

Father name: Devendra Singh

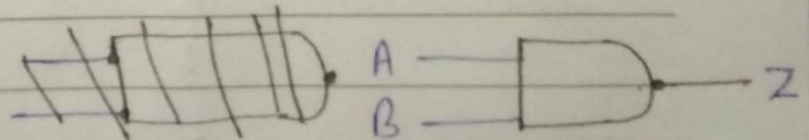
Graphic Era Hill University, Dehradun  
(Answer Sheet for Online Examination Feb. 2022)

Please tick (✓) your campus: (DEHRADUN/BHIMTAL/HALDWAN)  
Name: Gaurav Singh Univ. Roll No. 2101261 Student ID 21711290  
Date: 22/03/2022 Course: MCA Branch: Sem: 1st Section: D  
Subject Name: Computer Architecture Subject Code: TMC-102 Page No. 01

Ans:-1 NAND Gate:- The NAND gate is a ~~anti~~ combination of an AND gate and NOT gate. They are connected in cascade form. It is also called Negated And gate. The NAND gate provides the false or low output only when their output is high or true. The NAND gate is essential because different types of boolean function are implemented by using it.

The NAND gate has the property of functional completeness. The function completeness means any types of gate can be implemented by using the NAND gate. It performs the function of OR, NOR and AND gate.

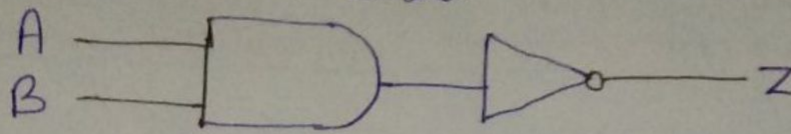
Logic Symbol:-



Gaurav

Signature of Student

Ans 1. The logic circuit of the NAND gate is shown below:



From the Logic Circuit, the output can be expressed as:

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

The equation is read as "Z equals NOT A AND B". Since the logic circuit involves an AND gate followed by an inverter. The output can only be low when both the inputs are high.

Truth table :-

A	B	Z
0	0	1
0	1	1
1	0	1
1	1	0

Ganesh  
Signature



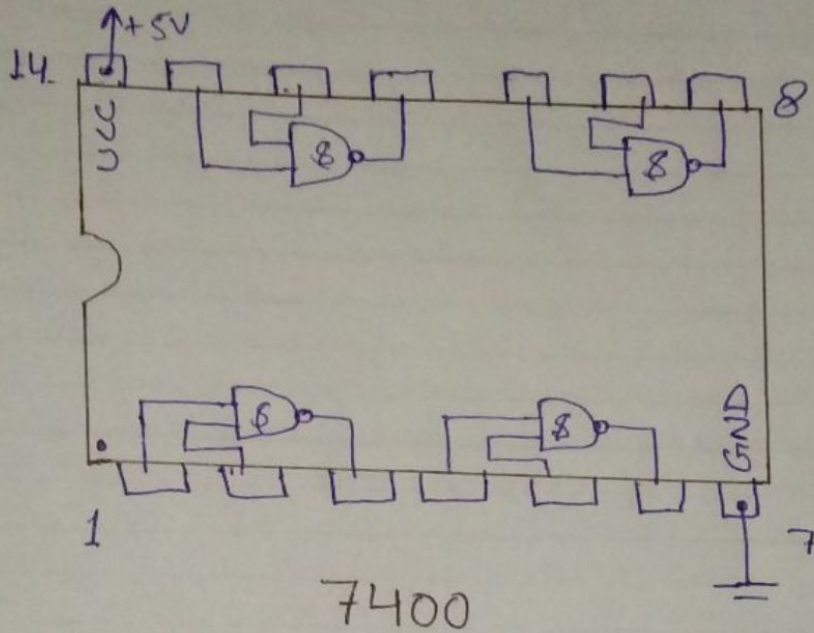
Ans 1

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NAND GATE ON 'IC 7400'

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