

I-D \Rightarrow 11596

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Ans ①

$$F = \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}\bar{C}D + \bar{A}\bar{B}C\bar{D} + \bar{A}B\bar{C}\bar{D} + A\bar{B}\bar{C}\bar{D} + A\bar{B}\bar{C}D + A\bar{B}C\bar{D}$$

	CD	$\bar{C}\bar{D}$	$\bar{C}D$	$C\bar{D}$	CD
AB					
$\bar{A}\bar{B}$	1	1	2	4	3
$\bar{A}B$	5	6	8	7	
$A\bar{B}$	12	13	15	14	
AB	1	1	9	11	10

Now

$$= \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}\bar{C}D + \bar{A}\bar{B}C\bar{D} + \bar{A}B\bar{C}\bar{D} + A\bar{B}\bar{C}\bar{D} + A\bar{B}\bar{C}D + A\bar{B}C\bar{D}$$

0000	0001	0010	0110	1000	1001	1010
↓	↓	↓	↓	↓	↓	↓
0	1	2	6	8	9	10

$$F(A, B, C, D) = \sum m(0, 1, 2, 6, 8, 9, 10)$$

I-D \Rightarrow 11596

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AB \ CD	00	01	11	10
00	1	1		1
01				1
11				
10	1	1		1

Ans ②

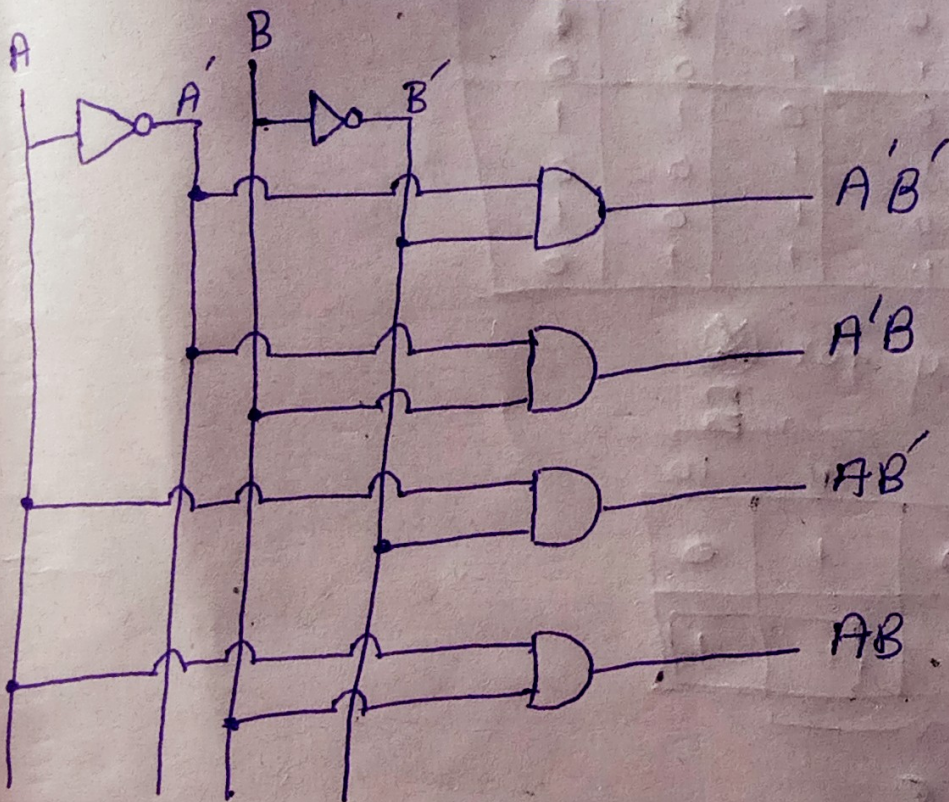
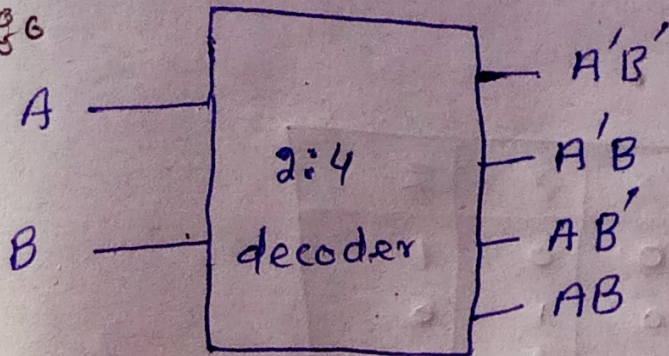
$$F(A, B, C, D) = \sum (2, 4, 5, 7, 9, 10, 11, 13, 15)$$

$$\text{don't care} = (0, 8, 12)$$

AB \ CD	00	01	11	10
00	X			1
01	1	1	1	
11	X	1	1	
10	X	1	1	1

Ans (5)

Solgo



Ans: 4%

Sol: 00

A	B	C	X	Y	Z
0	0	0	0	0	1
0	0	1	0	1	0
0	1	0	0	1	1
0	1	1	1	0	0
1	0	0	0	1	1
1	0	1	1	0	0
1	1	0	1	0	1
1	1	1	1	1	0

Now k-map for \textcircled{X}

	A/B		C	
	00	01	11	10
0	0	0	1	0
1	0	1	1	1

E

$X = B$ $Y = A$

Now k-map for \textcircled{Y}

	A/BC		C	
	00	01	11	10
0	0	1	0	1
1	1	0	1	0

Now K-Map for Z

	BC			
A	00	01	11	10
0	1	0	0	1
1	1	0	0	1

Ans ③

$$F(A, B, C, D) = \sum(1, 2, 3, 4, 5, 7, 9, 12, 14)$$

