SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc (Instrumentation & Control)
Semester: IV
Syllabus with effect from – December - 2016

Paper Code: PS04CINC02	Total Credit: 4
Title Of Paper: Programming in C/C $^{++}$	

Unit	Description in Detail	Weightage (%)
I	Importance of C, Program Design & Coding, Constants, Variables & Data Types, Operators & Expressions, Managing Input & Output Operations, Decision Making & Branching: IF, IF-ELSE, Nesting of IF-ELSE, WHILE, DO & FOR statements & Jumps in Loops	25%
II	Arrays: One, Two & Multi-Dimensional, Character Arrays & Strings, User-defined Functions: Types, Nesting & Recursion, Structures & Unions: Structure Initialization, Arrays of Structures, Structures & Functions	25%
III	Pointers: Declaration, Expressions, Increments & Scale Factors, Preprocessor: Macro Substitution, File Inclusion, Compiler Control Directives, File Management in C, Graphics	25%
IV	Principles of Object Oriented Programming, Applications of C++, Classes & Objects, Managing Console I/O Operations, Object Oriented Systems Development, Templates & Exception Handling	25%

Basic Text & Reference Books:-

➢ Programming in ANSI C, E. Balagurusamy, Tata McGraw-Hill Publishing Company Limited.

➢ Object Oriented Programming with C++, E. Balagurusamy, Tata McGraw-Hill Publishing Company Limited.

➢ Computer Programming in C, V. Rajaraman, Prentice Hall of India Private Limited.

➢ Let us C, Yashvant P. Kanetkar, BPB Publications.

➢ Graphics under C, Yashvant P. Kanetkar, BPB Publications.

➢ Object Oriented Programming with C++, Yashvant P. Kanetkar, BPB Publications.