Important terms related to minimization of Boolean expression + K Maps

1) Minterm
2) Maxterm
3) Cardinal form
4) Canonical form
5) SOP (Sum Of Product)
6) POS (Product Of Sum)

Sl no	Terms	Explanation
1	minterm	Product of all the literals with or without the bar within the expression . Example XY'Z'
	Short hand minterm notation	**Example :** the short hand **minterm** designation of xy'z' **Step 1 :** substitute 0's for barred letters and 1's for non barred letters , xy'z'=100 ,(Binary equivalent) **Step 2 :** Express decimal subscript of m (**lower case m**) = m_4
2	maxterm	Sum of all the literals with or without the bar within the expression. Example X'+Y+Z'
	Short hand maxterm notation	**Example :** the short hand **maxterm** designation of x+y'+z' **Step 1 :** substitute 0's for non barred letters and 1's for barred letters , x+y'+z'=011 ,(Binary equivalent) **Step 2 :** Express decimal subscript of **M** (**Upper case M**) = M_3
3	Cardinal form	F(X,Y,Z) =Σ(0,1,2,5) F(W,X,Y,Z) = π (0,3,6,8,10,12,14)
4	Canonical form	(X.Y.Z)+(X'.Y'.Z)..... **OR** (X+Y+Z') . (X'+Y+Z). (X'+Y"+Z').... Boolean Expression composed entirely either of minterms or maxterms is referred to as Canonical Expression
5	SOP (Sum Of Product) Or Canonical SOP	When a boolean expression is represented purely as **Sum Of Minterms** , it is said to be in **Canonical Sum-Of-Products Form** **Example:(XYZ')+(XY'Z')+(X'YZ')**
6	POS (Product Of Sum) Or Canonical POS	When a boolean expression is represented purely as **product of Maxterms** , it is said to be in **Canonical Product-Of-Sum Form** **Example : (X+Y+Z')(X+Y'+Z')(X'+Y+Z')**