Paper: _Computer_____   Total Marks: __15_____

Month Test: _November_____   Obt. Marks: _____

Theme/Unit: _5 – 8_____   Grand Total: _75_____

Objective: ID: _____   Time: _____20 min_____

Name: _____   class: ___9ᵗʰ_____   Section: _____

Q. No. 1: Encircle the correct option:

1. Boolean algebra is also known as:
   a. Logical algebra   c. Switching algebra
   b. Control algebra   d. A and c

2. Boolean algebra was introduced by:
   a. Charles Babbage   c. George boole
   b. Blaise Pascal   d. None

3. Boolean algebra was introduced in:
   a. 1847   b. 1850   c. 1857   d. 1867

4. Complement of 0 is.
   a. 4   b. 3   c. 2   d. 1

5. Which are basic logical operations in Boolean algebra?
   a. AND   c. NOT
   b. OR   d. All three

6. In Boolean algebra the AND operation is represented.
   a. + sign   c. . Sign
   b. * sign   d. / sign

7. A Boolean expression is a logical statement which is either.
   a. True   c. Both a and b
   b. False   d. None

8. If a= 1, b=0, c=1 then a.b.c=?
   a. 0   b. 10   c. 11   d. 1

9. A. B = B. A is a:
   a. Associative law   c. Distributive law
   b. Commutative law   d. Absorption law

10.   A Boolean function with four variables will have:
   a. 8 minterms   c. 24 minterms
   b. 16 minterms   d. 32 minterms

11.   Klez is a name of.
   a. Game   c. Virus
   b. Hardware part   d. Person

12.   Good time was a .
   a. Vairus   c. Fake news about the existence
   b. Antivirus   of virus
                                            d. None

13.   The base of binary number system is:
   a. 8   b. 10   c. 2   d. 16

14.   BCD code uses:
   a. 4 bits   b. 6 bits   c. 7 bits   d. 8 bits

15.   Program created to perform a specific task for a user:
   a. System software   c. Compiler
   b. Application software   d. All

Paper: _Computer_____		Total Marks: __60_____
Month Test: _November_____		Obt. Marks: _____
Theme/Unit: _5 – 8_____		Grand Total: _75_____
subjective:	ID: _____	Time: ____2 hours_____
Name: _____	class: ___9th _____	Section: _____

Q. No. 2 Give short answers: /30

1) What is the use of Boolean algebra?
2) Who is the founder of Boolean algebra?
3) What is the use of Logical AND gate? Make table.
4) Write down the elements of Boolean algebra?
5) Apply the principal of duality:
   a. $X + \bar{x} = x$
   b. $\bar{X} \cdot (y + z) = (\bar{x} \cdot y) + (\bar{x} \cdot z)$
6) Make the truth table of the function:
   a. $F(x, y) = x \cdot y + \bar{x} \cdot Y$
   b. $X \cdot \bar{y} + \bar{x} \cdot y$
7) Calculate the value of Boolean function:
   a. $\bar{X} \cdot y + \bar{x} \cdot \bar{z} + x \cdot \bar{y}$ for x=0, y=1, z=0
   b. $(\bar{x}+y) \cdot x + (\bar{y}+z)$ for x=0, y=1, z=1
8) Define data with an example.
9) Convert the hexadecimal number into binary, octal. $7A_{(16)}$
10) Write the message in ASCII code. "I am a good student".
11) Name the four different features of window.
12) What is the use of Recycle bin?
13) Define operating systems.
14) Write any two functions of an operating system?
15) Convert A1. $03_{(16)}$ into binary.

Q. No. 3. Give detailed answer. /30

1(a): state and prove the De Morgan's law for the Boolean algebra. /6
(b). Explain the OR Logic gate. /4
2(a): How does computer get a virus? /6
(b): write the steps of creating a folder. /4
3(a): Represent the following 8 bit 1's complement numbers into decimal. /5
a. 00101011
b. 11111111
(b). List down all the minterms of three variables x, y, z. /5