Name .....

First Semester FYIMP Computational Science Examination
November 2024 (2024 Admission onwards)
KU01DSCCSE101 (PRINCIPLES OF PROGRAMMING)
(EXAM DATE : 09-12-2024)

Time : 120 min Maximum Marks : 50

Part A (Answer any 4 questions. Each carries 2 marks)

1. Why compilation is important in Programming? 2

2. Describe the void keyword and its use in C. 2

3. What happens if there is no *default* case in a switch statement? 2

4. What does the following code do: int arr[3][3] = 1,2,3,4,5,6,7,8,9:? 2

5. Explain the difference between malloc() and calloc() in terms of memory initialization. 2

6. What is the purpose of the # ifdef directive in C? Provide an example of its use. 2

Part B (Answer any 3 questions. Each carries 6 marks)

7. Write an algorithm to calculate GCD(Greatest common divisor) of a number. 6

8. What is the difference between local and global variables? Explain with example. 6

9. What are tokens in C? List and explain the different types of tokens in C with examples. 6

10. What is pointer arithmetic in C, and how does it affect the traversal of arrays? Explain with an example how pointer arithmetic can be used to access array elements. 6

11. Explain the difference between text files and binary files in C. 6

Part C (Answer any 3 question(s). Each carries 8 marks)

12. Explain the concept of functions in C, including the function definition, declaration, and calling mechanisms. 8

13. Write a program that prints a pattern of stars using nested loops. The pattern should look like this for n=5:

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8

14. What is the role of the break statement in C? Write a program that demonstrates its use inside a switch statement. 8

15. Convert an if-else structure for checking even and odd numbers into a switch statement. 8