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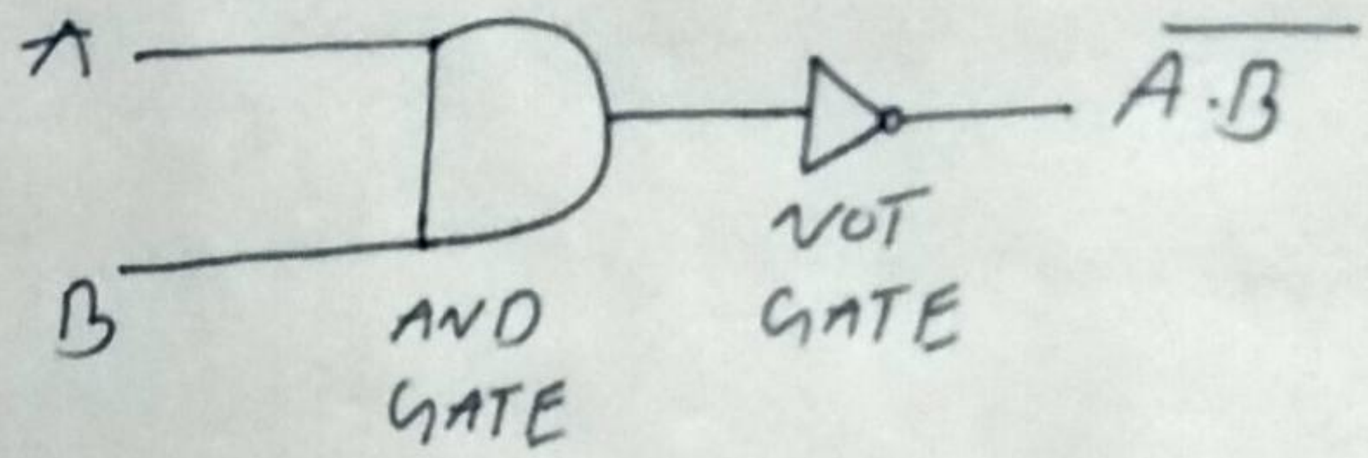
Computer organisation Practical

mid Term Examination

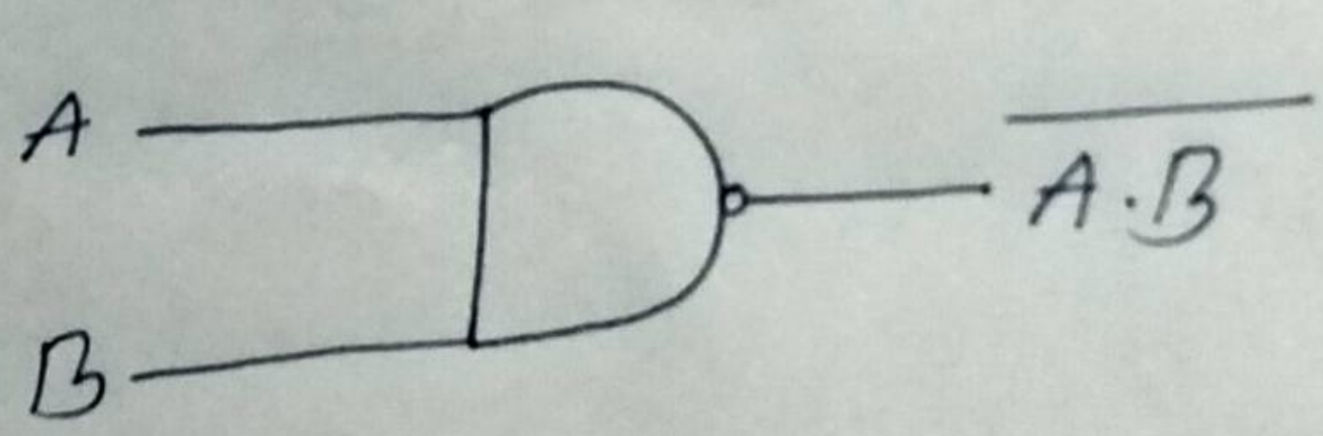
A1 Working of NAND GATE

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. Just like an AND Gate, a NAND gate may have any number of input probes but only one output probe. The NAND Gate peoforms the logical NAND operation. NAND Gates are known as universal Gate (along with NOR Gates), which means they are a type of 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 shown below (you can see it is an AND gate followed by NOT gate):

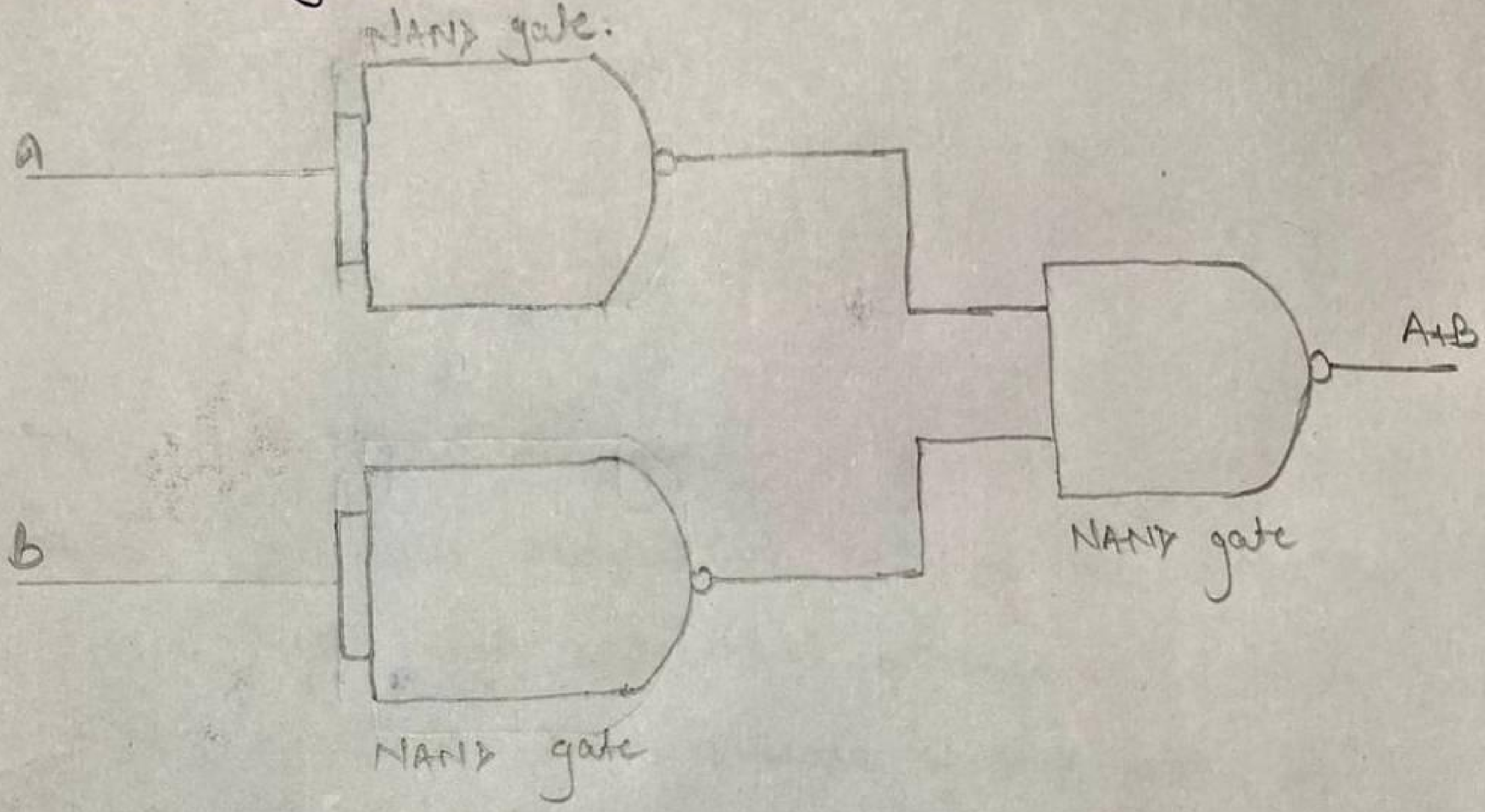


The Symbol of a NAND gate is similar to the AND gate, but a bubble is drawn at the output point of the AND gate.

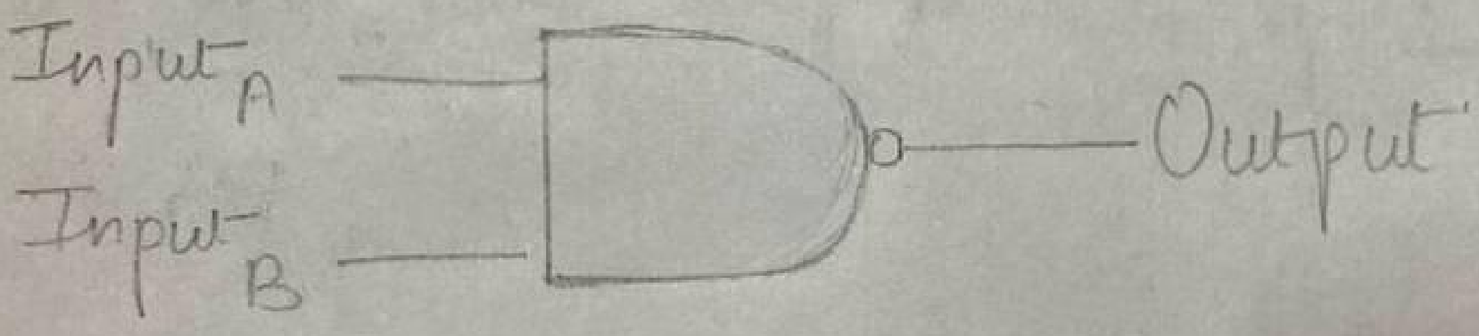


Symbol Diagram OF NAND GATE

⇒ Circuit Diagram of NAND GATE.



⇒ Truth Table of NAND gate



A	B	Output
0	0	1
0	1	1
1	0	1
1	1	0