

Roll no - 21711066

Di. _____

Shivam KUMAR MCA-See B

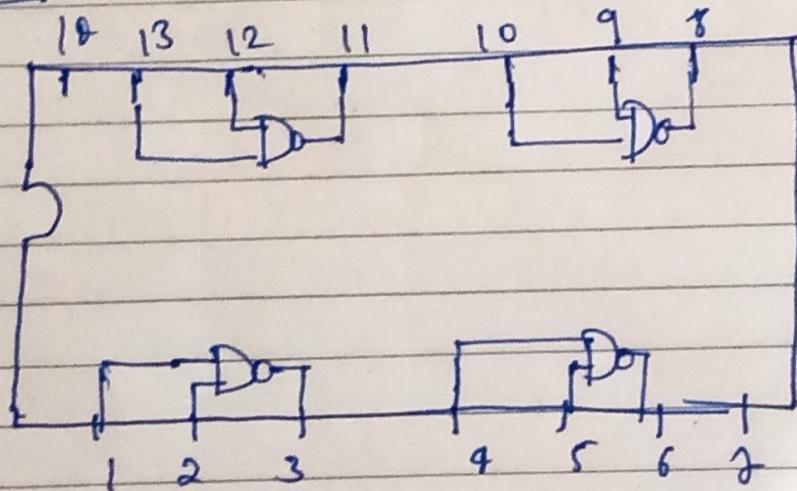
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objective - to verify the truth table of NAND gate
(IC - 7400)

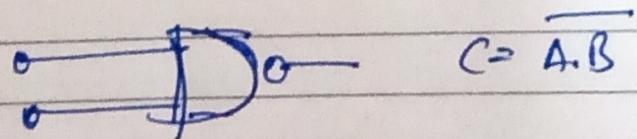
Approach required - NAND gate IC, power supply, connection wires, and bread board.

Theory - The logic NAND gate is generally called as a universal gate because it is one of the most used logic gate types all gates can be implemented by NAND gate. Boolean expression $A = \overline{A \cdot B}$. The NAND gate has an output low(0) only when all inputs are high(1). It is inverted of AND gate

IC Diagrams



Logic Diagrams



Truth Table

| Inputs | | Output |
|--------|---|----------------------------|
| A | B | $C = \overline{A} \cdot B$ |
| 0 | 0 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 0 |

Procedure

connect the Vcc and ground to the pins specified by the data sheet.

do all the connection as per IC Diagram.

Switch on the power supply.

After completing the connection properly observe the output of and match it with the given truth table.

-Result - the result of the experiment has been verified successfully

Precautions

all the connection should be proper accordingly the circuit diagrams

and the IC carefully

in case of any burning small switch off power supply immediately