Assignment 2

1. Differentiate between the acronyms SOP and POS. Explain each one clearly in your own words.

→ SOP is a way of representing a boolean expression using min terms or product terms while the POS is a way of representing a Boolean expression using max terms or sum terms.

2. Write the function $f_1(A,B,C) = A+B+C$ as a "Product of Sums" call the function f_2.

→ $F_1(A,B,C) = A+B+C$

$= (A+B)(A+C)$

$F_2(A,B,C) = (A+B)(A+C)$

3. Write the above function f_1 in conomical forms in both SOP and POS, f_2 is the conomical SOP and f_4 is the conomical POS.

→ Truth Table.

	A	B	C	F(A,B,C)
0	0	0	0	0
1	0	0	1	0
2	0	1	0	0
3	0	1	1	1
4	1	0	0	1
5	1	0	1	1
6	1	1	0	1
7	1	1	1	1

$F(A,B,C) = \Sigma M(3,4,5,6,7)$

$= A'BC + AB'C' + AB'C + ABC' + ABC$

In POS,

$F = (A+B+C).(A+B+C)(A+B+C)$

$= \pi M(0,1,2)$