

20U121

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Name:

Reg.No:

FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2020

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U CSC1 C01 - COMPUTER FUNDAMENTALS

(Computer Science - Complementary Course)

(2019 Admission onwards)

Time : 2.00 Hours

Maximum : 60 Marks

Credit : 2

Part A (Short answer questions)

Answer *all* question. Each question carries 2 marks.

1. Convert $(56)_8$ to its corresponding binary number
2. What are computer code ? Explain Grey code.
3. Perform $(101101)_2 - (100111)_2$ using 2's complement method.
4. What are boolean operators ? Give any 2 examples.
5. Prove that $X \cdot (X + Y) = X$
6. What are logic gates ? Explain any one logic gate with circuit symbol and truth table.
7. What are the basic functional units of a computer system ?
8. What are the difference between RAM and ROM ?
9. What are functions of Keyboard ? List the types of keys in a keyboard.
10. What is the functions of a Joystick ?
11. Define the term MIDI.
12. What is a flowchart ? List any two symbols used in flowchart.

(Ceiling: 20 Marks)

Part B (Short essay questions)

Answer *all* question. Each question carries 5 marks.

13. What are number systems? Explain various types of number systems with suitable examples.
14. Convert the $F(A,B,C) = (AB + C)(B + AC)$ into SOP form.
15. Draw the logic diagram of boolean function $(X + Y).(X' + Y')$ using NAND only.
16. What are the difference between SRAM and DRAM ?
17. Write a note on Optical disk.List the types of Optical disks.
18. What are output devices ? Explain various output devices in detail.
19. What is an algorithm ?Write an algorithm to check whether a given number is +ve,-ve or zero.

(Ceiling: 30 Marks)

Part C (Essay questions)

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

20. Explain Half ader and Full adder with circuit design.
21. Explain the architecture of CPU with suitable diagram.

(1 × 10 = 10 Marks)
