Kaushal Kaushik
19CS10039

① $f(w,x,y,z) = \sum_m (2,6,8,9,10,11,14,15)$

2 ⟶ 0010
6 ⟶ 0110
8 ⟶ 1000
9 ⟶ 1001
10 ⟶ 1010
11 ⟶ 1011
14 ⟶ 1110
15 ⟶ 1111

<0:1, 0:D>	
m	a b c d
–	–

<1:1, 0:D>	
m	a b c d
2	0 0 1 0
8	1 0 0 0

<2:1, 0:D>	
m	a b c d
6	0 1 1 0
9	1 0 0 1
10	1 0 1 0

<3:1, 0:D>	
m	a b c d
11	1 0 1 1
14	1 1 1 0

<4:1, 0:D>	
m	a b c d
15	1 1 1 1

<1:1, 1:D>	
cube	a b c d
2, 6	0 – 1 0
2, 10	– 0 1 0
8, 9	1 0 0 –
8, 10	1 0 – 0

<2:1, 1:D>	
cube	a b c d
6, 14	– 1 1 0
9, 11	1 0 – 1
10, 11	1 0 1 –
10, 14	1 – 1 0

<3:1, 1:D	
cube	a b c d
11, 15	1 – 1 1
14, 15	1 1 1 –

<1:1, 2:D>	
cube	a b c d
2,6,10,14	– – 1 0
2,10,6,14	– – 1 0
8,9,10,11	1 0 – –
8,10,9,11	1 0 – –

<2:1, 2:D>	
cube	a b c d
10,11,14,15	1 – 1 –
10,14,11,15	1 – 1 –

Kaushal Bantlia
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PIs	2	6	8	9	10	11	14	15
10, 11, 14, 15					×	×	×	(×)
8, 9, 10, 11			(×)	(×)	×	×		
2, 6, 10, 14	(×)	(×)			×		×	

$\Rightarrow \boxed{f = wy + wx' + yz'}$