ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution

FOR GOD AND COUNTRY

WORKSHEET - 20

Topic – Introduction to Boolean Algebra

Subject: COMPUTER SCIENCE **Class - 11** **F.M:15**

Chapter: Boolean Algebra **Date: 08/08/2020**

Choose the correct answer for each question: [5 X 1 = 15]

1. The following truth table belongs to :

x	y	xy
0	0	0
0	1	0
1	0	0
1	1	1

a) AND operation
b) OR operation
c) NOT operation
d) None of these

2. The following truth table belongs to :

x	y	x+y
0	0	0
0	1	1
1	0	1
1	1	1

a) AND operation
b) OR operation
c) NOT operation
d) None of these

3. In boolean algebra, the OR operation is performed by which properties?
a) Associative properties
b) Commutative properties
c) Distributive properties
d) All of the Mentioned

4. The expression for Absorption law is given by _____
a) A + AB = A
b) A + AB = B
c) AB + AA’ = A
d) A + B = B + A

5. According to boolean law: A + 1 = ?
   a) 1
   b) A
   c) 0
   d) A’
6. Which law states : A + B = B + A ?
   a) Associative properties
   b) Commutative properties
   c) Distributive properties
   d) All of the Mentioned
7. The involution of A is equal to _____
   a) A
   b) A’
   c) 1
   d) 0
8. (A + B)(A’ * B’) = ?
   a) 1
   b) 0
   c) AB
   d) AB’
9. DeMorgan’s theorem states that _____
   a) (AB)’ = A’ + B’
   b) (A + B)’ = A’ * B
   c) A’ + B’ = A’B’
   d) (AB)’ = A’ + B
10. A (A + B) = ?
    a) AB
    b) 1
    c) (1 + AB)
    d) A
11. Complement of the expression A’B + CD’ is _____
    a) (A’ + B)(C’ + D)
    b) (A + B’)(C’ + D)
    c) (A’ + B)(C’ + D)
    d) (A + B’)(C + D’)
12. Simplify Y = AB’ + (A’ + B)C.
    a) AB’ + C
    b) AB + AC
    c) A’B + AC’
    d) AB + A
13. Which law states (A. B). C = A . (B . C)?
    a) Associative properties
    b) Commutative properties

c) Distributive properties

d) All of the Mentioned

14. The boolean function A + BC is a reduced form of _____

a) AB + BC

b) (A + B)(A + C)

c) A'B + AB'C

d) (A + C)B

15. The following truth table belongs to :

x	F
0	1
1	0

a) AND operation

b) OR operation

c) NOT operation

d) None of these

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