B.Sc/B.C.A .DEGREE(CBCS)EXAMINATION, NOVEMBER 2019

First Semester

CORE - CS1CRT01 - COMPUTER FUNDAMENTALS AND DIGITAL PRINCIPLES

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

2017 Admission Onwards

31704F5E

Time: 3 Hours   Maximum Marks :80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Differentiate between system software and application software.

2. What do you mean by submarining?

3. Explain Network Operating system

4. Differentiate between video conferencing, audio conferencing, and data conferencing.

5. Diffferentiate between positional and non-positional number system.

6. What are BCD numbers?

7. Explain how NOR gate act as AND gate?

8. Define De- Morgan's theorem

9. Why Parity Checker is needed?

10. What is the need of a half adder?

11. What is demultiplexer?

12. What is T-flip flop ?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What are the different types of computers for organizations?

14. What is Internet.Explain the history of Internet?

15. Which are the main services of Internet?

16. Add : (a) 1101 and 0111 (b) 1011 and 1101 (c) 110110 and 110011

17. Briefly explain about 1's complement and 2's complement subtraction concepts with example

18. Explain logic gates?

19. Explain SOP and POS expression with examples?

20. Discuss the truth table of encoder

21. Discuss the applications of shift registers

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain the various input devices.

23. Explain with examples; Conversion-From octal to (a) binary (b) decimal (d) hexadecimal

24. Using Kmap simplify f=(A+B+C)(A+B'+C)(A'+B+C)(A'+B'+C)(A'+B'+C') Realize the reduced expression using NAND gates?

25. How can a R-S flip flop be constructed using NOR gate? Explain its working with truth table.

(2×15=30)