**LAB 3 REPORT**

Definition

Minterms:A term is mean term if it contains all the literals in its normal or complement form and all literals are related to eachother through AND operator.

Maxterms: A term is max term if it contains all the literals in its normal or complement form and all literals are related to eachother through OR operator.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Input Reference** | **ABC** | **F** | **Minterm** | **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’ |

|  |  |  |
| --- | --- | --- |
|  | Shorthand  Notation | Function |
| 1st Canonical Form | F=∑(1,2,6) | F= A’B’C + A’BC’ + ABC’ |
| 2nd Canonical Form | F=∏(0,3,4,5,7) | F=( A+B+C)( A+B’+C’)( A’+B+C)( A’+B+C’)(A’+B’+C’) |

For minterm ABC=1

For maxterm A+B+C=0

* Can Disjunctive Normal Form – SOP
* Can Conjunctive Normal Form - POS