Assignment #4 - ECED 4260 IC Design and Fabrication
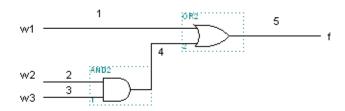
1) For the following circuit, using the stuck at model:

a. Find the equivalent faults; reduce 2n faults to k faults.

b. For each of the k faults, find test vectors. Provide input (w1, w2, w3), correct output (f) and faulty output (f*).

c. What is the minimum test pattern required?

(2) Represent -0.5 using IEEE 754 Single Precision Floating Point number.

(3) Add and multiply the following two numbers, which are given in IEEE 754 notation, and express the results using IEEE 754 single precision notation.

0	1	0	0	0	0	0	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

0	0	1	1	1	1	1	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0