



WORKSHEET – 52

TOPIC – LOGIC GATES & COMBINATIONAL CIRCUITS

SUBJECT: COMPUTER APPLICATION
F.M.: 15

CLASS: XII
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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