



GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING & TECHNOLOGY
AUTONOMOUS

**Questions & Answers for Previous Examination Questions
(Study Material)**

Computer Programming

Subject Code: GR14A1009
B.Tech. I Year (CSE, ECE, EEE, IT)



Gokaraju Rangaraju Institute of Engineering and Technology,
Bachupally, Hyderabad-500090

COMPUTER PROGRAMMING

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B.Tech. I Year (CSE, ECE, EEE, IT)

Syllabus

COMPUTER PROGRAMMING

Prerequisite: Knowledge of Mathematics required

Objectives:

1. To review basic computer system concepts
2. To express algorithms and draw flowcharts in a language independent manner.
3. To introduce the basic concepts of C-programming language such as variables, operators, branching, looping, functions, arrays, pointers, structures and files
4. To examine the key aspects of c-library

Outcomes:

At the of this course students will be

- 1) able to analyze and resolve a given problem
- 2) ability to use the programming concepts, c-library and generate code for a given problem
- 3) ability to understand computer programming environment.

L:4, T:1, Credits:4

Total Marks:100 (Int:30, Ext:70)

UNIT-I

Introduction to Computers: Computer hardware and software, System Software, Generation of programming languages, Program Development Steps, Algorithms, Flowcharts.

Introduction to C: History of C, Structure of C-Program, keywords, Identifiers, Data Types, Constants, variables, Operators, Expressions, Precedence and Order of Evaluation, Type Conversion and Type Casting .

UNIT-II

Managing I/O: Input-Output statements, formatted I/O.

Decision making statements : if, if-else, if-else-if, nested if, switch

Iterative statements: while, do- while, for

Unconditional statements: break, continue, go to.

UNIT-III

Arrays: Introduction, One-dimensional arrays, Declaring and Initializing arrays, Multidimensional arrays

Strings: Introduction to Strings, String operations with and without using String Handling Functions, Array of Strings.

UNIT-IV

Functions: Introduction, Function Definition, Function Declaration, Function Calls, Return values and their types, Categories of Functions, nested functions, Recursion, Storage Classes, Passing arrays to Functions.

Pointers: Pointers and Addresses, Pointer expressions and Pointer arithmetic, Pointers and Functions, void pointer, Pointers and Arrays, Pointers and Strings, Array of pointers, Pointers to Pointers.

Dynamic memory allocation: malloc, calloc, realloc, free.

UNIT-V

Structures: Basics of Structures, Nested Structures, Arrays of Structures, Arrays within structures, Structures and functions, pointers and structures, self referential structures, Unions.

Files: Introduction, Types of Files, File Access Functions, I/O on Files, Random Access to Files, Error Handling. , Command Line Arguments.

Teaching methodologies: white board and marker, power point presentations

Text Books

1. The C Programming Language, BRIANW. KERNIGHAN Dennis M.Ritchie, Second Edition, PHI.
2. Computer Programming and Data structures by E Balaguruswamy, published by Mc GrawHill.

Reference Books

1. Programming in C, Ashok N Kamthane, 2nd edition, Pearson Publication.
2. Let Us C, Yashwanth Kanetkar, 10th Edition, BPB Publications.
3. C& Data structures, P.Padmanabham, B.S. Publications.
4. Computer science, A structured programming approach using C, B.A. Forouzan and R.F. Gilberg, Third edition, Thomson.
5. Programming with problem solving, J.A.Jones & K.Harrow, Dreamtech Press.
6. Programming in C, Stephen G.Kochan, III Edition, Pearson Education.
7. Problem solving and program design in C, Jeri. R. Hanly, Elliot B. Koffman, Pearson Publication.

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Preface

The main object of this study material is to provide crisp information of the subject of the Computer Programming (CP) in the form of Questions and Answers to help the students for preparation of examinations. Questions have been collected from previous question papers of JNTUH and GRIET (Autonomous) and answers have been prepared by Faculty of Computer Programming and Data Structures. Definitions, concepts, algorithms, flowcharts, programs & outputs, diagrams and figures have been incorporated wherever necessary. This material is only a guideline for the students and so they are advised to refer various text books and other sources of information related to the subject. This material has been prepared by senior faculty with utmost care. However, corrections, modifications and improvements are solicited from students, faculty and experts in the subject for the further improvement of the quality of the content. The Faculty of CPDS are thankful to the management for their encouragement and for the facilities provided for the preparation of this material. And we also extend our thanks to all the teachers who have contributed to the preparation of this material.

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Faculty of CPDS
GRIET (Autonomous)
