

**ST.JOSEPH CALASANZ CBSE SCHOOL,  
KANYAKUMARI  
PERIODICAL TEST -I (2019-2020)  
COMPUTER SCIENCE**

**CLASS : XI**

**MARKS: 30**

All the questions are compulsory.

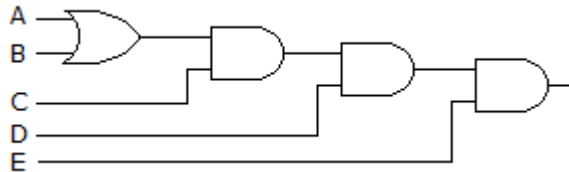
- Section A has 6 questions carrying 1 marks each
- Section B has 5 questions carrying 2 marks each
- Section C has 2 questions carrying 3 marks each
- Section D has 2 questions carrying 4 marks each

**Section A**

1. What is the difference between Mobile CPU and Computer CPU?
2. Difference between HLL and LLL
3. a) How many AND gates are required to realize  $Y = CD + EF + G$ ?  
b) The NOR gate output will be high if the two inputs are \_\_\_\_\_  
a) 00 b) 01 c) 10 d) 11
4. What is the function of memory? What are its measuring units?
5. Simplify  $Y = AB' + (A' + B)C$
6. Describe the benefits of cloud Computing?

**Section B**

7. Why are language processors used? List their types.
8. Derive the Boolean expression for the logic circuit shown below:



9. Convert the following:

- (i)  $(4A)_{16} = (\text{_____})_2$
- (ii) The representation of octal number  $(532.2)_8$  in decimal is \_\_\_\_\_
- (iii)  $(10111001)_2 = (\text{ })_8$
- (iv)  $(1234)_8 = (\text{ })_{16}$

10. (i) Minimize the following  $A+(A.(B.C))$

(ii) Add binary numbers 111.01 and 111.01

11. a) Draw the logic circuit from the following expression

$$A'B+A'C$$

b) Define Defragmentation?

**Section C**

12. a) State and prove the Demorgan's law (truth table and Algebraically any one law)  
b) a)  $Y = A'B'C'D + AB'C'D + ABC'D + ABCD'$
13. a) Discuss the role of utility software in the context of computer science?  
b) Write the distribution law and prove it algebraically.

**Section D**

14. What are the types of software in computer system and organization? Explain and give an example of each.
15. What are Boolean operators? Explain  
AND, OR, NOT, NAND, NOR OPERATORS With  
TRUTH TABLE AND LOGIC GATES?