

07

Thursday

February

2019

বৃহস্পতিবার

২৫ মাঘ ১৪২৫ বঙ্গাব্দ

১ জমাঃ সানিঃ ১৪৪০ হিজরী

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CSE 231

Date: 29/7/20

SOP  $\rightarrow$  Sum of Product / Sum of Minterm

POS  $\rightarrow$  Product of Sum

Minterm  $\rightarrow$  and Operation

Max term  $\rightarrow$  OR operation

$\rightarrow$  Disjunctive Normal Form / 1st Canonical

$\rightarrow$  Conjunctive Normal Form / 2nd Canonical

Table : 1

Input Reference	ABC	F	Min term	Max term
0	000	0		$A+B+C$
1	001	1	$A'B'C$	
2	010	1	$A'BC'$	
3	011	0		$A+B'+C'$
4	100	0		$A'+B+C$
5	101	0		$A'+B+C'$
6	110	1	$ABC'$	
7	111	0		$A'+B'+C'$

Table 2: 1st and 2nd canonical forms

	Shorthand Notation	function
1st Canonical Form	$F = \sum(1, 2, 6)$	$F = A'B'C + A'BC' + ABC'$
2nd Canonical Form	$F = \prod(0, 3, 4, 5, 7)$	$F = (A+B+C)(A+B'+C')(A'+B+C)(A'+B'+C')$