

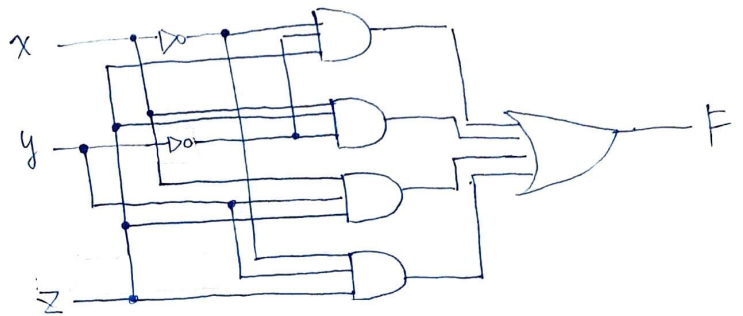
$$5. F = x'y'z + xy'z + xyz + x'yz$$

Truth table of F

(a)

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

(b) logic diagram of F



(c)

$$x'y'z + xy'z + xyz + x'yz$$

$$= z(xy + x'y + xy' + x'y')$$

$$= z$$

$$\underline{G = z} *$$

(d) Truth Table of G.

x	y	z	G
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

⇒ same as the truth table of F

(e) logic diagram of G.



literals of F = 12

literals of G = 1

gates of F = 7

gates of G = 1

numbers of.