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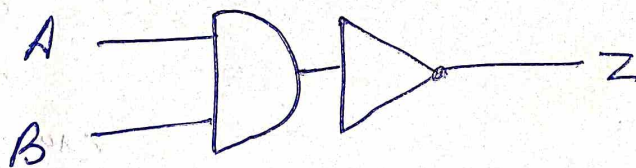
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(1)

Ans 1 → 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 output is high or true. The NAND gate is essential ~~but~~ because different types of a boolean function are implemented by using it.

The logical symbol for the <sup>NAND</sup> gate is :-



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

The truth table of the NAND gate is :-

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

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NAND gate is a logical gate that produces a low output (0) only if its inputs are true and high output otherwise. NAND gate is inverse of an AND gate.

(2)  
Samant

A NAND is classed as a "Universal gate" since it is one of the most commonly used logic gate types.