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Section => B

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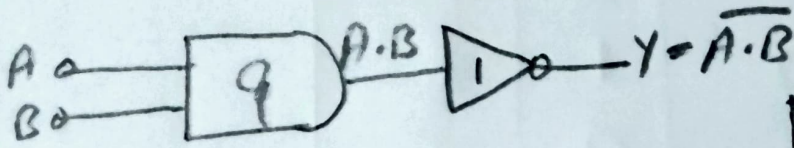
Q1 NAND Gate

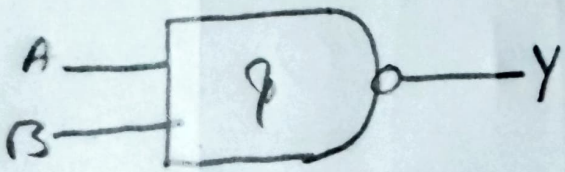
The Nand gate is the universal gate, it means all the basic gate such as AND, OR and NOT gate can be constructed using NAND gate.
It is combination of NOT & AND gate, the output state of the NAND gate will be low only when all the inputs are high

The logic or Boolen expression for the NAND gate is the complement of logical multiplication of inputs denoted by a dot

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

- The 2 input NAND gate.





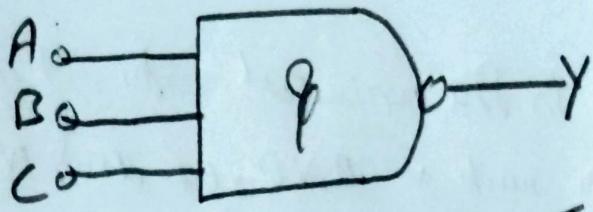
There are $2^2 = 4$ possible combination of I/P.

Truth Table

Input		o/p
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

3 Input NAND

There will be $2^3 = 8$ possible combinations of I/P



3-I/P NAND gate

Truth Table

Input			output
A	B	C	Y
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0