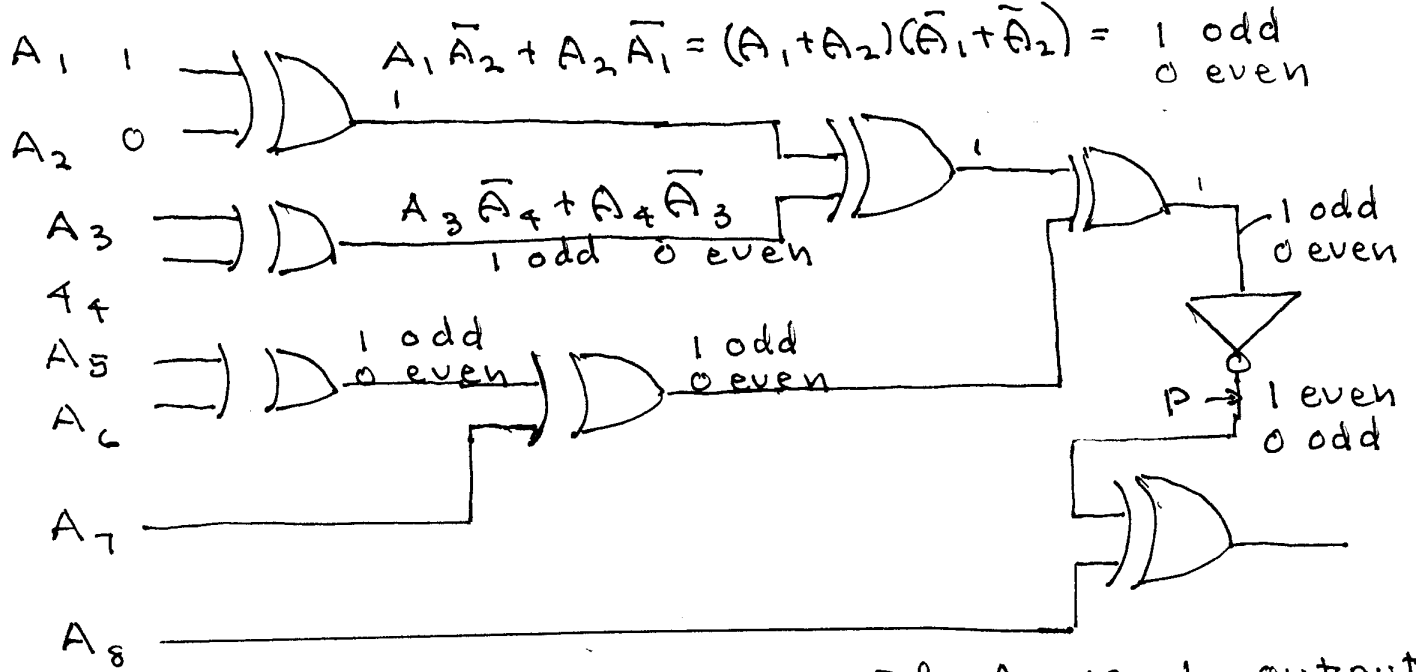


XOR Gate  $Y = A \oplus B = A\bar{B} + \bar{A}B = (A+B)(\bar{A}+\bar{B})$

A	B	Y	$A\bar{B}$	$\bar{A}B$
0	0	0	0	0
1	0	1	1	0
0	1	1	0	1
1	1	0	0	0

Example : Parity Check



If  $A_8$  is 1 output is 0 if P is even and 1 if P is odd

If  $A_8$  is 0 output is 1 if P is even and 0 if P is odd

$A_8$  is one of the eight bits so output is one for even parity