

Paper Code: HCSGE1012T	Paper Name: Computer Fundamentals and Programming in C (THEORY)	Marks: 60
Sl. No.	Topic	No. of Periods
GROUP-A		26
1	Introduction to Computer: Different Generations, Functional Units, Basic I/O devices, Storage devices, Bus Structure	2
2	Number Systems and Codes: Weighted and Non-Weighted Codes, Positional Number Systems like Binary, Octal, Decimal and Hexadecimal, Conversion of one number system to another, BCD, Concept of r's and (r-1)'s Complement.	5
3	Binary Arithmetic: Addition and Subtraction using Complement Operation. Representation of Characters: ASCII and Unicode	2
4	Introduction to Problem Solving: Concept of Data and Information, Basic problem solving using Flow Chart and Algorithm	3
5	Software: Types and Brief Ideas about Each of the Types	4
6	Introduction to C - History of C, Overview of Procedural Programming, Using main() function, Compiling and Executing Simple Programs in C.	2
7	Types, Variables, Constants, Operators and Basic I/O - Declaring, Defining and Initializing Variables, Scope of Variables, Keywords, Data Types, Casting of Data Types, Operators (Arithmetic, Logical and Bitwise), Using Comments in programs, Character I/O (getc, getchar, putc, putchar, etc), Formatted and Console I/O (printf(), scanf()), Using Basic Header Files (stdio.h, conio.h, etc.).	4
8	Expressions, Conditional Statements and Iterative Statements - Simple Expressions in C (including Unary Operator Expressions, Binary Operator Expressions), Understanding Operators Precedence in Expressions, Conditional Statements (if construct, switch-case construct), Understanding syntax and utility of iterative Statements (while, do-while, and for loops), Use of break and continue in Loops, Using Nested Statements (Conditional as well as iterative).	4

