

**19U129**

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Name: .....

Reg. No.....

**FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2019**

(CBCSS UG)

**CC19U CSC1 C01 - COMPUTER FUNDAMENTALS**

(Complementary Course)

(2019 Admission Regular)

Time: Two Hours

Maximum: 60 Marks

Credit: 2

**Section A** (Short answer type questions)

Each question carries 2 marks.

1. Explain basic logic gates with graphic symbol and truth table.
2. Draw a simple model of a computer. Explain its basic functions.
3. Explain theorems of Boolean algebra.
4. Explain registers.
5. Explain MIDI instrument.
6. Perform the following conversion
  - a)  $(457.23)_{10} = (?)_8$
  - b)  $(13.346)_{10} = (?)_2$
7. Explain cache memory.
8. Perform the following binary operations
  - a)  $10101 - 11100$
  - b)  $10011 + 11001$
9. Explain combinational logic circuits.
10. Explain memory hierarchy.
11. What is a flowchart? Explain its advantages and disadvantages.
12. Explain hamming code.

**(Ceiling 20 Marks)**

**Section B** (Short essay type questions)

Each question carries 5 marks.

13. What is number system? Explain different types of number systems with example.
14. Explain magnetic tape system with its advantages and disadvantages.
15. Explain the truth table and implementation of half adder and full adder.
16. What is control unit? Explain its implementations.
17. What is a computer code? Explain different types of computer codes.
18. What is RAM? Explain its different types.
19. Briefly explain any five input devices.

**(Ceiling 30 Marks)**

**Section C** (Essay type question)

Answer any *one* question. The question carries 10 marks.

20. Write down algorithm and draw a flowchart to display first 'n' prime numbers.

21. Explain any five output devices.

**(1 x 10 = 10 Marks)**

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