O.P.Code: 23CS0501   R23   H.T.No. ☐☐☐☐☐☐☐☐☐☐

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech.I Year I Semester Regular & Supplementary Examinations December/January-2025/2026
INTRODUCTION TO ROGRAMMING
(Common to All)

Time: 3 Hours   Max. Marks: 70

PART-A
(Answer all the Questions 10 x 2 = 20 Marks)

1	a	List the different symbols in a flowchart.	CO1	L2	2M
	b	Define with example any four operators in C.	CO1	L1	2M
	c	Write the syntax of switch-case statements?	CO2	L2	2M
	d	What is the purpose of using break and continue statements.	CO2	L2	2M
	e	Explain how to initialize the 1D array.	CO2	L2	2M
	f	Differentiate Character and String.	CO3	L2	2M
	g	How does a pointer store the address of a variable?	CO4	L2	2M
	h	Differentiate structure and union.	CO6	L2	2M
	i	What is meant by function, and list the different types of functions.	CO5	L1	2M
	j	Define a file. What is its purpose.	CO6	L2	2M

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

UNIT-I

2	a	Define an algorithm. Explain the characteristics of an algorithm.	CO1	L2	5M
	b	Design an algorithm to find the average of three numbers	CO1	L3	5M

OR

3		List and explain the various operators with examples.	CO1	L2	10M

UNIT-II

4	a	Discuss various decision statements with suitable examples.	CO2	L2	5M
	b	Create a C Program to find the greatest of three numbers using a nested if- else statement.	CO2	L3	5M

OR

5	a	Discuss the different looping statements with syntax in C.	CO2	L2	5M
	b	Write a C program to perform the Fibonacci series using for loop.	CO2	L3	5M

UNIT-III

6	a	Compose a C program to calculate the sum of the array elements.	CO2	L3	5M
	b	Create a C program to perform the addition of two matrices.	CO2	L3	5M

OR

7	a	List and discuss the different string handling functions.	CO3	L2	5M
	b	Illustrate a C program to find the reverse of a given string without using string handling functions.	CO3	L3	5M

UNIT-IV

8	a	Discuss the concept of void pointers with examples.	CO4	L2	5M
	b	Summarize the following with an example i. malloc(), ii. calloc(), iii. realloc() and iv. free()	CO4	L2	5M

OR

9	a	Illustrate the procedure to declare and initialize a structure with an example C program.	CO6	L2	5M
	b	Explain about nested structures.	CO6	L2	5M

UNIT-V

10	a	Explain the library functions available in C?	CO5	L2	5M
	b	Compose a C program to swap two numbers using call by reference.	CO5	L3	5M

OR

11	a	Summarize the following operations on files with examples. i) Read() ii) write() iii)append()	CO6	L2	5M
	b	Illustrate a C program to append the contents of a file at the end of another file.	CO6	L3	5M

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