16U125 (Pages:2) Name: .....

Reg. No.....

FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2016

(Regular/Supplementary/Improvement)

(CUCBCSS-UG)

CC15UCSC1C01- COMPUTER FUNDAMENTALS

(Complementary Course)

(2015 Admission Onwards)

Time: Three Hours Maximum: 64 Marks

PART A

Answer ***all*** questions. Each question carries **1** mark.

1. Write about any two number systems.
2. What is ASCII code?
3. Write the dual form of A+(A.B)=A
4. Differentiate OR and XOR gates.
5. What is a nibble?
6. What is flash memory?
7. What is the recording density of 2 inch diameter disk pack with 256 sectors and 1024 bytes per sector?
8. What is the use of a joystick?
9. What is a computer program? (9X1=9)

PART B

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

10. What are the symbols used in flowchart?
11. Convert the following:
    a. $(100101010101)_2$ to hexadecimal
    b. $(745)_8$ to binary
12. Explain the types of the keys and its functions found in a keyboard.
13. Describe about different types of ROM.
14. Differentiate Memory Address Register and Memory Data Register. (5X2=10)

PART C

Answer ***any five*** questions. Each question carries **5** marks.

15. NAND and NOR gates are known as universal gates. Why? Show the implementation of OR and NOT using NAND gate.
16. What is 2's Complement? Subtract $(1000100)_2$ from $(1010100)_2$ using 2's complement method.

17. Write the truth table and logic circuit for the following Boolean functions:
    a. XY+X'Y+XY'+X'Y'
    b. (AB')(C+D'E')

18. Explain the various types of printers.
19. Explain error correction and error detection codes with special reference to Hamming codes.
20. What are the binary equivalents of the following:
    a. $(0.3428)_{10}$
    b. $(A09)_{16}$
    c. $(54)_{10}$
21. Explain the classifications of primary memory?
22. Describe the working of MICR, OMR and OCR. (5X5=25)

PART D

Answer ***any two*** questions. Each question carries **10** marks.

23. What are the various secondary storage devices used? Also explain its characteristics.
24. Explain in detail about half adder, full adder and binary subtractor with the help of neat logic diagrams and truth table.
25. Write an algorithm and its flowchart to print prime numbers in a given range. The range of numbers should be read from the user as input. (2X10=20)

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