CSE260 Lab Assignment 1

NAME: ANIKA ISLAM
ID: 21101298
SECTION: 6

LAB ASSIGNMENT 1

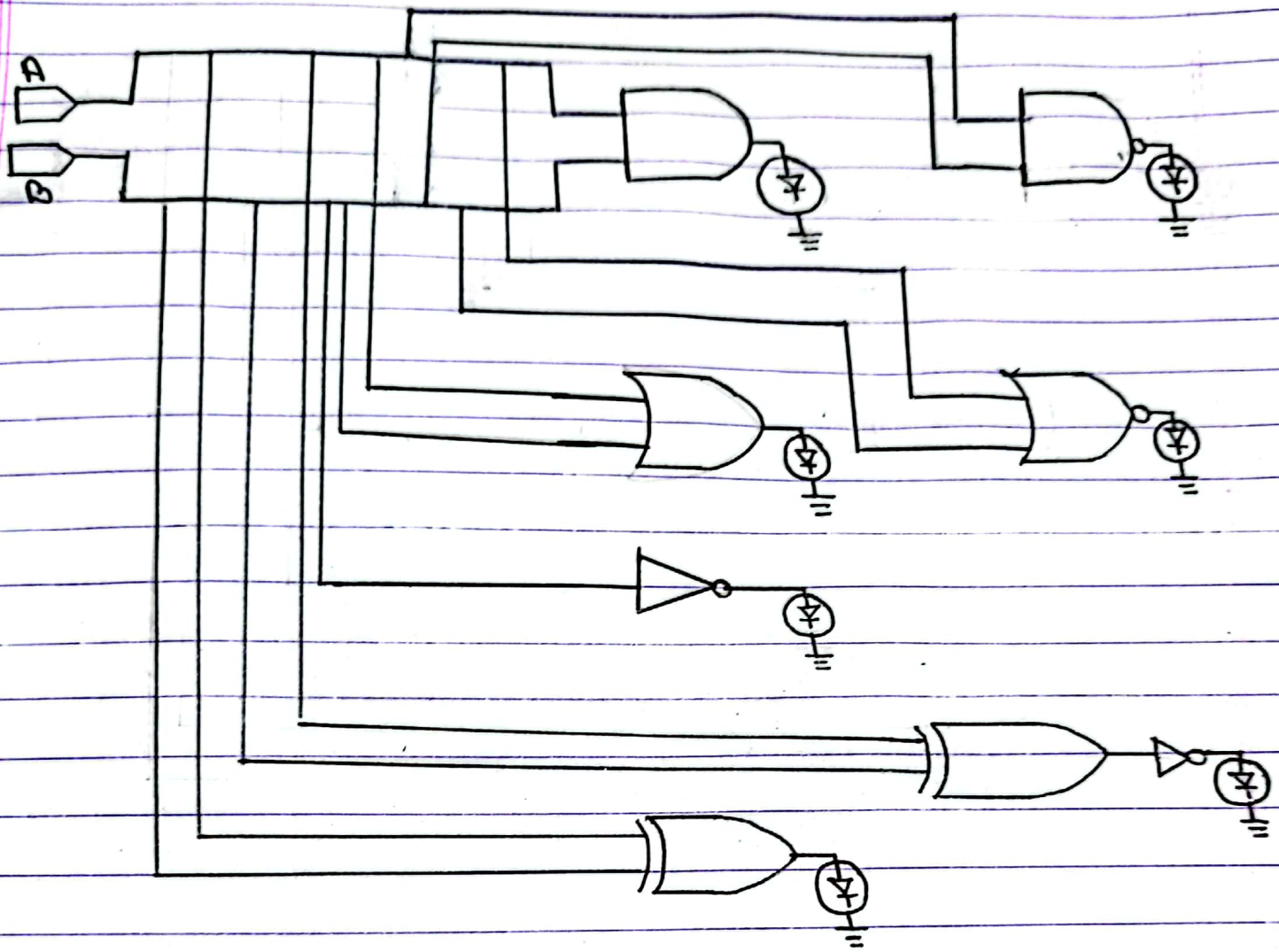
Report:

(1) Name of the Experiment :
Familiarization of Fundamental Logic Gates

(2) Objective:
- To get familiarised with fundamental logic gates and demostrates the input output relationships of 2-input AND, OR and NOT gates by constructing their truth tables.
- To get familiarized with other logic gates with like NAND, NOR, XNOR and XNOR

(3) Required components and Equipments :
- LOGICSTATE
- LED-BLUE
- LED-GREEN
- LED-PINK
- LED-RED
- LED-YELLOW
- LED-ORANGE
- LED-PURPLE
- AND
- OR
- NOT
- NAND
- XOR

4) Experiment Setup



(5) Results (Truth Table) and Discussions

- Truth Tables
- For AND:

Input		Output
A	B	A.B
0	0	0
0	1	0
1	0	0
1	1	1

- For NAND

Input		Output
A	B	(A.B)'
0	0	1
0	1	0
1	0	0
1	1	0

- For OR:

Input		Output
A	B	A+B
0	0	0
0	1	1
1	0	1
1	1	1

- For NOR:

Input		Output
A	B	(A+B)'
0	0	1
0	1	0
1	0	0
1	1	0

- For ~~NOT~~ XOR

Input		Output
A	B	A ⊕ B
0	0	0
0	1	1
1	0	1
1	1	0

- For NXOR

Input		Output
A	B	A ⊙ B
0	0	1
0	1	0
1	0	0
1	1	1

- For NOT

Input	Output
A	A'
0	1
1	0

Discussion:

Difficulty faced: If any of the wire is not placed properly or is loose, then there is a chance of wrong output. For this reason, the whole circuit needs to be set again from the very start. Also, like there is no NXOR gate unlike the other gates, so, connecting XOR and NOT be properly needs to be taken into extra caution.

Learnings: The concept of logic gates is more improvised and the ~~use~~ output of the logic gates in a circuit is visible ~~in~~ ~~pro~~ through the use of LED/logic probe in the output.