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COURSE: MCA
SECTION: B
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SUBJECT: Computer Organization Practical

Ans) NAND Gate: In digital electronics, a NAND gate is combination of NOT-AND gate which produces an output which is false only if all its inputs are true.

The NAND gate is significant because any boolean function can be implemented by using a combination of NAND gates. This property is called functional completeness.

NAND gate using circuit diagram

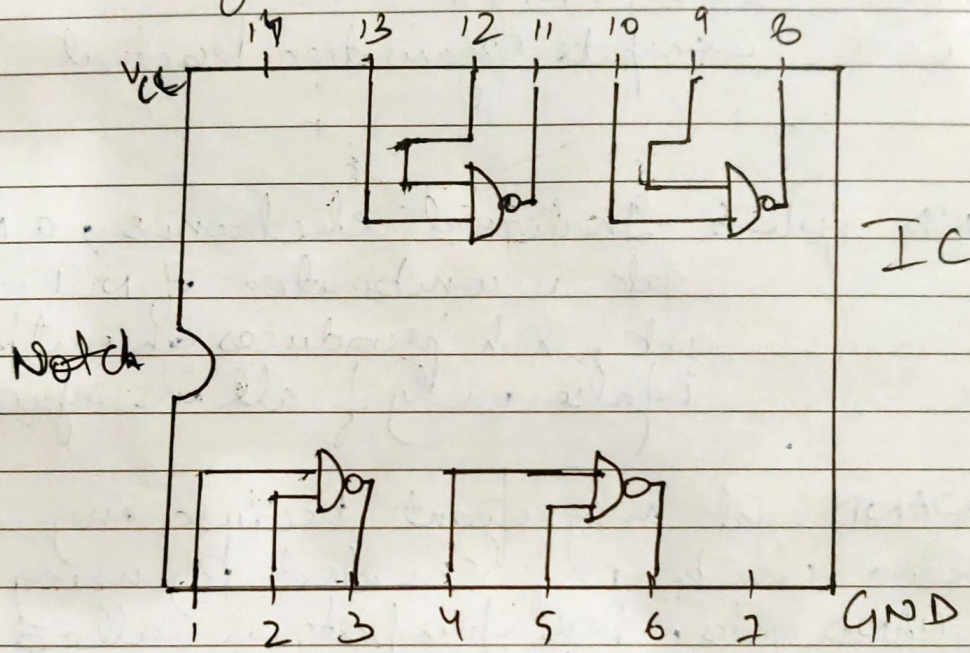
APPARATUS: The logic NAND gate IC, power supply, lookup wires, breadboard.

THEORY: The logic gate is generally classed as a universal gate. All gates can be implemented by NAND gate

Boolean expression : $Q = \overline{A \cdot B}$

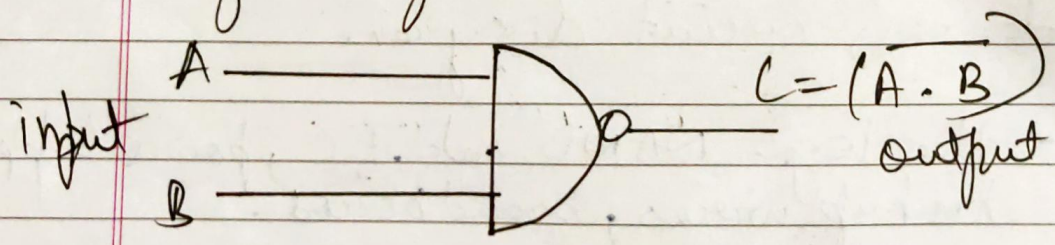
NAND gate has an output does (0) only when its inputs are high (1)

Circuit diagram



IC No. 7400

Logic Diagram



Truth Table

A	B	C $(\overline{A \cdot B})$
0	0	1
0	1	1
1	0	1
1	1	0