QP CODE: 18103607

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Reg No : .....

Name : .....

B.Sc.DEGREE(CBCS)EXAMINATION, DECEMBER 2018

First Semester

CORE - CS1CRT01 - COMPUTER FUNDAMENTALS AND DIGITAL PRINCIPLES

(Common to B.Sc Computer Applications Model III Triple Main,
Bachelor of Computer Application)

2018 Admission only

87B56154

Maximum Marks: 80 **Time: 3 Hours**

Part A

Answer any **ten** questions.

Each question carries **2** marks.

1. Write the features of super computers.
2. Differentiate between optical mouse and mechanical mouse.
3. What is a MAN?
4. Write note on WWW.
5. Convert (829)10 to hexadecimal.
6. What are the rules for binary subtraction?
7. What is a logic circuit? Give example.
8. Reduce the expression f=(B+BC)(B+B'C)(B+D)
9. What do 1's & 0's on the POS Kmap represent?
10. What is the need of a full adder?
11. Define encoder.
12. List out basic types of shift registers.

(10×2=20)

Part B

Answer any **six** questions.

Each question carries **5** marks.

13. What are the basic working principles of optical input devices?
14. What are the functions of operating systems ?
15. Explain the types of Operating System in detail.

16. Perform the Subtraction using 1's complement method (a) 110 from 1010 (b) 110 from 011

17. Add the BCD numbers. (a) 1010 + 0101 (b) 1001 + 0100 (c) 0001 0110 + 0001 0101 (d) 0001 + 0101

18. What are universal gates? Give example.

19. Explain don't care conditions?

20. Explain clocked S-R flip flops.

21. Explain 4-input multiplexer.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Explain different types of monitors.

23. Explain different number systems in detail with example

24. Explain the following I. K-MAP II. Solve the following using K-MAP
F(A,B,C,D)=∑(1,3,9,11,4,5,12,13,10,14) and design the circuit using basic gates

25. Explain master slave flip-flop.

(2×15=30)