Reg. No: ☐☐☐☐☐☐☐☐☐☐

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech II Year I Semester Regular Examinations Feb-2021
C AND DATA STRUCTURES
(Common to CSE & CSIT)

Time: 3 hours   Max. Marks: 60

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

UNIT-I

1	Define an operator? Explain the arithmetic, relational, logical and assignment operators in C language with appropriate example.	12M

OR

2	a	Write a C program to check whether a given number is Armstrong number or not.	6M
	b	Discuss about while and for loops and write suitable examples.	6M

UNIT-II

3	a	How to pass array elements as arguments to function? Explain with one example.	8M
	b	Write a C program to illustrate call-by-value parameter passing technique.	4M

OR

4	a	List and explain the storage classes with examples.	8M
	b	Discuss any two string handling functions.	4M

UNIT-III

5	Write about dynamic memory management functions in C.	12M

OR

6	a	What is a pointer? What are the features of pointers? Write a C program to print address of a variable.	7M
	b	List out the differences between the structures and union.	5M

UNIT-IV

7	a	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.	6M
	b	What are the advantages and disadvantages of stack and queue?	6M

OR

8	a	With an example, explain infix, postfix and prefix notations.	8M
	b	What do you mean by stack overflow and stack underflow.	4M

UNIT-V

9	a	Explain how to insert an element into double linked list.	7M
	b	Sort the following numbers using merge sort : 45,34,12,46,27,56,11,87,6,33,28.	5M

OR

10	a	Write an algorithm for searching an element in single linked list.	8M
	b	Explain how an element is searched using sequential search.	4M

*** END ***