

OFFLINE ASSIGNMENT ON) K-MAPS

$$1. f(A, B, C, D) = \sum (1, 4, 10, 11) + D(0, 2, 3, 5, 8, 14, 15)$$

AB \ CD	00	01	11	10
00	0 X	1 1	3 X	2 X
01	4 1	5 X	7	6
10	8 X	9	11 1	10 1
11	12	13	15 X	14 X

→ A'C'

→ AC

$$\therefore f(A, B, C, D) = AC + A'C'$$

$$2. f(A, B, C, D, E) = \sum(4, 5, 17, 19, 25, 27) + D(3, 6, 12, 13, 16, 18, 24, 26, 30, 31)$$

A=0

BC \ DE	00	01	11	10
00	0	1	3 X	2
01	4 1	5 1	7	6 X
11	12 X	13 X	15	14
10	8	9	11	10

$\rightarrow A'D'C$

A=1

BC \ DE	00	01	11	10
00	16 X	17 1	19 1	18 X
01	20	21	22	23
11	28	29	31 X	30 X
10	24 X	25 1	27 1	26 X

$\rightarrow AC'$

$$\therefore f(A, B, C, D, E) = A'D'C + AC'$$