Register No.: ……………………………… Name: ……………………………………………………

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER B.TECH DEGREE EXAMINATION (S), AUGUST 2023

(2020 SCHEME)

Course Code :   **20EST102**

Course Name: **Programming in C**

Max. Marks   :   **100**   **Duration: 3 Hours**

PART A
(Answer all questions. Each question carries 3 marks)

1. Draw a flowchart to find the sum of first N numbers.
2. Differentiate between complier and interpreter.
3. Explain entry controlled and exit controlled looping statements.
4. Differentiate between 'break' and 'continue' statements.
5. Develop a C program to find the largest element in an array.
6. Develop a C program to find length of a string without using string handling functions.
7. Explain formal parameters and actual parameters. Illustrate with an example.
8. List the advantages of modular programming.
9. Explain pointer variable. How is it initialized?
10. Explain different modes of opening a file.

PART B
(Answer one full question from each module, each question carries 14 marks)
MODULE I

11. a) Explain bubble sort with an example.   (6)
    b) Draw a flowchart and write pseudo code to perform bubble sort on an array of numbers.   (8)

OR

12. a) Explain briefly about memory hierarchy in computer system.   (6)
    b) Develop an algorithm to find sum of digits of a number.   (8)

MODULE II

13. a) Explain different data types supported by C language with suitable examples. (7)

     b) Develop a C program to read a character from the user and check whether it is a vowel or consonant. (7)

OR

14. a) Develop a C program to find the sum of digits of a number. (7)

     b) Explain formatted and Unformatted I/O functions of C language with syntax and example. (7)

MODULE III

15. a) Develop a C program to perform linear search on an array of numbers. (7)

     b) Develop a C program to check whether a string is palindrome or not without using string handling functions. (7)

OR

16. a) Explain any 4 string handling functions in C programming. (8)

     b) Develop a C program to find second largest element in an array. (6)

MODULE IV

17. a) Explain the purpose of function declaration, function definition and function call. With examples illustrate their syntax. (8)

     b) Define recursion. Write a C program to display Fibonacci series using recursive function. (6)

OR

18. a) Explain the main differences between structures and unions with suitable examples. (7)

     b) Explain the different storage classes in C. Give examples for each. (7)

MODULE V

19. a) Develop a C program to replace vowels in a text file with character 'x'. (8)

     b) Explain any 5 file handling functions in C. (6)

OR

20. a) Explain how pointers can be passed to functions in C. (7)

     b) Develop a C program to print the elements of an array in reverse order using pointers. (7)

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