

24U276

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Name :

Reg. No :

SECOND SEMESTER UG DEGREE EXAMINATION, APRIL 2025

(FYUGP)

CC24UCSC2MN 101 - FOUNDATIONS OF C PROGRAMMING

(Computer Science - Minor Course)

(2024 Admission - Regular)

Time: 2.0 Hours

Maximum: 70 Marks

Credit: 4

Part A (Short answer questions)

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

1. Analyse the role of the "Process" symbol in a flowchart with an example. [Level:4] [CO1]
2. Compare and contrast the role of Raptor in visual programming with that of block-based languages like C. [Level:4] [CO1]
3. Distinguish between an algorithm and a program, highlighting their significance in software development. [Level:4] [CO1]
4. Examine the concept of trigraph characters. [Level:4] [CO2]
5. Detect the different classes of data type with an example for each. [Level:4] [CO2]
6. Implement a program using an if-else statement to check whether a given number is even or odd. [Level:3] [CO3]
7. Demonstrate the working of while loop by an example program. [Level:3] [CO3]
8. Provide the concept of recursive function. [Level:3] [CO4]
9. Demonstrate the difference between a function declaration and a function definition with an example. [Level:3] [CO4]
10. Demonstrate how a pointer can be used to access and modify the value of a variable. [Level:3] [CO4]

(Ceiling: 24 Marks)

Part B (Paragraph questions/Problem)

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

11. Provide the term pseudocode, and why is it used as an intermediate step in algorithm development? [Level:4] [CO1]
12. Analyze the process of converting a given temperature from Celsius to Fahrenheit with the help of a flowchart. [Level:4] [CO1]

13. Detect any five input output functions in C. [Level:4] [CO2]
14. Inspect the different sections of a C program and analyze how each contributes to program execution. [Level:4] [CO2]
15. Provide a string, write a program to find its length without using strlen(), explain its working. [Level:3] [CO3]
16. Provide the advantages of structure and union data types? How are they implemented? [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 break down a function definition and explain how each component affects execution with an example. [Level:3] [CO4]

(Ceiling: 36 Marks)

Part C (Essay questions)

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

19. Compare unary, binary, and ternary operators in C, explaining their usage and effect on program efficiency with examples. [Level:4] [CO1]
20. Implement a c program to find Sum of two matrix. Explain how array can be useful for this. [Level:3] [CO2]

(1 × 10 = 10 Marks)
