Name: Parity Generator and Checker

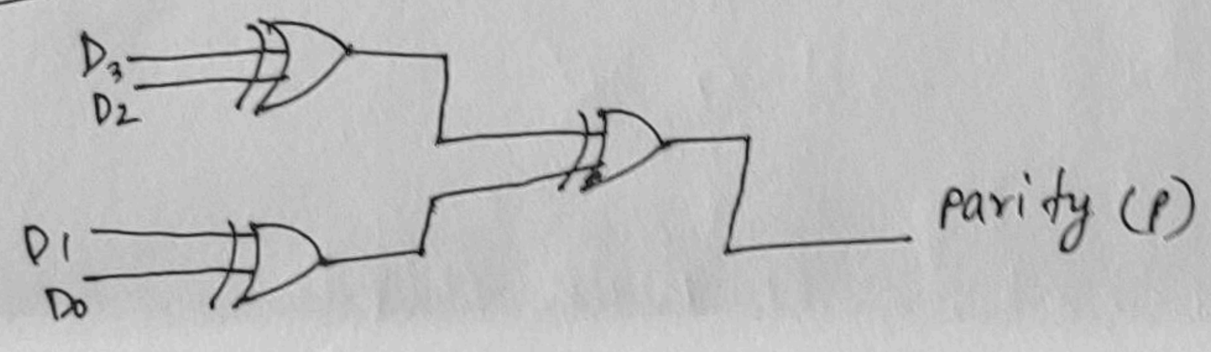
Objective: In this experiment, we have to implement an Even parity Generator and an Even parity checker, we have to use XOR gate for this experiment.

Required Components: 1. AT-700 portable Analog/ Digital Laboratory

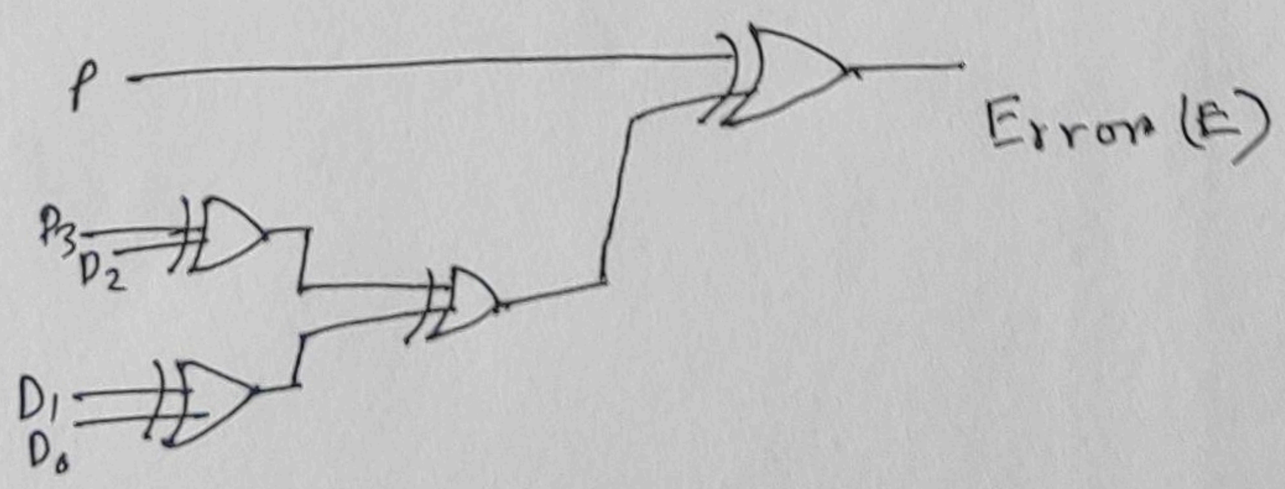
2. 7486

Experimental Setup:

Generator:



Checker:



D_3	D_2	D_1	D_0	output
0	1	1	1	1
1	0	0	1	0
0	0	0	0	0
0	1	0	0	1

D_3	D_2	D_1	D_0	~~output~~ Error
1	0	1	0	0 (no error)
1	1	1	0	0 (no error)
1	1	1	1	1 (error)
0	0	0	0	1 (error).

Discussion: In this experiment, we are ~~checking the parity~~ creating an even parity generator and an even parity checker, using XOR gates. In case of even parity generator, the generator successfully generates the parity, resulting if the number of 1's is even, it generates 0 as output, and if the number of 1's is odd, it generates 1 as output.

In case of parity checker, we are checking wheather the result of our experiment matches theoretically and practically. If the result matches, we are indicating it with 0 (no-error) and if the result does not match, we are indicating it with 1 (error).