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SECTION: 'B'

Regular Practical

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Ans 1) NAND GATE:

To verify the working of NAND using circuit diagram & truth table.

Apparatus Required: Digital Trainer kit, IC Tester, IC-7400 & connecting wires.

Theory:- Logic gates are electronic circuits which perform logical functions on one or more inputs to produce one output. There are several logical gates. When all inputs combinations of a logic gate are written in a series & their corresponding outputs written along them, then this input/output combination is called TRUTH TABLE.

NAND Gate: It is a series of AND gate with NOT gate. If we connect the output of an AND gate to the input of a NOT gate, this combination will work as NOT-AND or NAND gate. Its output is 1 when any or all inputs are 0, otherwise output is 1.

$$Y = \overline{A \cdot B}$$

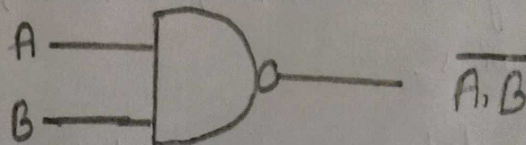
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

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- Procedure:-
- 1) Make the connection as per the circuit diagram on breadboard.
 - 2) Apply various combination of input according to truth table of NAND gate.
 - 3) Note down the output reading for different combination inputs.

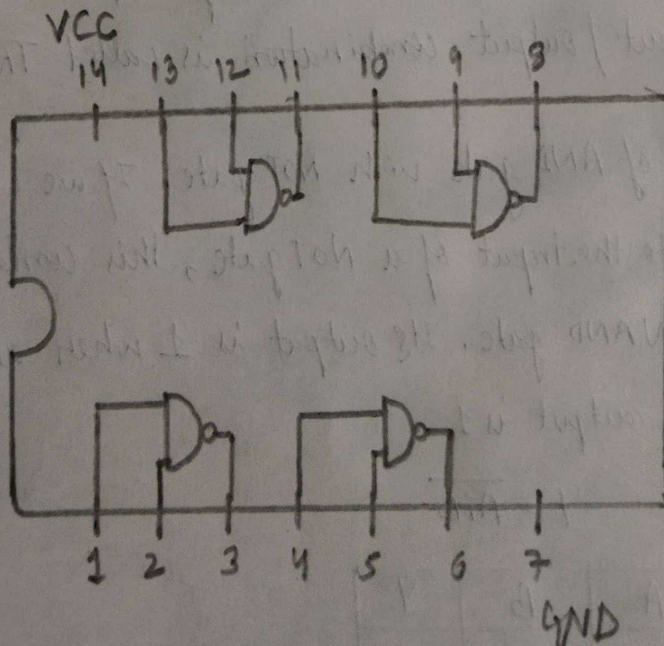
Result: Thus, we have verified the Truth Table.

NAND-IC



IC-7400

NAND-GATE



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