Reg No.: _____ Name : _____

Jyothi Engineering College(Autonomous)

B. Tech Degree S2 (R) Examination, May 2026(2025 Scheme)

25EST204 - PROGRAMMING IN C

Total Mark: 60 **Total Time: 2hrs 30 min**

CO MARK

PART A

(Answer All Questions. Each question carries 3 marks)

1.	Explain the different categories of characters in the C character set.	CO1 (3)
2.	Explain the purpose of the printf() and scanf() functions.	CO1 (3)
3.	How can a list of numbers be arranged in ascending order using the bubble sort method? Write the algorithm.	CO2 (3)
4.	Write a C program to read and display a string.	CO2 (3)
5.	Differentiate between pass by value and pass by reference in functions.	CO3 (3)
6.	Explain how a structure is passed to a function in C with an example.	CO3 (3)
7.	Write a C program to access a string using pointers.	CO4 (3)
8.	Write a C program using a pointer to function to perform addition of two numbers.	CO4 (3)

PART B

(Answer any one full question from each module, each question carries 9 marks)

Module - 1

9.	Write a C program to print sum of n natural numbers. Also count the number of odd numbers in it.	CO1 (9)

OR

10. a)	Describe the structure of a C program with an example code.	CO1 (5)
b)	Write a C program to check whether a number is palindrome or not.	CO1 (4)

Module - 2

11.	Given the list [15, 18, 2, 19, 18, 0, 8, 14, 19, 14], write an algorithm and a program to find the key element 8.	CO2 (9)

OR

12. a)	Write a C program to check whether the given matrix is symmetric or not.	CO2 (5)
b)	A student management application stores student roll numbers in an array based on their entry sequence. To display the roll numbers from the most recent entry to the earliest, the array needs to be reversed. Develop a C program to reverse the elements of the array.	CO2 (4)

Module - 3

13.	Write a C program to display fibonacci series using recursive function.	CO3 (9)

OR

14. a)	Explain the features of register and extern storage classes.	CO3 (5)

b) Differentiate between structure and union. CO3 (4)

Module - 4

15. What is dynamic memory allocation in C? Explain the concept and describe the different functions used for dynamic memory allocation. Write a C program to allocate memory for n integers dynamically, read the values, and display them. CO4 (9)

OR

16. a) Write a C program to allocate memory dynamically for an array of 5 integers using malloc() and display the elements. CO4 (5)

b) What is the realloc() function in C? Explain with an example. CO4 (4)

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