Q.P. Code: 20CS0501 **R20**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Supplementary Examinations November-2022

C PROGRAMMING AND DATA STRUCTURES

(Common to CE, AGE, CSE, CSIT, CSM, CIC, CAD & CCC)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Write a C Program to find the sum of individual digits of positive integer.	L3	6M
	b	Explain about precedence and associativity in C.	L4	6M
		OR		
2	a	Write a C Program to Perform Arithmetic Operations using Switch statement.	L3	6M
	b	Differentiate break and continue statements.	L2	6M

UNIT-II

3	a	What is 2D array? Write the syntax for declaring and initializing 2D array with example.	L3	6M
	b	Write a C program for displaying smallest element in array.	L3	6M
		OR		
4		Define String. Explain the different string handling functions with example.	L2	12M

UNIT-III

5	a	Define pointer. Write the syntax for declaring pointer with example.	L4	4M
	b	Explain the concept of array of pointers with examples.	L2	8M
		OR		
6	a	Illustrate the use of typedef with suitable example.	L3	6M
	b	Give difference between the structure and union.	L4	6M

UNIT-IV

7	a	Distinguish between stacks and queue.	L4	6M
	b	State any two applications of stacks and queues.	L1	6M
		OR		
8		Implement the following single linked list operations: i)Insertion ii)Deletion iii) Searching an element	L5	12M

UNIT-V

9	a	Order the following numbers using merge sort : 45,34,12,46,27,56,11,87,6,33,28.	L4	6M
	b	Explain insertion sort with an example.	L3	6M
		OR		
10	a	Compare binary search and linear search techniques.	L4	6M
	b	Explain Linear Search with Algorithm.	L4	6M

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