ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET – 2
TOPIC – LOGIC GATES & COMBINATIONAL CIRCUITS

SUBJECT: COMPUTER APPLICATION **CLASS: XII**

F.M.: 15 **DATE: 04.05.2020**

➢ **Choose the correct option:** **(1X15=15)**

1) Which of the following gates is called a universal gate? :
(a)NOT (b) XNOR (c) NAND (d) XOR

2) All types of logic gates can be formed by suitable combinations of _____ gates only:
(a)NOT (b) AND (c) NOR (d) XOR

3) How many NAND gate(s) are required to form an AND gate? :
(a) 1 (b) 2 (c) 3 (d) 4

4) How many NAND gate(s) are required to form an OR gate? :
(a) 1 (b) 2 (c) 3 (d) 4

5) The output of a 2 input XOR gate with inputs A and B is given by:
(a) AB (b) $\overline{A}B + A\overline{B}$ (c) $\overline{A}\ \overline{B} + AB$ (d) A+B

6) The output of a 2 input XNOR gate with inputs A and B is given by:
(a) AB (b) $\overline{A}B + A\overline{B}$ (c) $\overline{A}\ \overline{B} + AB$ (d) A+B

7) How many NOR gate(s) are required to form an AND gate? :
(a) 3 (b) 2 (c) 1 (d) None of these

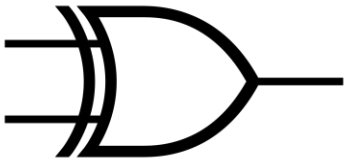
8) How many NOR gate(s) are required to form an OR gate? :
(a) 3 (b) 2 (c) 1 (d) None of these

9) How many NOR gate(s) are required to form a NOT gate? :
(a) 4 (b) 3 (c) 2 (d) 1

10) How many NAND gate(s) are required to form a NOT gate? :
(a) 4 (b) 3 (c) 2 (d) 1

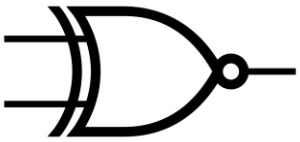
11) NAND gate is called an:
(a) Uniform Gate (b) Universal Gate (c) Unilateral Gate (d) Unidigital Gate

12) The following symbol is of:



(a) NOT (b) XOR (c) NAND (d) XNOR

13) The following symbol is of:



(a) NOT (b) XOR (c) NAND (d) XNOR

14) $\overline{A}B + A\overline{B}$ may also be represented as:

(a) $A \oplus B$ (b) $\overline{A \oplus B}$ (c) A . B (d) A + B

15) $\overline{A}\ \overline{B} + AB$ may also be represented as:

(a) $A \oplus B$ (b) $\overline{A \oplus B}$ (c) A . B (d) A + B

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