Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year II Semester Supplementary Examinations February-2022
PROGRAMMING FOR PROBLEM SOLVING
(Common to ECE, CSE & CSIT)

Time: 3 hours   Max. Marks: 60

PART-A
(Answer all the Questions **5 x 2 = 10** Marks)

1	a	Write difference between algorithm and flowchart.	2M
	b	Write the syntax for nested if and else-if ladder.	2M
	c	What is multi-dimensional array?	2M
	d	Define pointer. How can you declare it?	2M
	e	Define Structure. How to Initialize a Structure?	2M

PART-B
(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	a	Describe computer hardware and software.	5M
	b	What are C Data types?	5M

OR

3	a	Write an algorithm to find the sum of numbers from 1 to n.	5M
	b	Write a program for finding the sum of numbers from 1 to n.	5M

UNIT-II

4	a	Explain various branching statements in C.	5M
	b	Write a program to generate "n" Fibonacci numbers.	5M

OR

5	a	Explain else-if ladder with the help of flowchart and program.	5M
	b	How does nested if-else works explain with an example?	5M

UNIT-III

6	a	Define an array. How to initialize one-dimensional array?	5M
	b	Write a C program to add 2 matrices of size n by n.	5M

OR

7	a	What are the advantages of functions?	6M
	b	Discuss about the different categories of functions.	4M

UNIT-IV

8	a	Define pointer. How to declare and initialize it?	6M
	b	Write a C program to illustrate the use of indirection operator to access the value pointed by a pointer.	4M

OR

9	a	Explain the concept of functions returning pointers with example.	5M
	b	Write a C program to read and print an array of elements using pointers.	5M

UNIT-V

10	a	Define Structure and write the general syntax for declaring and accessing members.	5M
	b	How to copy and compare structure variables. Illustrate with example.	5M

OR

11	a	How data elements are stored under unions, explain with example.	5M
	b	Write a C program to illustrate the concept of structure within structure.	5M

END