

**AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.**

**An Autonomous college within the jurisdiction of Krishna University A.P, India.**

**(With Effect from Academic Year 2018-'19)**

|                         |                  |                 |                      |
|-------------------------|------------------|-----------------|----------------------|
| <b>COMPUTER SCIENCE</b> | <b>CCSC 505C</b> | <b>2018-'19</b> | <b>B.Com.(C.A.)</b>  |
| <b>SEMESTER – V</b>     | <b>PAPER – V</b> |                 | <b>Max. Marks 75</b> |

**Syllabus**

**PROGRAMMING IN C**

**NO Of Hours: 5**

**No Of Credits: 3**

**Pass Marks 30**

**Unit- I: Introduction to Algorithms and Programming Languages: 12 Hrs**

Algorithm – Key features of Algorithms – Some more Algorithms – Flow Charts.  
Introduction to C: 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 12 Hrs**

Introduction to Decision Control Statements – Conditional Branching Statements – Iterative Statements – Nested Loops – Break and Continue Statement – Go to Statement

**Unit- III: Functions 12 Hrs**

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

**Unit- IV: Arrays 12 Hrs**

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-V: Pointers: 12 Hrs**

Understanding Computer Memory – Introduction to Pointers – declaring Pointer Variables  
Passing Arguments to Functions using Pointer.

Structure, Union, and Enumerated Data Types: Introduction – Nested Structures – Unions – Enumerated Data Types.

**Reference Books:**

1. Reema Thareja, Introduction to C programming, Oxford University Press.
2. E Balagurusamy, Computing Fundamentals & C Programming – Tata McGraw-Hill, 2008.
3. Ashok N Kamthane, Programming with ANSI and Turbo C, Pearson Publisher, 2002. 4. Henry Mulish & Hubert L.Coo Reema Thareja: The Spirit of C: An Introduction to Modern Programming, Jaico Publishing House,1996.

**AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYYURU.**  
**An Autonomous college within the jurisdiction of Krishna University A.P, India.**  
**(With Effect from Academic Year 2018-'19)**

|                         |                  |                 |                     |
|-------------------------|------------------|-----------------|---------------------|
| <b>COMPUTER SCIENCE</b> | <b>CCSC 505C</b> | <b>2018-'19</b> | <b>B.Com.(C.A.)</b> |
|-------------------------|------------------|-----------------|---------------------|

**SEMESTER – V**

**PAPER – V**

**Max. Marks 75**

**Model Paper**

**PROGRAMMING IN C**

**Section- A**

Answer **FIVE** Questions. Each Question carries **FIVE** Marks.

**5\*5=25M**

1. Write a short note on Algorithm?
2. Explain data types in C?
3. Explain Jump Statements?
4. Write a short note on 'if' - statements?
5. Explain Call by Value and Call by Reference
6. Describe recursive function with an example?
7. Explain one dimensional array with example?
8. Write about pointers

**Section- B**

Answer **FIVE** the Questions. Each Question carries **TEN** Marks

**5\*10=50M**

9. Explain different types of programming languages?
10. Explain about different Categories of Operators in 'C'?
11. Explain Decision Making Looping statements with examples?
12. Explain different categories of functions?
13. Explain about Storage Classes?
14. Write about two dimension arrays? Give an example program?
15. Explain briefly about String function in 'C'?
16. Difference between Structures and Unions?

**AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.**  
**An Autonomous college within the jurisdiction of Krishna University A.P, India.**  
**(With Effect from Academic Year 2018-'19)**

|                  |           |               |               |
|------------------|-----------|---------------|---------------|
| COMPUTER SCIENCE | CCSC 505C | 2018-'19      | B.Com.(C.A.)  |
| SEMESTER – V     | PAPER – V | Max. Marks 75 | Pass Marks 30 |

Guidelines for paper setting '**PROGRAMMING IN C**'

Unit wise weightage of Marks

|        | Section-A<br>(Short answer questions) | Section-B<br>(essay questions) |
|--------|---------------------------------------|--------------------------------|
| Unit-1 | 2                                     | 2                              |
| Unit-2 | 2                                     | 2                              |
| Unit-3 | 2                                     | 2                              |
| Unit-4 | 1                                     | 1                              |
| Unit-5 | 1                                     | 1                              |

- Each Short answer question carries 5 marks in Section –A
- Each Essay question carries 10 marks in Section –B
- The Question papers setters are requested to cover all the topics in the syllabus stipulated as per the weightage given by us

**AG & SG SIDDHARTHA COLLEGE OF ARTS AND SCIENCES - VUYYURU.**

An Autonomous college within the jurisdiction of Krishna University A.P, India.

(With Effect from Academic Year 2017-18)

|                         |                    |                      |                      |
|-------------------------|--------------------|----------------------|----------------------|
| <b>COMPUTER SCIENCE</b> | <b>CCSC-505P</b>   | <b>2018-'19</b>      | <b>B.Com.(C.A.)</b>  |
| <b>SEMESTER – V</b>     | <b>PAPER – III</b> | <b>Max. Marks 50</b> | <b>Pass Marks 25</b> |

**LABLIST**

**PROGRAMMING IN C**

**No. of Hours per week: 2      External: 25      Internal: 25      Credits: 2**

1. Find out the given number is perfect number or not using c program.
2. Write a C program to check whether the given number is Armstrong or not.
3. Write a program to find roots of quadratic equation.  
 $\text{Root 1} = (-b + \sqrt{b^2 - 4ac}) / 2a$        $\text{Root 2} = (-b - \sqrt{b^2 - 4ac}) / 2a$
4. Write a C program to find the sum of individual digits of a positive integer.
5. Write a C program to print the Fibonacci series
6. Write a C program to generate the first n terms of the Fibonacci sequence.
7. Write a program to find factorial of a given number using recursion
8. Write a program to perform all arithmetic operations using switch case
9. Write a C program to generate all the prime numbers between 1 and n, where n is a Value supplied by the user.
10. Write a C program to find both the largest and smallest number in a list of integers.
11. Write a C program that uses functions to perform the following:
  - a. Addition of Two Matrices
  - b. Multiplication of Two Matrices
12. Write a program to perform various string operations
13. Write a program to swap two numbers using pointers.
14. Write C program that implements searching of given item in a given list
15. Write a C program to sort a given list of integers in ascending order

