

1. Simplify the following boolean expressions to a minimum number of literals. (4)

1. $xyz' + x'yz + xyz + x'yz'$

2. $ABC + A'B + ABC'$

2. Draw the logic diagrams for the following. (6)

1. $(x+y)' \cdot (x' + y')$

2. $(x+y'+z') \cdot (x' + z')$

3. Simplify the following boolean function (4)

x	y	z	F
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

4. Express the complement of following functions in sum-of-minterms form. (4)

$$F(w, x, y, z) = \sum (0, 1, 2, 4)$$

$$F(x, y, z) = \prod (0, 2, 4)$$