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)