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Semester: 1 Sem Paper Name: Computer Organization and Architecture Lab
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Q1) NAND Gate

Apparatus Required: NAND gate IC, power supply, Hook up wires and breadboard etc.

Theory (working): NAND gate is actually series of AND gate with NOT gate. If we connect the output of an AND gate to the input of a NOT gate, this combination will work as NOT-AND or NAND gate.

→ Its output is 1 when any or all inputs are 0, otherwise output is 0.

→ The logic NAND gate is generally called as a "UNIVERSAL GATE" because it is one of the most used logic gate types.

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Procedure:

* Connect the Vcc and ground to the pins specified by the data sheet.
* Do all the connections as per the IC diagram, switch on the power supply
* After completing the connections, properly observe the output and match in it with the given truth table.

~~Result: The result of the experiment has been verified successfully~~

Truth Table

Input		Output
A	B	$C = \overline{A \cdot B}$
0	0	1
0	1	1
1	0	1
1	1	0

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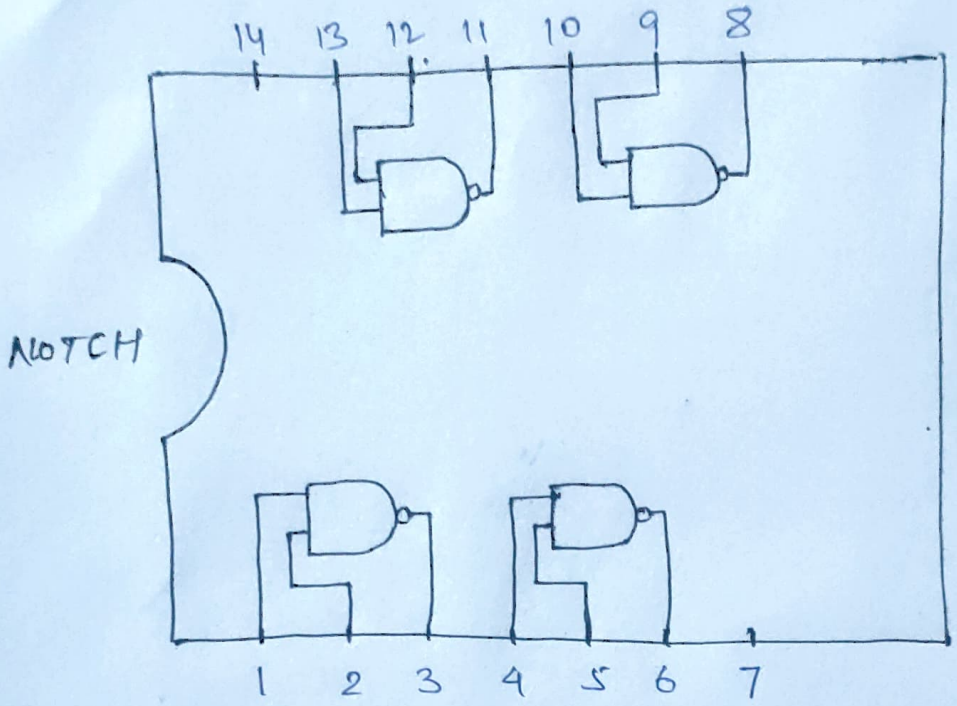
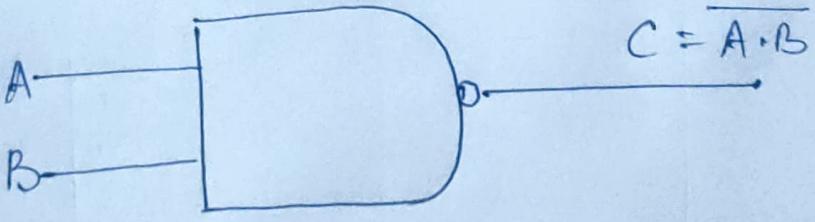
IC Diagram



IC-7400

Logic Diagram



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