

New College

Programming in C **and** **Numerical Methods**

B.A./B.Sc. II
FOURTH SEMESTER

JEEVANSONS PUBLICATIONS

SYLLABUS

Maharishi Dayanand University, Rohtak

B. Sc. 2nd Year

FOURTH SEMESTER

PROGRAMMING IN C AND NUMERICAL METHODS : (BM - 243)

PART - A (Theory)

SECTION - I

Programmer's model of a computer. Algorithms. Flow Charts. Data Types, Operators and expressions, Input / outputs functions.

SECTION - II

Decisions control structure : Decision statements, Logical and conditional statements, Implementation of Loops, Switch Statement and Case control structures. Functions, Preprocessors and Arrays.

SECTION - III

Strings : Character data type, Standard string handling functions, Arithmetic operations on characters. Structures : Definition, using structures, use of structures in arrays and arrays in structures. Pointers : Pointers data type, Pointers and arrays, Pointers and functions.

Solution of algebraic and Transcendental equations : Bisection method, Regula-Falsi method, Secant method, Newton-Raphson's method. Newton's iterative method for finding p th root of a number, Order of convergence of above methods.

SECTION - IV

Simultaneous linear algebraic equations : Gauss-elimination method, Gauss-Jordan method, Triangularization method (LU decomposition method). Crout's method, Cholesky decomposition method. Iterative method, Jacobi's method, Gauss-Seidal's method, Relaxation method.

PART - B (Practical)

Simple programs in C and the implementation of Numerical Methods studied in the theory paper in C programming Language.

Note. *The question paper will consist of **five** sections. Each of the first four sections will contain two questions and the students shall be asked to attempt **one** question from each section. **Section - V** will contain **six** short answer type questions without any internal choice covering the entire syllabus and shall be **compulsory**.*

Soha Rai
2162

SYLLABUS

Kurukshetra University, Kurukshetra

B. Sc. 2nd Year

FOURTH SEMESTER

PROGRAMMING IN C AND NUMERICAL METHODS : (BM - 243)

Note. *The examiner is requested to set **nine questions** in all, selecting two questions from each section and **one compulsory question** consisting of five or six parts distributed over all the four sections. Candidates are required to attempt **five questions in all**, selecting **at least one question** from each section and the compulsory question.*

PART - A (Theory)

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PART - B (Practical)

Simple programs in C and the implementation of Numerical Methods studied in the theory paper in C programming Language.

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