

SARDAR PATEL UNIVERSITY
B. Sc. (Information Technology)
(3rd Semester)
Syllabus with Effect from: June-2012
Course : US03CINT02
(Fundamentals of Computer Programming Using C)

Credits : 3
Lectures per week : 3
University examination duration : 3 Hours
All units carry equal weightage.

Unit 1. Concept of Algorithm, Flowchart and Languages

- Concept of an algorithm and a flow chart, need and definition
- Symbols used to draw a flow chart
- Typical (primitive) examples of flow charts and algorithms
- Generations of computer languages
- High-level and low-level languages
- Translators
- Introduction to editors and details about one of the editors

Unit 2. Basics of Programming

- Problem analysis
- Variables, expressions & manipulation
- Data types in a high-level language, operators
- I/O statements, Assignment statements
- Control strategies, Conditions

Unit 3. Structured Programming, Library Functions and Arrays

- Loop statements
- Method of structured programming
- Common standard library functions
- Arrays

Unit 4. Strings, User-Defined Functions and Command-line arguments

- String handling.
- Working with functions
- Calling functions, passing arguments
- User-defined functions
- Command-line arguments

MAIN REFERENCE BOOKS :

1. Kernighan B., Ritchie D. : The C Programming Language, Prentice Hall.
2. Cooper H. & Mullish H : The Sprit of C, Jaico Publication House, New Delhi.
3. Balaguruswami : Programming in ANSI C., Tata McGraw Hill Publication.
4. Computer Fundamentals 4th Edition - P.K. Sinha, Priti Sinha