

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER INTEGRATED M.C.A DEGREE EXAMINATION (S), SEPT 2022**(2020 SCHEME)****Course Code: 20IMCAT108****Course Name: Problem Solving and Structured Programming****Max. Marks: 60****Duration: 3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. Write a short note on symbolic constant and C tokens.
2. Explain enum with suitable example.
3. Write the syntax of do-while with an example.
4. How does switch case work without break statement? Explain.
5. How do you declare and initialize 1-D and 2-D arrays? Give examples.
6. What is an array of strings?
7. Write a short note on recursion.
8. What are storage classes?
9. Explain the concept of pointer to a pointer.
10. Write short notes on different file modes.

PART B*(Answer one full question from each module, each question carries 6 marks)***MODULE I**

11. a) What is constant? Give suitable example. (3)
b) Explain the role of pre-processor directive with an example. (3)

OR

12. Explain logical, bitwise and increment / decrement operators with suitable examples. (6)

MODULE II

13. What are the various conditional statements? Explain the difference between nested if and switch case statement with suitable examples. (6)

OR

14. Write a C program to display the following pattern. (6)
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**MODULE III**

15. List and explain any three string manipulation functions in C. (6)

**OR**

16. Write a C Program to print the sum of diagonal elements of 2-D Matrix. (6)

**MODULE IV**

17. Explain the following. (3)
- i) Nested Structure (3)
  - ii) Array of structure (3)

**OR**

18. Differentiate structure and union with suitable example. (6)

**MODULE V**

19. a) Explain the array of pointers with an example. (3)
- b) How are pointers and arrays related? Explain with example. (3)

**OR**

20. Explain in detail the various file operations with suitable examples. (6)

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