CSE 219

Ans to q. no - 1   @

$F(a,b,c,d) = \Sigma\ 1,3,4,7,9,11,12,14$

AB \ CD	C'D' 00	C'D 01	CD 11	CD' 10
00 A'B'	A'B'C'D' 0	1	A'B'CD 1 (3)	2
01 A'B	A'B'C'D 1 (4)	5	A'BCD 1 (7)	6
11 AB	A'BC'D' 1 (12)	13	15	ABCD 1 (14)
10 AB'	8	1 (9)	AB'CD 1 (11)	10

$F(a,b,c,d) =$

Ans. to q. no-1 (6)

$$F(x, y, z) = \sum 1, 2, 5, 6, 7$$

xy\z	0	1
00	$\overline{x}\overline{y}\overline{z}$ 0	$\overline{x}\overline{y}z$ 4
01	$\overline{x}y\overline{z}$ (1) 1	$\overline{x}yz$ (1) 5
11	$xy\overline{z}$ 3	xyz 1 7
10	$x\overline{y}\overline{z}$ (1) 2	$x\overline{y}z$ (1) 6

$$\therefore F(x, y, z) = \overline{x}y + yz + x\overline{y}$$
$$= \overline{x}y + x\overline{y} + yz$$
$$= y(\overline{x} + \overline{z}) + x\overline{y}$$
$$= \overline{x}y(z\overline{z}) + yz(x\overline{x} + x\overline{y})$$
$$= (x \oplus y) + yz$$

(P.T.O)

Ans to q. no-2

$$F(a, b, c, D) = \sum (1, 3, 7, 8, 9, 10, 13, 14)$$

$= \sum m$

$(1, 3, 7, 8, 9,$
$10, 13, 14)$