Subject

Date 26/02/15

(Lecture 20) Tabulation Method:-

Practice Question:- $F = \sum(0,1,2,8,10,11,14,15)$

(a)

(a)

	A	B	C	D	
0 -	0	0	0	0	✓
1 -	0	0	0	1	✓
2 -	0	0	1	0	
8 -	1	0	0	0	✓
10 -	1	0	1	0	✓
11 -	1	0	1	1	✓
14 -	1	1	1	0	✓
15 -	1	1	1	1	✓

- Write first table using bits in zeroes and ones.
- Divide them in groups in a way, such that every groups should have one bit difference
- Compare each group with the other consecutive group and place (-) if there is only one bit difference in two members of comparing groups.

(b)

(b)

	A	B	C	D
(0,1)	0	0	0	-
(0,2)	0	0	-	0
(0,8)	-	0	0	0
(2,10)	-	0	1	0
(8,10)	1	0	-	0
(10,11)	1	0	1	-
(10,14)	1	-	1	0
(11,15)	1	-	1	1
(14,15)	1	1	1	-

- Now Compare consecutive groups's members and pair those who has one bit difference. and write them in group C.

Subject _____ Date _____

(c)

	A	B	C	D
(0,2,8,10)	-	0	-	0
(0,8,2,10)	-	0	-	0
(10,11,14,15)	1	-	1	-
(10,14,11,15)	1	-	1	-

- In final answer, write only those who donot pair with any one.

$$F = A'B'C' + B'D' + AC$$

Question 2:- $F = \Sigma(1,4,6,7,8,9,10,11,15)$

(a)

	A	B	C	D
1 -	0	0	0	1
4 -	0	1	0	0
8 -	1	0	0	0
6 -	0	1	1	0
9 -	1	0	0	1
10 -	1	0	1	0
7 -	0	1	1	1
11 -	1	0	1	1
15 -	1	1	1	1

(b)

	A	B	C	D
(1,9)	-	0	0	1
(4,6)	0	1	-	0
(8,9)	1	0	0	-
(8,0)	1	0	-	0
(6,7)	0	1	1	-
(9,11)	1	0	-	1
(10,11)	1	0	1	-
(7,15)	-	1	1	1
(11,15)	1	-	1	1

(c)

	A	B	C	D
(8,9,10,11)	1	0	-	-
(8,10,9,11)	1	0	-	-

	1	9	6	7	8	9	10	11	15
(1,9) B'C'D	X					X			
(4,6) AB'D'		X	X						
(6,7) A'BC'			X	X					
(7,15) BCD				X					X
(11,15) ACD								X	X
(8,9,10,11) AB'					X	X	X	X	

$$F = B'C'D + A'B'D' + BCD + AD'$$