| Paper Code: ECS-101/CS-101 | Roll No. | | | | | | | | | |
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**B.Tech.**
**FIRST SEMESTER EXAMINATION, 2016-17**
**COMPUTER SYSTEM AND PROGRAMMING IN C**

[Time: 3 Hours]                                                                 [Max. Marks: 100]

**1.** Attempt any five parts of the following: -                                 **[4x5=20]**

    (a)  Name any two input and two output devices.
    (b)  Differentiate between RAM and ROM.
    (c)  What are the important functions of Operating system?
    (d)  What is android?
    (e)  Draw any four symbols that are used in drawing flowchart. Also write the name and purpose of the symbols.
    (f)  $(20)_{10} = (?)_2$
    (g)  What do you mean by data types? Explain with the help of examples.

**2.** Attempt any four parts of the following: -                                 **[5x4=20]**

    (a)  Write down the syntax of conditional operator? Write a statement to print the larger of two numbers using conditional operator.
    (b)  What do you understand by library functions?
    (c)  Differentiate between for and while loops.
    (d)  Write down the syntax and purpose of switch statement.
    (e)  Write a program to show the use of break statement.

**3.** Attempt any four parts of the following: -                                 **[5x4=20]**

    (a)  Write a function to print the sum of digits of a number.
    (b)  Differentiate between call by value and call by reference parameter passing techniques. Give examples in support your answer.
    (c)  Write a program to calculate the factorial of a number.
    (d)  Write down the name, syntax and purpose of four string functions.
    (e)  Differentiate between the local and global variable.

**4.** Attempt any two parts of the following: -                                 **[10x2=20]**

    (a)  Write a program to read and display values of an integer array a[10].
    (b)  Write a program to demonstrate the use of nested if structure.
    (c)  Write a program to read and display the information about ten employees using structure.

**5.** Attempt any two parts of the following: -                                 **[10x2=20]**

    (a)  What is a Pointer? How is it declared?
    (b)  Explain the different type of modes used to handle files.
    (c)  What are macros? Give one example to explain its use.