u e.
P ₇	AB'DE	-						-		X			X			7, 1
p_8	AB'CE	-	701	-								X	X		200	

Step 3: Now find out the dominating rows -

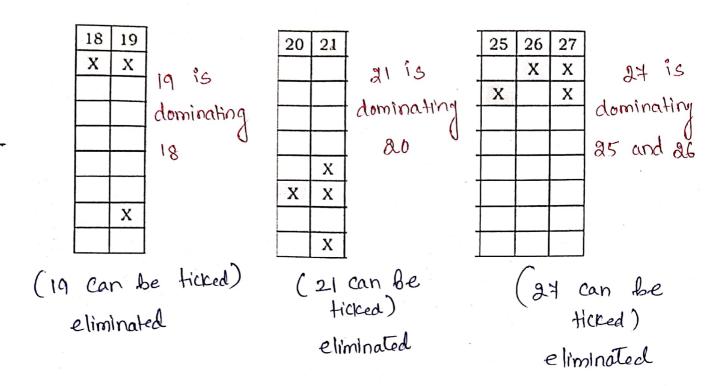
Row Dominance.

	3			
X	X	3 is dominating.	10	11
-		à	X	X
	Х	<u> </u>		X
				X
				,
		Column 3 can		
		be ticked		
		(eliminated)		-

11 is dominating 10

Column 11 can be ticked

Theorem: Dominating Columns can be eliminated.



Total = 2, 10, 18, 20, 25, 26, 3, 11, 19, 20 and 21 columns can be eliminated (ticked)

			M			~									١		
83	Name	Expression	1	2	3	5	9	10	11	18	19	20	21	23	25	26	27
Y'e	*P1	СД		X	X			X	X	X	X					X	X
5~	*P2	BCE					X		X						X		X
	P ₃	A'C'D	X		X		X		X					;			
i i	P ₄	A'B'D'E	X	1		Х				S. :			機關				
	P ₅	B'CD'E		19		Х				N LA	翻點	2/4	X				
ĵ,	P6	AB'CD'				V.F		開發			表现	X	X				
	P ₇	AB'DE		6 13				espect sy Tell 1 de			X			X		* /	
	P8	AB'CE											X	X			
				1	V	V	$\sqrt{}$	\checkmark	V	\checkmark	V	V	V	-	V	V	$\overline{}$

Now we are left out with only column no 1, 5, 23.



Now we have to go with the concept of ROW DOMINANCE

	Name A			The state of	Cress	1 manus	(usten	I SANT	CHARLES THE CONTRACTOR	TOWNERS IN PROCESS	ne i semponente de l'attitud l'accid	a I management	1 (modelnos)	>800.
\rightarrow	P ₃	A'C'D	Х	4 10	X		X	Х				y Isanoucae)		Lopin
\longrightarrow	P ₄	AB'D'E	Х			Х			17712)					183
->	. P ₅	B'CD'E				Х			2(3)	X				C

	^	PH	15	do	mirati	ng 80	NW P 3	and	P51
	In the co	ise of	Row	, we	have to	o elimi	rate th	e dom'	inated rows)
P ₇	AB'DE					X	X		-
Ps	AB'CE						X X	1. kg/ V	-

P7 and P8 are same so We can Consider either P7 or P8 in the final expression.

P3 and Plimi Name

P1

P2

P3

	me																
1	Name	Expression	1	2	3	5	9	10	11.	18	19	20	21	23	25	26	27
	/*Pi	CD	1	X	X		緣	X	X	X	X					X	X
	*P2	BCE			11/15		X		X						X	9260	X
7	P ₃	A'C'D	X		X		X		XIT			被將			200		34
	P ₄	ABDE	Х	ile i di i	1	Х		Magric F		House		8				creatification	
9	Ps	B'CD'E				X	論						X				
	*P6	AB'CD'								ÇŞIV.		X	X				
	P_7	AB'DE					(in		THE STATE OF THE S		X			Х			
	Pa	AB'CE											X	X			

We are left out with

Essential Prime Implicants.

P4 and (P7 OR P8)