INTRODUCTION TO PROGRAMMING

Paper Code: ETCS-108 **L T C**
Paper: Introduction to Programming **3 0 3**

INSTRUCTIONS TO PAPER SETTERS:
Maximum Marks : 75
1. Question No. 1 should be compulsory and cover the entire syllabus. This question should have objective or short answer type questions. It should be of 25 marks.
2. Apart from Question No. 1, rest of the paper shall consist of four units as per the syllabus. Every unit should have two questions. However, student may be asked to attempt only 1 question from each unit. Each question should be 12.5 marks

Objective: The objective of the paper is to facilitate the student with the basics of programming aspects, using C as the primary language. This course focuses on the programming constructs which are used in other languages as well. This is the first course on programming and does not assume any prerequisite.

UNIT I

Concept of algorithms, Flow Charts, Overview of the compiler (preferably GCC) , Assembler, linker and loader , Structure of a simple Hello World Program in C ,Overview of compilation and execution process in an IDE (preferably Code Block)

[T1],[T2], [R4][R5][No. of hrs 8]

UNIT II

Programming using C: Preprocessor Directive, C primitive input output using get char and put char , simple I/O Function calls from library , data type in C including enumeration , arithmetic, relational and logical operations, conditional executing using if, else, switch and break .Concept of loops , for, while and do-while , Storage Classes: Auto, Register, Static and Extern

[T1], [T2], [R7][No. of hrs 8]

UNIT III

Arrays (one and two dimensional), 2-d arrays used in matrix computation. Concept of Sub-programming, functions. Parameter transmission schemes i.e. call by value and call by reference, Pointers, relationship between array and pointer, Argument passing using pointers, Array of pointer, passing arrays as arguments

[T2], [R1], [R7][No. of hrs 8]

UNIT IV

Structure and unions , Strings and C string library, File Handling in C Using File Pointers,fopen( ), fclose( ),Input and Output using file pointers, Character Input and Output with Files , String Input / Output Functions , Formatted Input / Output Functions,Block Input / Output Functions, Sequential Vs Random Access Files , Positioning the File Pointer

[T1], [T2],[R2][R7][No. of hrs 8]

Text Books:

[T1] Herbert Schildt, “C: The Complete Reference”, OsbourneMcgraw Hill, 4th Edition, 2002.
[T2] Forouzan Behrouz A. “Computer Science: A Structured Programming Approach Using C, Cengage Learning 2/e

Reference Books:

[R1] Kernighan & Ritchie, “C Programming Language”, The (Ansi C version), PHI, 2/e
[R2] K.R Venugopal, “Mastering C ”, TMH
[R3] R.S. Salaria "Application Programming in C " Khanna Publishers4/e
[R4] Yashwant Kanetkar “ Test your C Skills ” , BPB Publications
[R5] http://www.codeblocks.org/
[R6] http://gcc.gnu.org/
[R7] Programming in ANSI C, E. Balagurusamy; Mc Graw Hill, 6th Edition.