D 32346 (Pages : 2) Name....................................

Reg. No...............................

FIRST SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2022

Computer Science

BCS 1C 01—COMPUTER FUNDAMENTALS

(2019—2022 Admissions)

Time : Two Hours Maximum : 60 Marks

Section A (Short Answer Type Questions)

*Answer **all** questions, each correct answer carries a maximum of 2 marks. Ceiling 20 marks.*

1. What is Parity bit ?

2. What is BCD ?

3. Convert the following :-

    (a) $(01011112)_{10}$ to octal. (b) $(511210)_{10}$ to hexadecimal

4. What is a binary number ?

5. Discuss in brief the role of Canonical forms.

6. List different Output Devices. Explain any *two* in details.

7. What is difference between warm boot and cold boot ?

8. Differentiate between Hard Disk and CD ROM.

9. Write the four rules of binary subtraction.

10. Define the term CPU organization.

11. Subtract the following 4-bit binary numbers.

    (a) $(1010)_2 - (0011)_2$. (b) $(1101)_2 - (1011)_2$.

12. How does an Algorithm help to solve a problem ?

Turn over

Section B (Short Essay Type Questions)

Answer **all** *questions, each correct answer carries a maximum of* 5 *marks. Ceiling* 30 *marks.*

13. What do you mean by number system ? List types of number system.

14. How do you represent the number in Excess-3 Code and Gray Code ?

15. Write half adder logic diagram with truth table.

16. Differentiate between application software and system software.

17. What are the different types of printers ? Explain the working of the same.

18. State De-Morgan's Theorem.

19. Define Flowcharts and its use. Draw a flowchart to print sum of digits of a numbers.

Section C (Essay Type Questions)

Answer any **one** *question, correct answer carries* 10 *marks.*

20. Give the logic symbol and truth table of logic gates :

    (a) AND

    (b) OR.

    (c) NOT.

    (d) NAND.

    (e) NOR.

21. (a) Compare Primary and Secondary Memory. (5 marks)

    (b) Explain the hierarchy of memories. (5 marks)