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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year II Semester Regular Examinations November-2021
C PROGRAMMING AND DATA STRUCTURES
(Common to EEE, ME and ECE)

Time: 3 hours   Max. Marks: 60

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

UNIT-I

1	a	Describe the Structure of C Program with neat diagram.	L2	6M
	b	Write a program to print first n terms in Fibonacci series.	L3	6M

OR

2	Describe the various operators available in C with examples.	L3	12M

UNIT-II

3	a	How to pass array as arguments to function? Explain with one example.	L1	6M
	b	Write a C program for factorial of a given number using recursion.	L3	6M

OR

4	What is 2D array? Write program for addition of two matrices.	L3	12M

UNIT-III

5	a	Define pointer. How to pass a pointer to a function? Explain.	L2	6M
	b	Write a C program to read and display multiple strings using pointers.	L3	6M

OR

6	a	Define union and give the general syntax for union. Write suitable example program.	L3	6M
	b	Give the differences between structure and array.	L4	6M

UNIT-IV

7	a	What do you mean by stack overflow and stack underflow.	L2	6M
	b	Construct an empty stack and perform PUSH operation for any five elements. Also perform POP operation for two elements and show the value on top of the stack.	L6	6M

OR

8	State any two applications of stacks and queues? With an example, explain infix, postfix and prefix notations.	L4	12M

UNIT-V

9	Sort the following numbers using selection sort and insertion sort: 45, 25, 10, 2, 9, 85, 102, 1.	L4	12M

OR

10	What do you mean by Searching? Explain sequential search and binary search with suitable example.	L3	12M

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