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 Mullish & Huubert L.Cooper: The Spirit of C An Introduction to modern Programming, Jaico Pub. House,1996.

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Time: 3 Hrs   Max. Marks: 75

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. Expalin 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.