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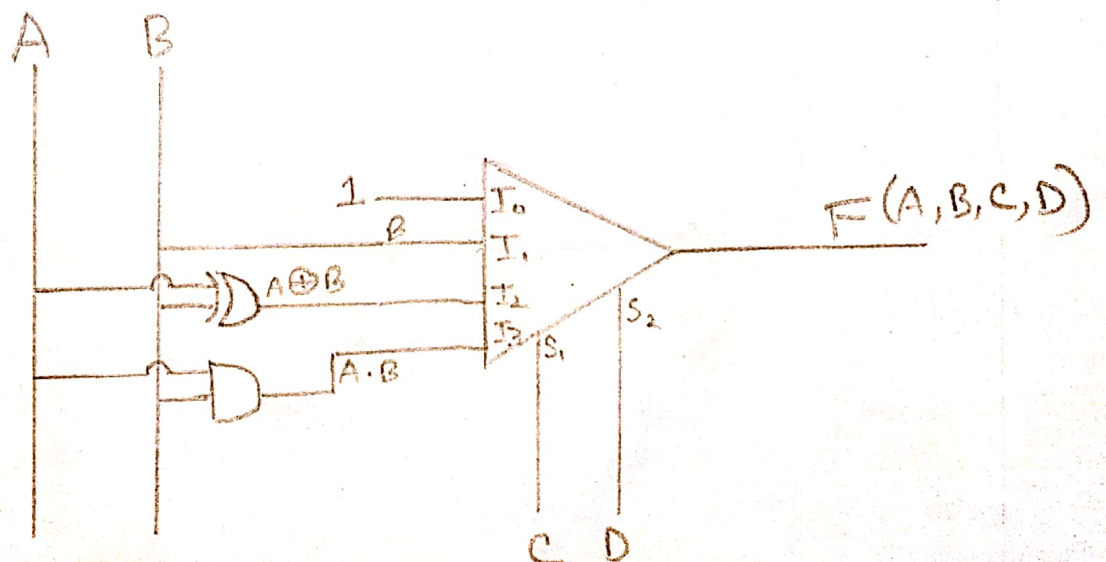
Ans:-

Given function  $\Rightarrow F(A, B, C, D) = \sum(0, 4, 5, 6, 8, 10, 12, 13, 15)$

Using  $4 \times 1$  Mux:-

	$I_0$	$I_1$	$I_2$	$I_3$
$A'B'$	1			
$A'B$	1	1	1	
$AB'$	1		1	
$AB$	1	1		1

$$\begin{aligned} & \begin{matrix} 1 & A'B+AB & A'B+AB' & AB \\ & = B(A+A') & = A \oplus B \\ & = B \end{matrix} \end{aligned}$$



Using 2x1 Mux:-

	$I_0$	$I_1$
$A'B'C'$	1	
$A'B'C$		
$A'BC'$	1	1
$A'BC$	1	
$AB'C'$	1	
$AB'C$	1	
$ABC'$	1	1
$ABC$	1	1

$$\begin{aligned}
 &A'B'C' + A'BC' + A'BC + AB'C' + AB'C + ABC' \\
 &= A'B'C' + AB + ABC'
 \end{aligned}$$

$$\begin{aligned}
 &= B'C' + A'B + AB'C + ABC'
 \end{aligned}$$

