Name :- Vageesh Vashishtha
Roll no :- 2101242
Course :- MCA section :- (A)
subject :- Computer Organisations :-

Q1 :- Aim :- To study logic gate NAND

Apparatus Required :- NAND gate IC, power supply, Hook up wires and bread board etc

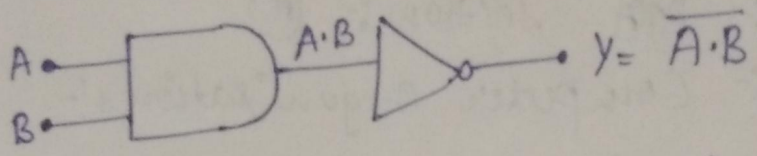
Theory :- The NAND gate is a special type of logic gate in the digital logic circuit. The NAND gate is the "UNIVERSAL GATE" which means that all the basic gates such as AND, OR and NOT gate can be constructed using a NAND gate NAND gate is a combination of the NOT-AND gate The output state of the NAND gate will be low only when all the inputs are high.
The logic or Boolean for the NAND gate is the complement of logical multiplication of inputs denoted by a full stop or a single dot as

$$(A \cdot B)' = Y.$$

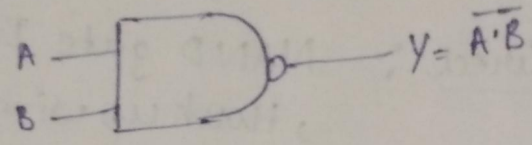
Vageesh

The value of Y will be true when any one of the Input is set to zero '0'

Circuit Diagram :-

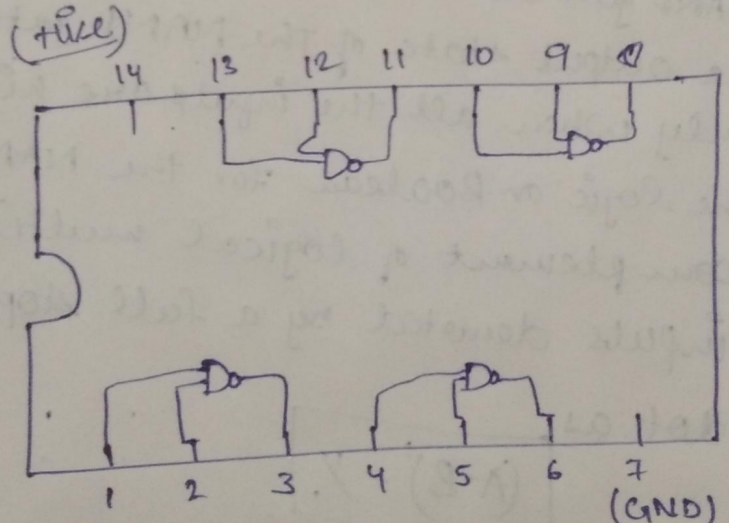


2-Input "AND" gate plus a "NOT" gate



Truth Table :-

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



I.C diagram of NAND gate.

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