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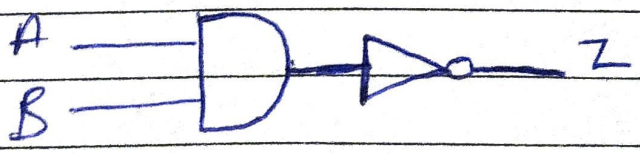
s-1 Nand Gate :-

The NAND gate is a 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 outputs is high or true. The NAND gate is essential because it 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.

The logic circuit of the NAND gate is :



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

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

The Truth table of NAND Gate

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

From the truth table of the ~~NA~~ NAND gate it is clear that all the inputs must be high to get a low output and if any of the input is low the out put obtained will be high. If any of the input is high the output will be ~~he~~ high that is 1.

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