CSE260 Lab Report

Experiment Name: Familiarization of Fundamental Logic Gates

Submitted by

Name: Shabab Abdullah

ID: 20301005

Section: 09

Date: 4 July, 2021

Name of the experiment:

Familiarization of Fundamental Logic Gates.

Objective:

To get familiarized with fundamental logic gates and demon-
-state the input output relationship of 2-input AND (IC-7408)
OR (IC-7432) and NOT (IC-7404) gates by ~~construction~~
constructing their truth tables.

To get familiarized with other logic gates like NAND (IC-7403)
NOR (IC-7402), X-OR (IC-7486) and X-NOR (IC-74266).

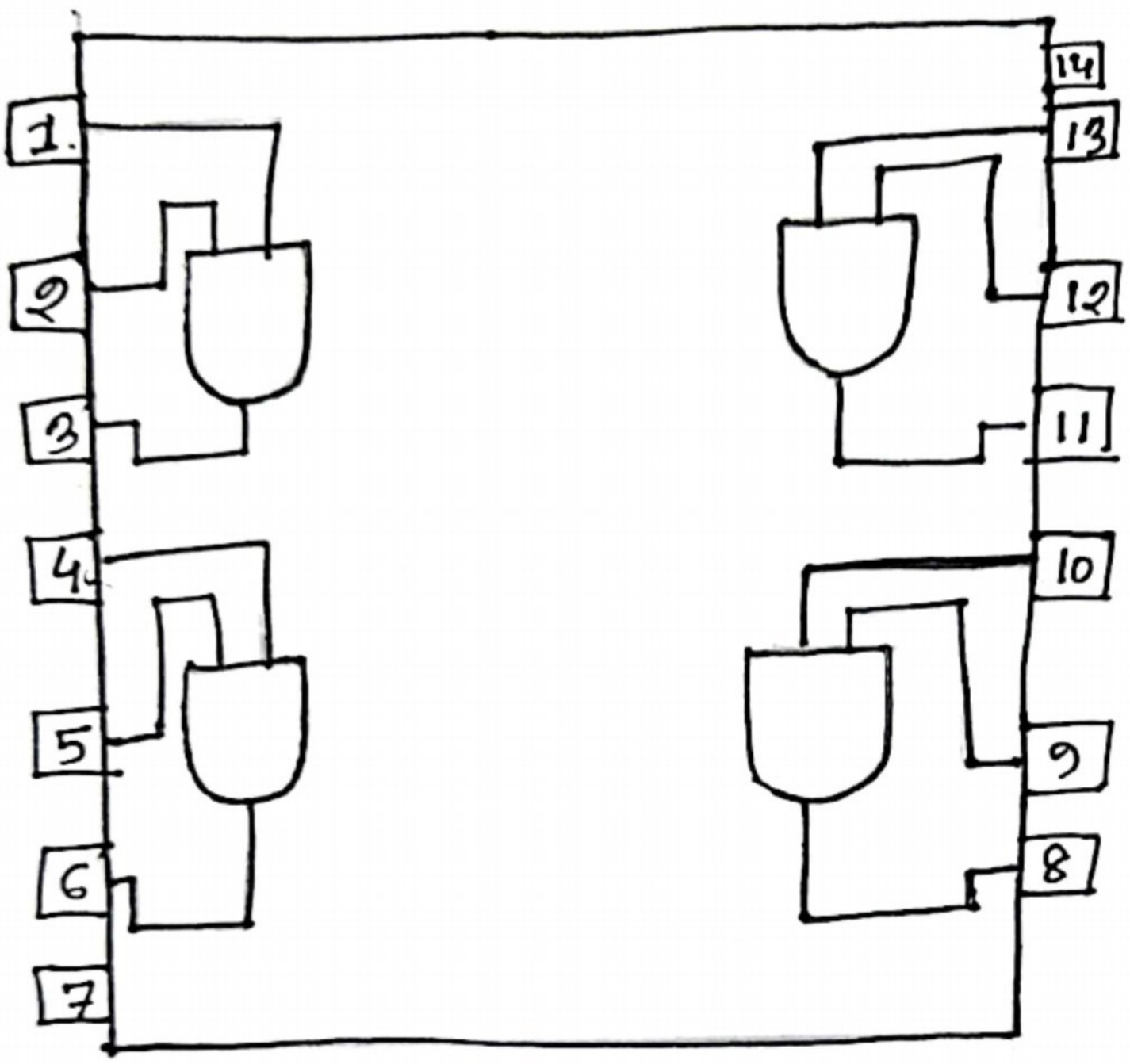
P.T.O

Scanned with CamScanner

Required Components and Equipments:

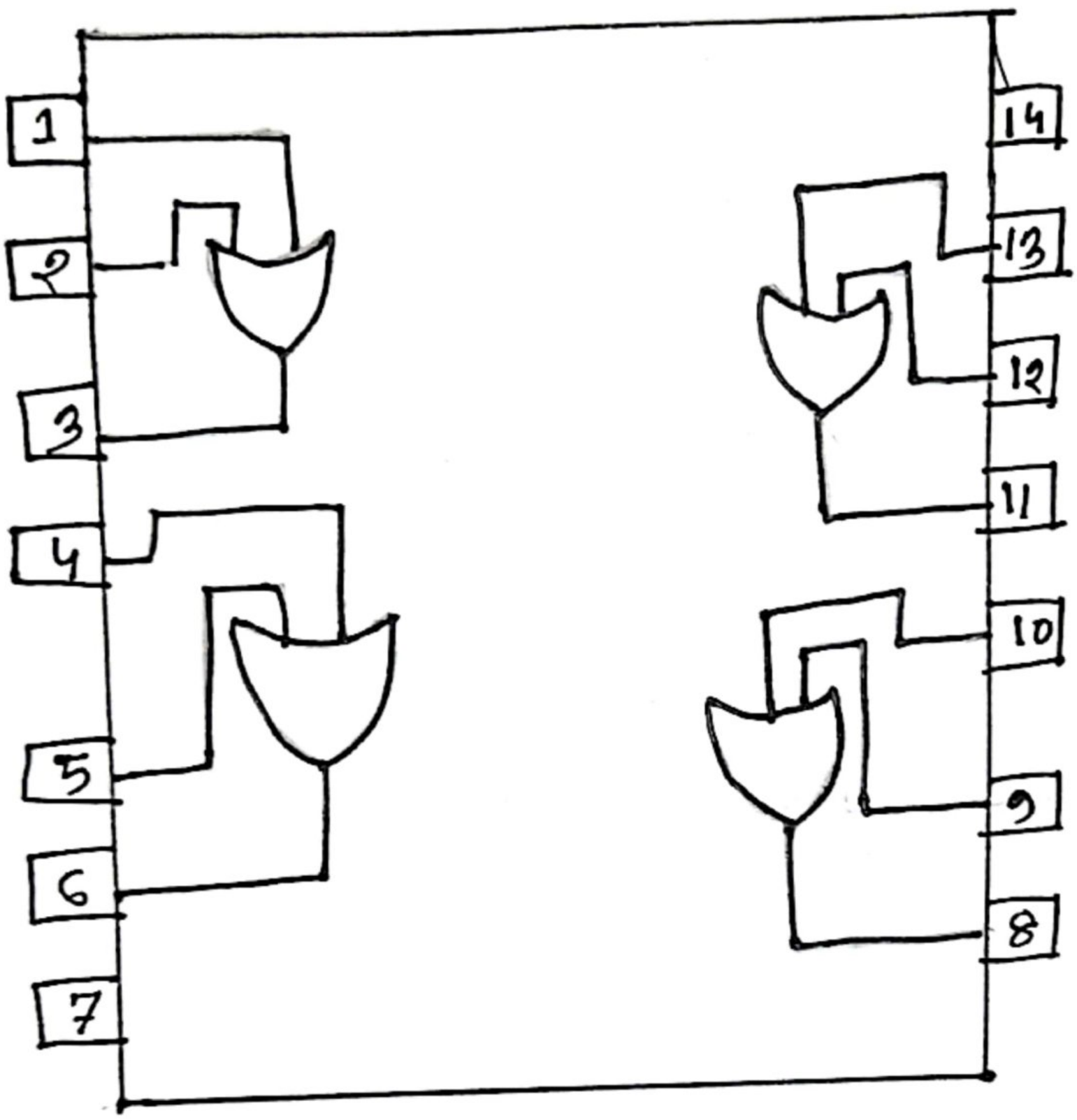
1. AND (IC- 7408)
2. OR (IC- 7432)
3. NOT (IC- 7404)
4. NAND (IC- 7400)
5. NOR (IC- 7402)
6. X-NOR (IC-74266)
7. X- OR (IC- 7486)
8. Logic Probe (Big)
9. Logic State.
10. Power.
11. Vott Meter.
12. Resistence.
18. Ground.

Scanned with CamScanner



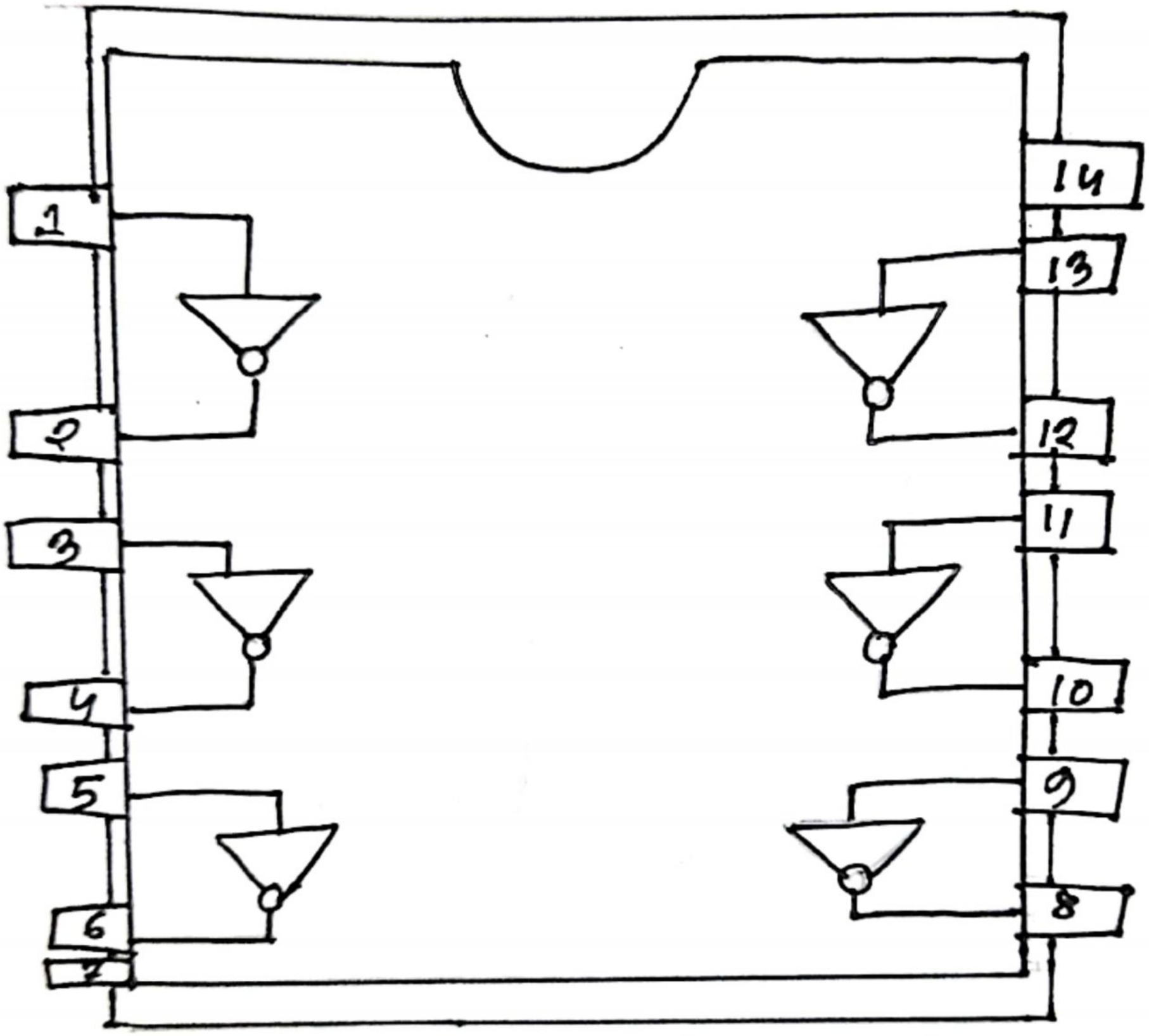
Pin Layout of 7408

Scanned with CamScanner



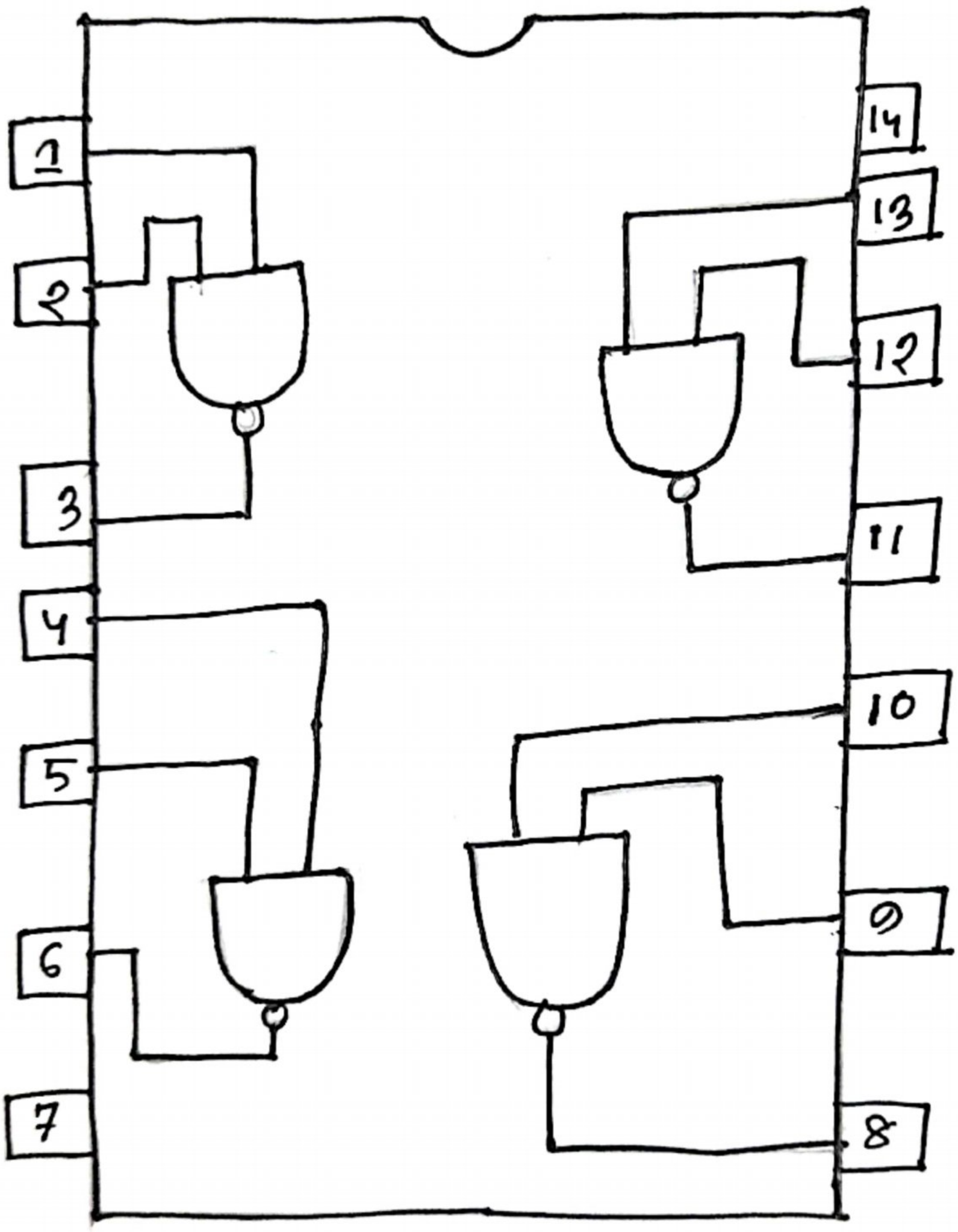
Pin Layout of 7432

Scanned with CamScanner



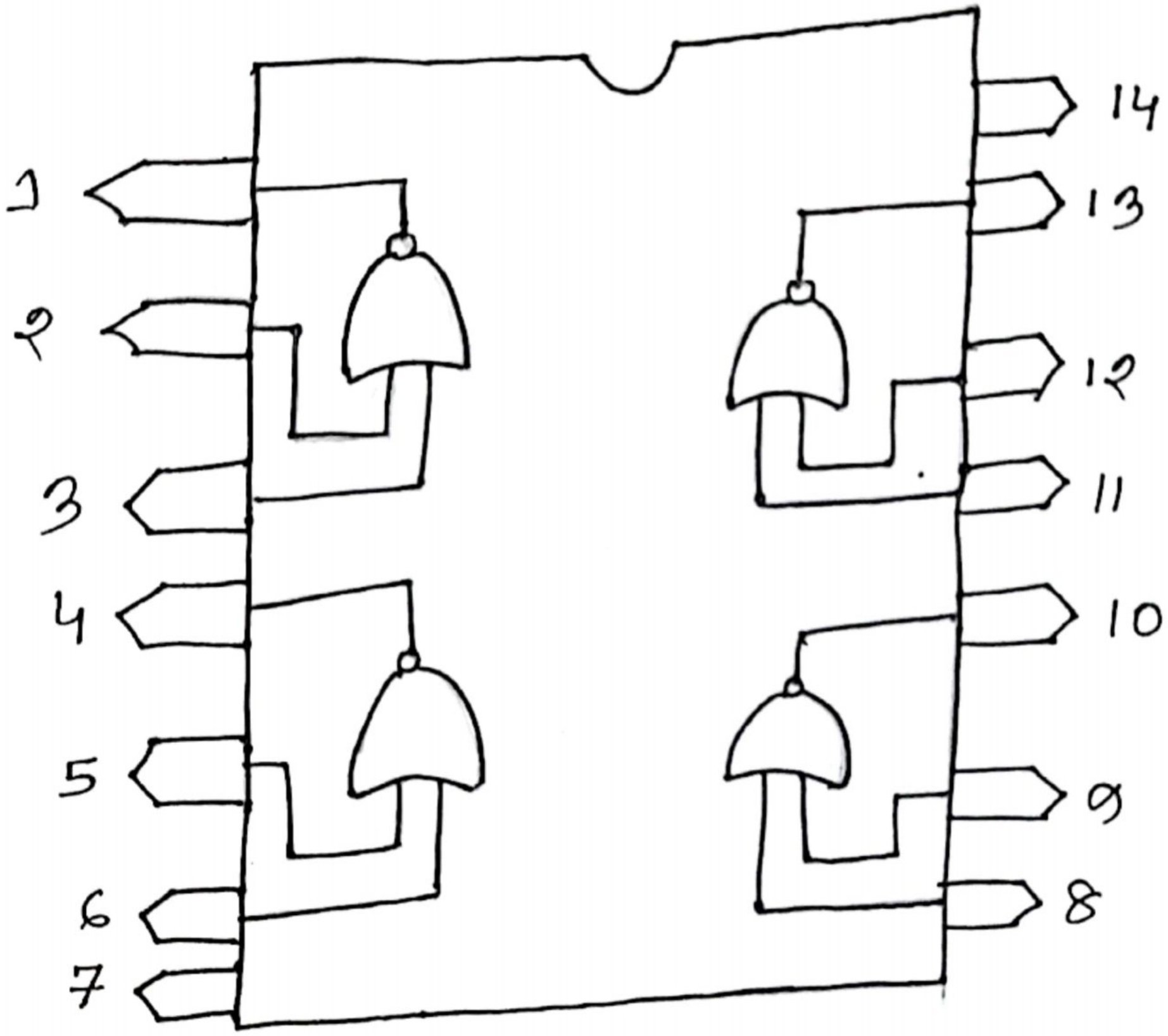
Pin Layout of 7404

Scanned with CamScanner

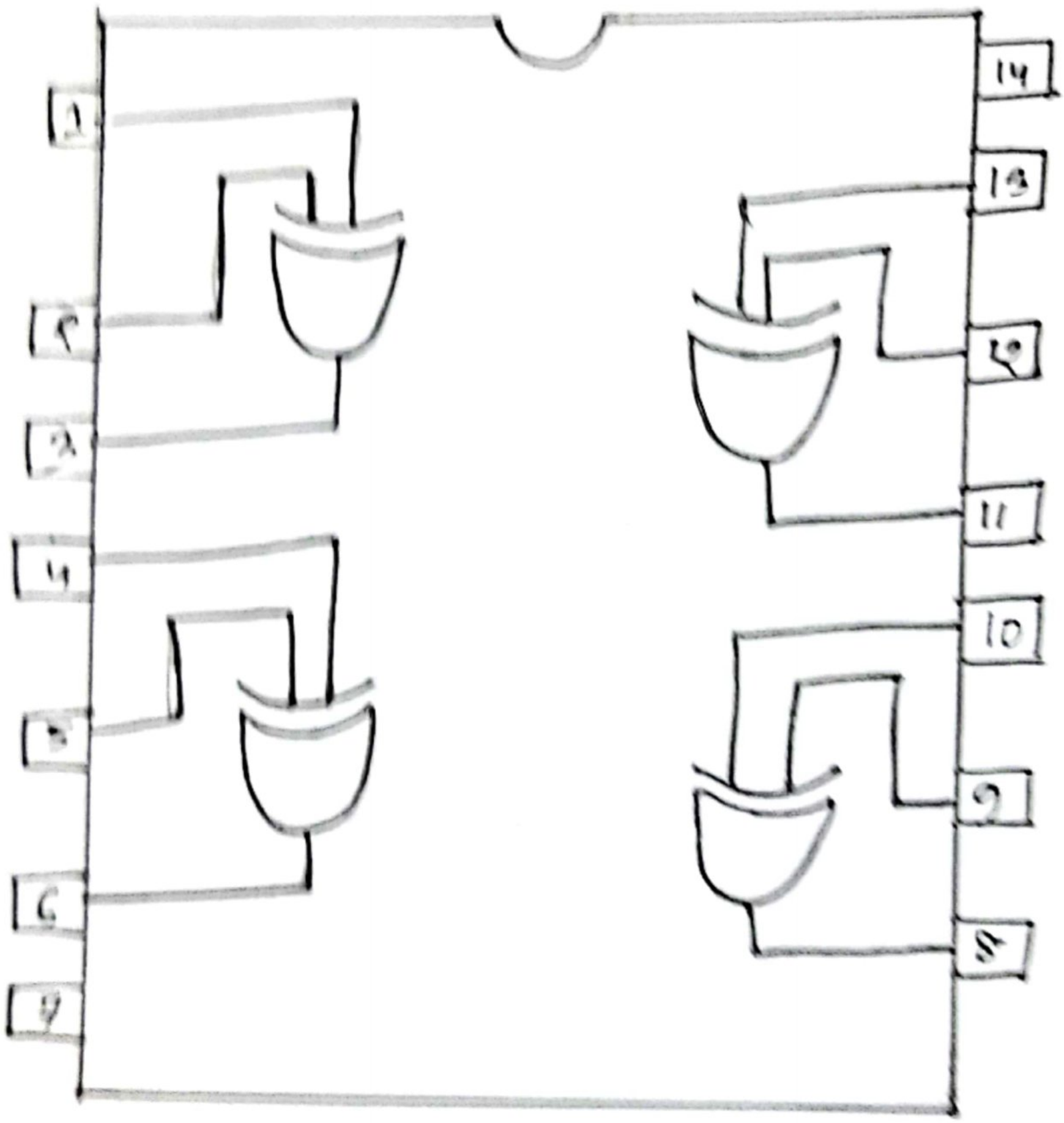


Pin Layout of 7400

Scanned with CamScanner

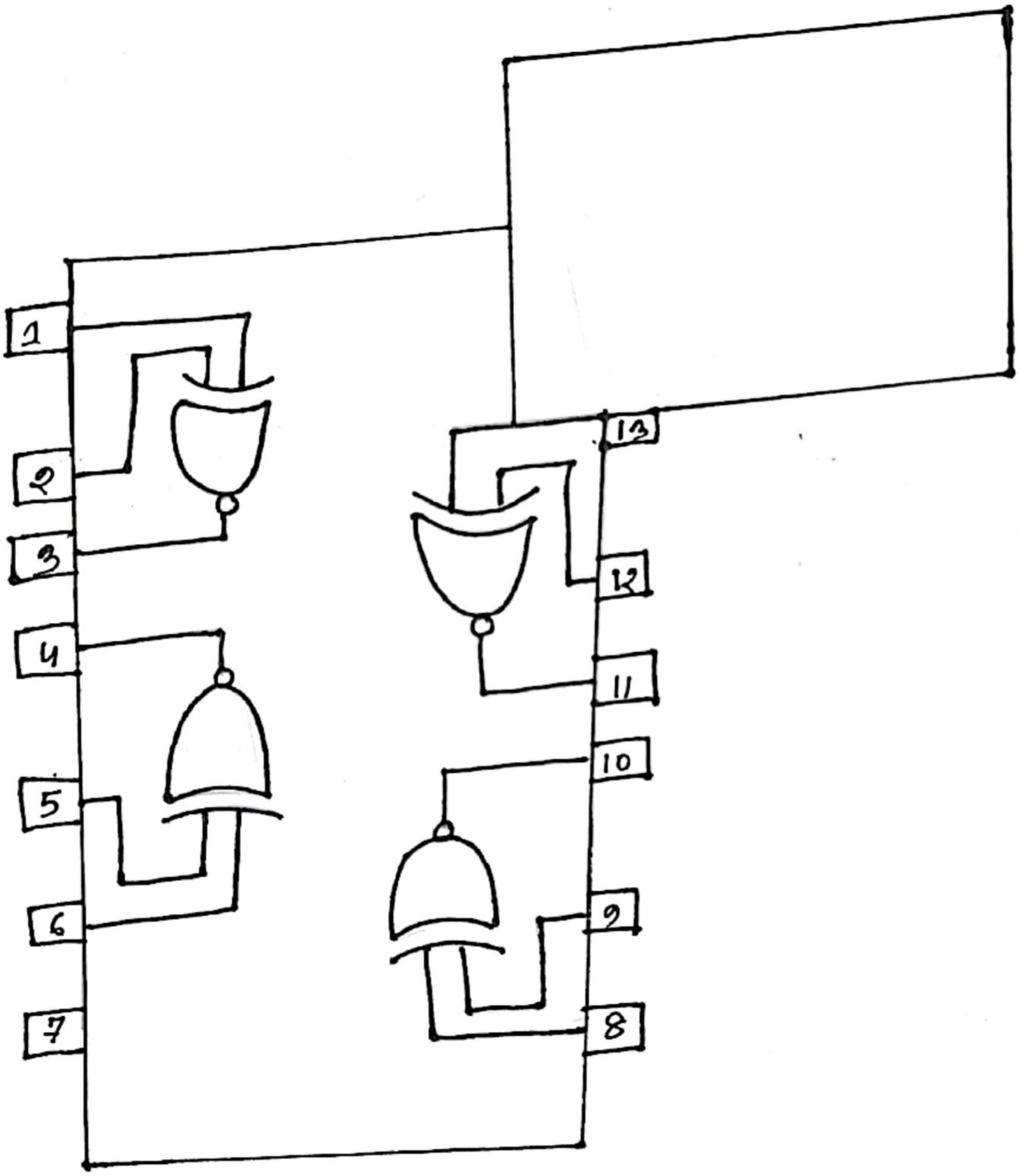


Scanned with CamScanner



Pin Layout of 7486

Scanned with CamScanner

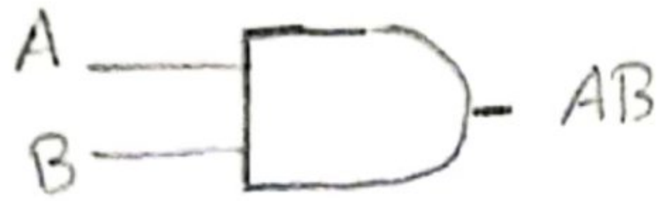


Pin Layout of 74266

Scanned with CamScanner

Truth Table :-

i) Truth table of AND gate:-



Input		Output
A	B	AB
0	0	0
0	1	0
1	0	0
1	1	1

ii) Truth table of OR gate:-

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

Scanned with CamScanner

iii) Truth Table of NOT gate :

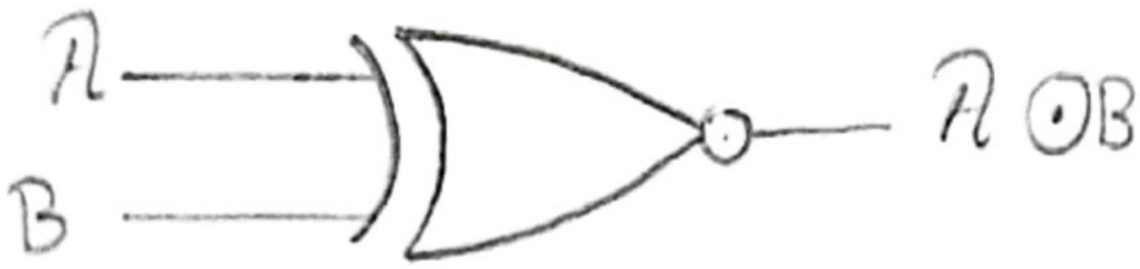
A	A'
0	1
1	0

iv) Truth Table of X-OR gate :-

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

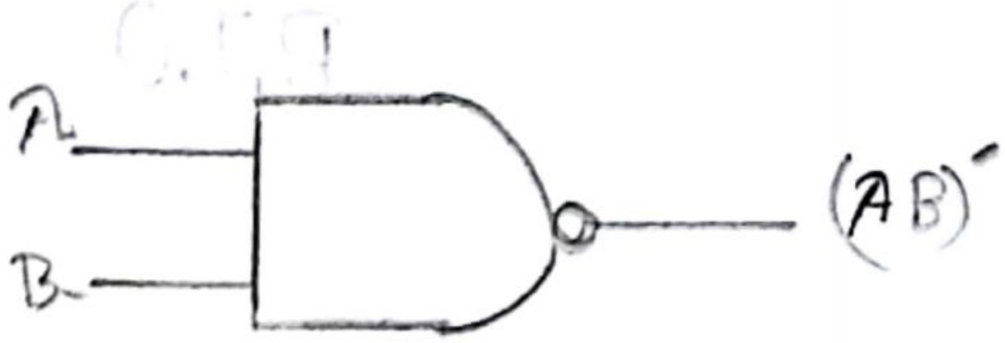
Scanned with CamScanner

v) Truth table of X-NOR gate:-



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

vi) Truth table of NAND gate:-



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

Scanned with CamScanner

vii) Truth table of NOR- gate :-

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

P. T. O

Scanned with CamScanner

Discussion :-

Throughout this exercise, we were introduced to the fundamental Logic gates, which consist of two inputs and a single outpu We used an online simulator called Proteus to get a bette understanding of how the gets worked. All of the logic gates have two inputs, which is typical for logic gates in general. Basic logic gates ~~have two~~ are used ~~to~~ in a wide range of applications, many of which are familiar to us.

Scanned with CamScanner