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ICT-2103 - Digital Logic Design

Date:- 10.11.20

Quiz-1

Answer to the question no-1

a. True

b. True

c. True

d. false

e. True

Answer to the question no-2

OR gates

2020/11/10 12:00

Answer to the question no-3

De Morgan's Theorem are basically two sets of rules developed from the Boolean expressions for AND, OR and NOT using two input variable A and B. These two rules allow the input variables to be negated and converted from one form of a Boolean function into an opposite form.

De Morgan's first rules:

De Morgan's first theorem Proves that when two input variables are AND and negated they are equivalent to the OR of the Complements of the individual Variable.

Example: $\overline{A \cdot B} = \overline{A} + \overline{B}$

De Morgan's Second Rules

De Morgan's Second theorem Proves that when two input variable are OR and negated they are equivalent to the AND of the complements of the individual variable.

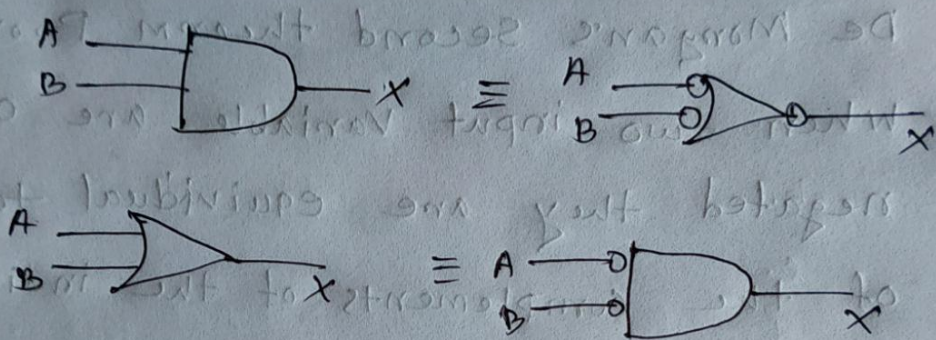
Example: $\overline{A+B} = \bar{A} \cdot \bar{B}$

Answer to the question no - 4

Bubble Pushing is a technique to apply De Morgan's theorem directly to the logic diagram.

1. Change the logic gate
2. Add bubbles to the input and output where there were ~~one~~ none and remove the original bubbles.

Example:



Example: $A + B = \overline{\overline{A} \cdot \overline{B}}$

Answer to the question is -

De Morgan's theorem directly to the logic diagram. Boolean algebra is a technique to apply. Where there were one more and remove. Add bubbles to the input and output. Change the logic gate. diagram.