

PROGRAMMING IN C FOR NUMERICAL METHODS

UNIT I

Constants ,Variables, data types symbolic constants –Operators & expressions – evaluation of Expressions –reading & writing a character – Formated input & output – handling of character strings- Operations on strings – string handling functions.

UNIT II

Decision making and branching – Use of IF, IF-ELSE ,& nesting of IF-ELSE statements – ELSE – IF ladder – Switch statement – Conditional Operator –GOTO statement – Decision making & looping – WHILE , DO , and FOR statements.

UNIT III

Arrays – One dimensional ,two dimensional & multi dimensional groups – Structures – Initialization - comparison –Arrays of structures –Arrays within structures – structures within structures and functions –Unions –Size of structures .

UNIT IV

User defined functions –The form of C functions , return values & their types –Calling a function – category of functions –no arguments & no return values –arguments but no return values –arguments with return values – Nesting of functions – Recursion – Functions & arrays - the scope & life time of variables in a function.

UNIT V

File management – defining & opening of a file – Closing a file – I/O operations on files Error handling during I / O operation – Random access to files –Command line arguments.

TEXT BOOK(S)

- [1] E.Balagurusamy , Programming in ANCI C, Tata McGraw Hill Publishing Company Ltd, 2002 (5th Reprint)
UNIT – I - Chapters 2,3,4,& 8
UNIT – II - Chapters 5 & 6
UNIT – III - Chapters 7 & 10
UNIT –IV - Chapter 9
UNIT – V - Chapter 12

REFERENCE(S)

- [1] Rajaraman, V, Programming in C, Prentice Hall of India, 2000
[2] Yeshwant Kanetkar, Let us C, BPB Publications, 2000
[3] B.S. Gottfried, Programming with C, Schaym’s Series, Tata McGraw Hill, 1996.
[4] Manish Jain, Let us C, BPB Publications, New Delhi, Third Revised Edn., 1999.