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Exam Type → Mid Sem

Sem → 1st

Sec → A

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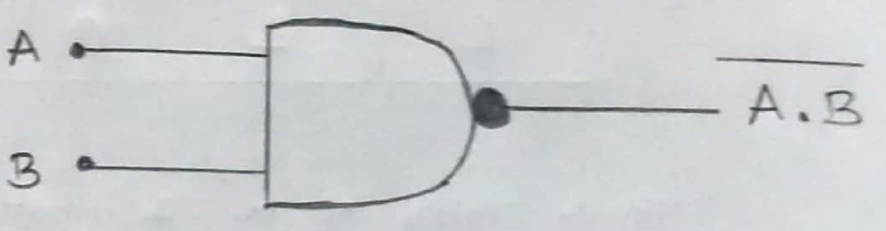
Ans 1 → NAND Gate

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

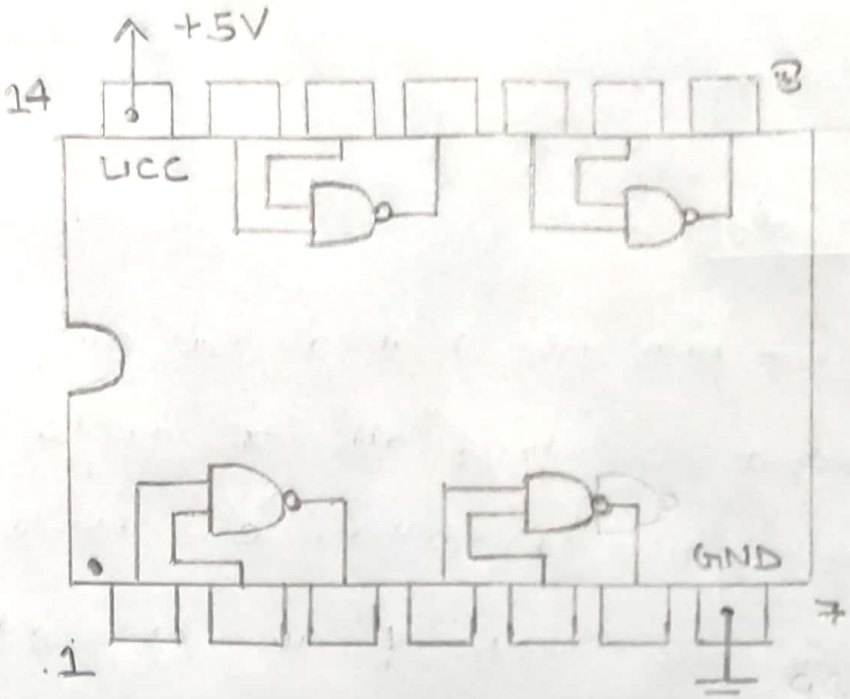
The NAND gate performs the logical NAND operation. NAND gates are known as "Universal gate", which means they are a type of logic gate which can implement any Boolean function without the need to use any other gate type.

Symbol →



NAND Gate

Circuit Diagram → (IC Diagram)



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Truth Table →

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

Truth Table of a 2 input NAND gate.