

TB221080V

Reg. No :

Name :

B. Sc. / B. Voc. DEGREE (C.B.C.S.) EXAMINATION, NOVEMBER 2022
(2022 Admissions (regular) 2021 Admissions (Improvement / Supplementary), 2020, 2019, 2018, Admissions
Supplementary)

SEMESTER I - CORE COURSE (COMPUTER APPLICATIONS)

(For Computer Applications and B. Voc. SWD)

CA1B01B18 - COMPUTER FUNDAMENTALS AND DIGITAL PRINCIPLES

Time : 3 Hours

Maximum Marks : 80

Part A

I. Answer any Ten questions. Each question carries 2 marks

(10x2=20)

1. Define Hardware
2. Name any 4 output devices.
3. Name any 4 input devices.
4. Define computer network.
5. List the categories of computer network
6. Describe Internet.
7. Define Base or Radix of a Number system
8. Convert $(39.625)_{10}$ to its binary equivalent
9. Name the Logic gate which gives a HIGH output only when all its inputs are HIGH. Show its truth table
10. Discuss the use of a parity bit?
11. Explain timing diagram with an example?
12. Recall the use of an A/D Converter

Part B

II. Answer any Six questions. Each question carries 5 marks

(6x5=30)

13. How many types of storage are there in any computer system? Justify the need for each.
14. Discuss the different components of a communication.
15. Illustrate the various functions of an Operating system.
16. Add the following BCD numbers 0110 0011 0101 and 0111 1001 0010
17. Convert the decimal number 5361 to its BCD equivalent
18. Prove the following expression using Boolean Algebra $(A+B)(A'+C) = AC + A'B$
19. Design the logic circuits of the expression $(AB)'+AB+AC'+ABC$
20. Explain the working of a comparator
21. Explain the working of Full Adder with a neat circuit diagram

Part C

III. Answer any Two questions. Each question carries 15 marks

(2x15=30)

22. Briefly discuss the advantages and disadvantages of Internet.
23. Explain the different methods adopted by a computer system to represent negative numbers with suitable examples

24. Simplify the Boolean expression using K -Map $f(ABCD) = \prod M(3,7,9,13) \cdot \prod d(1,5,11,15)$

25. Explain the working of any two flipflops