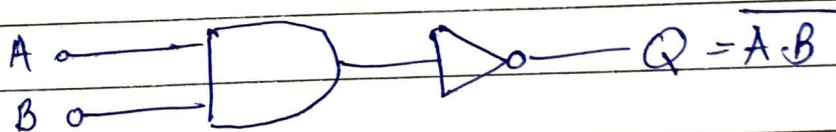→ Objective :- Discuss the working of NAND gate with the help of circuit diagram and truth table

→ NAND GATE :-The NAND gate has an output that is normally at logic. level "1" and only goes "Low" to logic level "0" when all of it inputs are logic level "1".

→ Diagram :-

Ao─┐
   │ ⟩o─────────────── $Q = \overline{A \cdot B}$
Bo─┘

NAND gate Equivalence :-

A o────┐
       │ ⟩──▷o──── $Q = \overline{A \cdot B}$
B o────┘

→ Truth table of NAND Gate

truth table		
B	A	Q
0	0	1
0	1	1
1	0	1
1	1	0
Read as A and B gives NOT Q		

→ **Working of NAND Gate :-** It is just the reverse of AND GATE like AND Gate a NAND Gate can be more than two inputs, like 3, 4, input NAND Gate.

if both the input of nand gate are "0" then the result will be "@" / "1", or if both the input of nand gate are "1" then the result will be "0".

If one input is 0 and the other input is 1 it will give 1 as an output.

Advantage of NAND Gate:-

• NAND gates are cost effective device and they have more storage capacity as per their size

• High endurance and durability

Disadvantage of NAND Gate :-

• When compared with the NOR gate, the NAND memory architecture and speed are less reliable