ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

ANSWER KEY – 52

TOPIC – LOGIC GATES & COMBINATIONAL CIRCUITS

SUBJECT: COMPUTER APPLICATION **CLASS: XII**

F.M.: 15 **DATE: 16.01.2021**

➢ **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) What is the output for $\overline{1.0}$? :
(a) 1 (b) 0 (c) 10 (d) None of these

9) What is the output for $\overline{1}$? :
(a) 1 **(b) 0** (c) 10 (d) None of these

10) Which gate is the logical complement of XOR? :
(a)NOT (b) NOR (c) NAND **(d) XNOR**

11) Which gate is the logical complement of OR? :
(a) NOT **(b) NOR** (c) NAND (d) XNOR

12) Which gate works with one input? :
(a) NOT (b) NOR (c) NAND (d) XNOR

13) How many states are possible with 2 inputs? :
(a) 1 (b) 2 (c) 3 **(d) 4**

14) A logic gate has how many outputs? :
(a) 0 **(b) 1** (c) 2 (d) 3

15) The complement of the AND gate is called:
(a) NOT (b) NOR **(c) NAND** (d) XNOR

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