Name- Rahul Bhandari
Roll no - 2101157
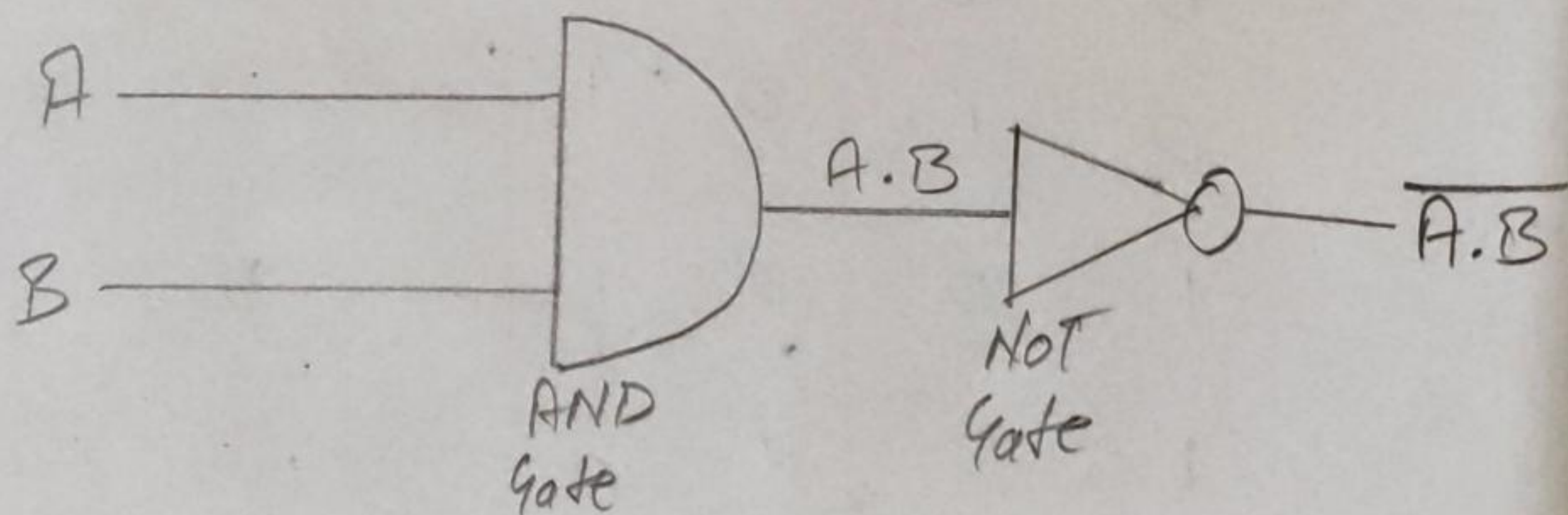Section - D

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

Just like an AND gate, a NAND gate may have any number of input probes but only one output probe.

The NAND gate perform the logical NAND operation NAND gates are known as universal gates, which means it is a logic gate which can implement any Boolean function without the need to use any other gate type.
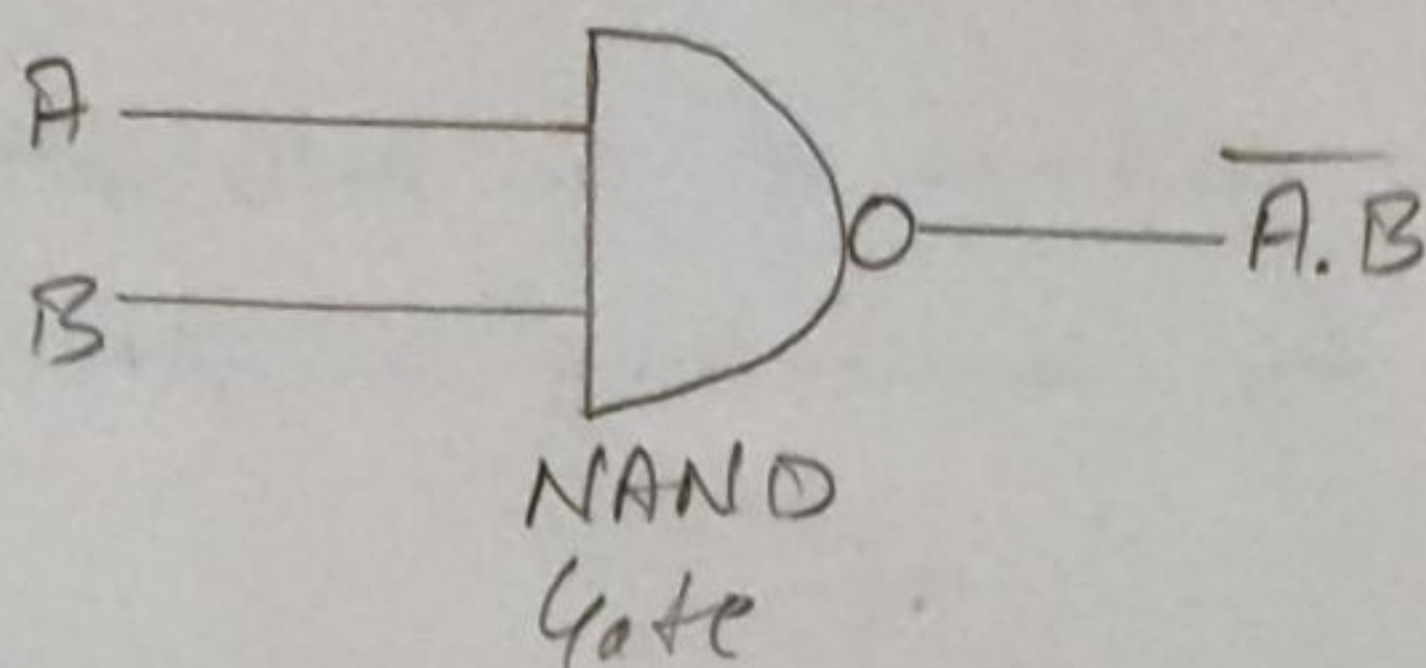
The basic logical construction of the NAND gate is —

Circuit Diagram of NAND

There are two input A & B after passing AND logic gate is produced an output A.B then it is pass through NOT gate then it produced an output $\overline{A.B}$.

OR we can make NAND gate by second method that is —

A ──────┐
        ├──▷○──── $\overline{A.B}$
B ──────┘

NAND Gate

TRUTH TABLE

Input		Output
A	B	$X = \overline{A.B}$
0	0	1
0	1	1
1	0	1
1	1	0

OR

Input		Output	
A	B	A·B	$\overline{A.B}$
0	0	0	1
0	1	0	1
1	0	0	1
1	1	1	0