

QP CODE: 19103007



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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?

 $(10 \times 2 = 20)$

Part B

Answer any six questions.

Each question carries 5 marks.

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



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- 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

 $(6 \times 5 = 30)$

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.

 $(2 \times 15 = 30)$

