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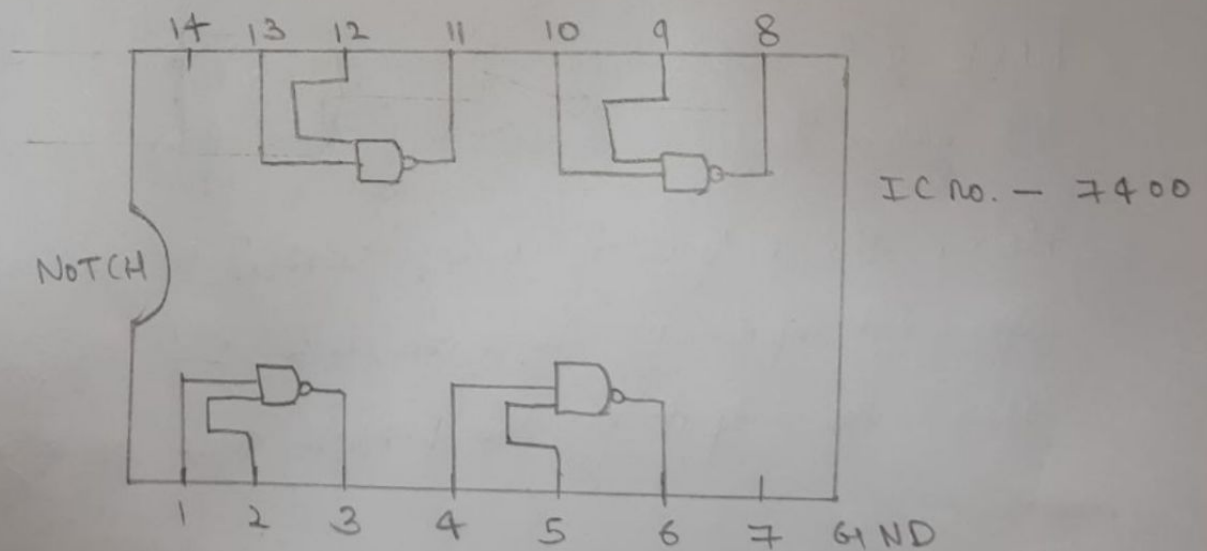
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Computer Organization & Architecture Mid Term Practical Exam.

Ans 1. Working of NAND gate -

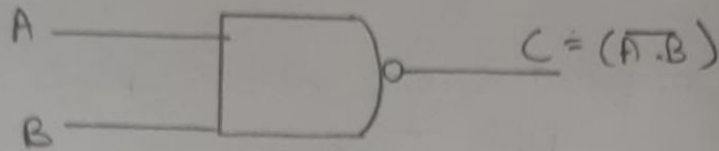
A NAND gate is a logic gate that produces a low output (0) only if all its inputs are true & high output (1) otherwise. Hence, the NAND gate is the inverse of an AND gate, & its circuit is produced by connecting an AND gate to a NOT gate.

Circuit diagram of NAND gate:



Manvi Bishet

Symbol of NAND gate —



Truth Table :-

INPUT		OUTPUT
A	B	$C = \overline{A.B}$
0	0	1
0	1	1
1	0	1
1	1	0

NAND gate means "not AND gate", hence the output of this gate is just reverse of that of a similar AND gate.

Here, the output is only logical 0 when & only when all inputs of the gate are 1's & in all other cases, the output of the NAND gate is high or 1.

manish