

13/11/21 Saturday

Don't Care Conditions:-  $F(x,y,z) = \sum(0,1,4)$   
 $(x'y'z')$

$x \backslash yz$	00	01	11	10
0	1	1	1	1
1				

$$x'y + x'z$$

$$F(x,y,z) = x'y'z' + x'y'z + x'y'z'$$

$$x'y' + x'z$$

$x \backslash yz$	00	01	11	10
0	1	1	1	1
1	0	0	0	0

$$x'$$

① Simplify  $F(w,x,y,z) = \sum(1,3,7,11,15)$   
 that has don't care conditions  $\sum(0,2,5)$

Sol:-  $F(w,x,y,z) = \sum(1,3,7,11,15)$   
 Don't care conditions  $\sum(0,2,5)$

$wz \backslash yx$	00	01	11	10
00	X	1	1	X
01		X	1	
11			1	
10			1	

$$F(w,x,y,z) = yz + w'z$$

- xx✓✓  
 wxyz
- (1,3) 0011
  - (2,3) 0111
  - (3,3) 1111
  - (4,3) 1011

	w	x	y	z
(1,2)	0	0	0	1
(1,3)	0	0	1	1
(2,2)	0	1	0	1
(2,3)	0	1	1	1

② Simplify  $F(a,b,c,d) = \sum(0,2,4,6,8,12)$

that has the don't care conditions  $\sum(1,3,5,7)$

Sol:-

$a \backslash cd$	00	01	11	10
00	1	X	X	1
01	1	X	X	1
11	1			
10	1			

$$c'd + a'$$

③  $F(x,y,z) = \sum(0,2,4,6)$   
 Don't care conditions  $\sum(1,5)$

$\gamma \backslash x$	00	01	11	10
0	1	X		1
1	1	X		1