

SRI VENKATESWARA UNIVERSITY

II B.Com / B.A. / B.Sc (COMPUTER APPLICATIONS)

III SEMESTER – W.E.F. 2016-17

PROGRAMMING IN C

UNIT I

**Introduction to Algorithms and Programming Languages:** Algorithm – Key features of Algorithms – Some more Algorithms – Flow Charts – Pseudo code –Generation of Programming Languages – Structured Programming Language

**Introduction to C:** Introduction – Structure of C Program – Writing the first C Program – File used in C Program – Compiling and Executing C Programs – Using Comments – Keywords – Identifiers – Basic Data Types in C – Variables – Constants – I/O Statements in C- Operators in C- Programming Examples – Type Conversion and Type Casting.

UNIT II

**Decision Control and Looping Statements:** Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Goto Statement

**Functions:** Introduction – using functions – Function declaration/ prototype – Function definition – function call – return statement – Passing parameters – Scope of variables – Storage Classes – Recursive function

UNIT III

**Arrays:** Introduction – Declaration of Arrays – Accessing elements of the Array – Storing Values in Array – Calculating the length of the Array – Operations on Array – one dimensional array for inter-function communication – Two dimensional Arrays –Operations on Two Dimensional Arrays

**Strings:** Introduction String and Character functions

UNIT IV

**Pointers:** Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables – Pointer Expressions and Pointer Arithmetic – Null Pointers – Generic Pointers - Passing Arguments to Functions using Pointer – Pointer and Arrays – Passing Array to Function –

**Structure, Union, and Enumerated Data Types:** Introduction – Nested Structures – Arrays of Structures – Structures and Functions - Unions – Enumerated Data Types

## **UNIT V**

**Files:** Introduction to Files – Using Files in C – Reading Data from Files – Writing Data from Files – Detecting the End-of-file –Close a file – Random Access Files – Binary Files – Command line arguments

## **REFERENCE BOOKS**

1. Introduction to C programming by REEMA THAREJA from OXFORD UNIVERSITY PRESS
2. E Balagurusamy: —COMPUTING FUNDAMENTALS & C PROGRAMMING – Tata McGraw-Hill, Second Reprint 2008, ISBN 978-0-07-066909-3.
3. Ashok N Kamthane: Programming with ANSI and Turbo C, Pearson Edition Publ, 2002.
4. Henry Mullah & Huubert L.Cooper: The Spirit of C An Introduction to modern Programming, Jaico Pub. House,1996.

**MODEL QUESTION PAPER**  
**B.Com. / B.A. / B.Sc. (COMPUTER APPLICATIONS): II YEAR – III SEMESTER**  
**PROGRAMMING IN C**

Time: 3 Hrs

Max. Marks: 75

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**SECTION – A**

1. Answer any 5 Questions :

5 x 3 =15 M

- a) What are the types of Languages?
- b) Define keyword.
- c) Difference between Structure and Union.
- d) Difference between while and do-while.
- e) Explain getchar() and putchar() statements.
- f) What is flowchart?
- g) Explain any two bit-wise Operators.
- h) File modes in 'C'.
- i) Define null pointer.
- j) What is C preprocessor ?

**SECTION – B**

**Answer one question from each unit. Each carries equal marks:5 x 12 = 60 M**

**UNIT- I**

2. a. Explain algorithms with proper example.  
b. Define different categories of High-level Languages.

(or)

3. a. Explain the importance and uses of C-language.  
b. Explain scanf() and printf statements.

**UNIT- II**

4. Define branching and iterative statements.

(or)

5. Describe recursive functions with suitable example.

**UNIT- III**

6. What is an array? Explain the types of arrays?

(or)

7. a. Explain any five string functions in C.  
b. Write a Program for string Palindrome.

#### **UNIT- IV**

8. What is pointer? How the pointer are illustrated in functions.  
(or)
9. What is structure? How to create structure and explain with suitable example.

#### **UNIT - V**

10. Explain file management in 'C'  
(or)
11. Explain the command-line arguments.