

QP Code: U25B024

Reg. No :

Name :

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

II SEMESTER (FYUGP) DEGREE EXAMINATION, MARCH 2025

BCA

BCA2CJ101 : FUNDAMENTALS OF PROGRAMMING (C LANGUAGE)

2024 Admission Onwards

(Credits: 4)

Time: 2 Hours

Maximum Marks: 70

Section A

*Answer **all**. Each question carries 3 Marks (Ceiling: 24 Marks)*

1. Distinguish between gets() and puts() functions in C. [BTL4]
2. Write a C program using an if-else statement to check whether a number is even or odd. [BTL3]
3. How can you resize a dynamic array in C? Give a sample code. [BTL1]
4. Mention the purpose of the return type in a function declaration. Illustrate with an example. [BTL1]
5. What is the purpose of the strlen() function? Provide an example. [BTL1]
6. What happens if you try to access an array element out of its bounds in C? Discuss with an example. [BTL3]
7. Distinguish between call by value and call by reference in C. [BTL5]
8. How do you pass an array to a function in C? Explain with a sample code. [BTL3]
9. What is the purpose of the -> operator when working with pointers to structures in C? [BTL3]
10. What is the purpose of the free() function in dynamic memory allocation? Illustrate with sample code. [BTL1]

Section B

*Answer **all**. Each question carries 6 Marks (Ceiling: 36 Marks)*

11. What are bitwise operators in C? Explain. [BTL1]
12. Write a program to calculate the sum of numbers from 1 to 10 using the goto statement. [BTL4]
13. Explain how a nested loop works with an example. [BTL4]

Turn Over

14. Write a C program to find the maximum and minimum elements in a one-dimensional array of integers. [BTL2]
15. Explain the working of command-line arguments in C. Mention the purpose of argc and argv with an example. [BTL1]
16. What is the purpose of the extern storage class? Write a program to demonstrate the use of extern variables in multiple source files. [BTL2]
17. Define a pointer in C. How do you declare and initialize a pointer? Provide an example. [BTL2]
18. Write a program to demonstrate how to use an array within a structure in C. [BTL2]

Section C

*Answer **any one**. Each question carries **10 Marks** (1x10=10 Marks)*

19. Define and explain the character set in C. [BTL1]
20. Write a program to implement a function with arguments but without a return value [BTL5] to display the sum of two numbers. Explain how the arguments are passed to the function.
