25U271 (Pages: 2) Name : .....

Reg. No : .....

SECOND SEMESTER UG DEGREE EXAMINATION, APRIL 2026

(FYUGP)

(Regular/Supplementary/Improvement)

CC24UCSC2MN101 - FOUNDATIONS OF C PROGRAMMING

(Computer Science - Minor Course)

(2024 Admission onwards)

Time: 2.0 Hours Maximum: 70 Marks

Credit: 4

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 3 marks.

1. Detect the role of the "Decision" symbol in a flowchart. Provide an example. [Level:4] [CO1]
2. Compare and contrast a flowchart and pseudocode. How do both contribute to algorithm design. [Level:4] [CO1]
3. Distinguish between an algorithm and a program, highlighting their significance in software development. [Level:4] [CO1]
4. Analyze the differences between getchar() and gets(). In what situations might one be preferred over the other, and why? [Level:4] [CO2]
5. Distinguish between character constants and string constants in C, providing relevant examples. [Level:4] [CO2]
6. Demonstrate the use of the period operator (.) in structure. [Level:3] [CO3]
7. Demonstrate the working of for loop by an example program. [Level:3] [CO3]
8. Solve the errors in the following function definition and explain why they occur: void sum(int a, int b); { return a + b; } [Level:3] [CO4]
9. Compute how use of functions improves code maintainability, debugging, and reusability? [Level:3] [CO4]
10. Provide the concept of recursive function. [Level:3] [CO4]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

Answer ***all*** questions. Each question carries 6 marks.

11.	Estimate the role of pseudocode in algorithm debugging and testing.	[Level:4]	[CO1]
12.	Analyze the impact of Raptor's algorithmic thinking approach on a student's problem-solving skills.	[Level:4]	[CO1]
13.	Analyze the precedence law in arithmetic operators.Provide examples that demonstrate the importance of operator precedence.	[Level:4]	[CO2]
14.	Analyze the significance of each section in a C program and explain how modifying any section could impact program execution.	[Level:4]	[CO2]
15.	Implement a C program to compare two strings using strcmp() and display whether they are equal or not.	[Level:3]	[CO3]
16.	Implement a C program hat takes a one-dimensional integer array as input, sorts it in ascending.	[Level:3]	[CO3]
17.	Implement a C program that swaps two numbers using both call by value and call by reference. Compare the results.	[Level:3]	[CO4]
18.	Estimate the term pointer? What are the advantages of pointers?	[Level:3]	[CO4]

(Ceiling: 36 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

19.	Compare and contrast different elements of the C language, explaining their significance in program execution with examples.	[Level:4]	[CO1]
20.	Implement C program to show the difference between nested if and else if ladder.	[Level:3]	[CO2]

(1 × 10 = 10 Marks)

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