25900786 **Reg.No : .....**

Name : .....

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MGU-UGP (HONOURS) REGULAR/ IMPROVEMENT/ REAPPEARANCE EXAMINATION NOVEMBER 2025

FIRST SEMESTER

Skill Enhancement Course (SEC) - MG1SECBCA100 - FUNDAMENTALS OF PROGRAMMING USING C

(2024 ADMISSION ONWARDS)

Duration: 2 Hours **Maximum Marks: 70**

Remember(K), Understand(U), Apply(A), Analyse(An), Evaluate(E), Create(C), Skill(S), Interest(I) and Appreciation(Ap)

Students should attempt at least one question from each course outcome to enhance their overall outcome attainability.

Part A

Very Short Answer Questions

Answer **All** Questions

Each Question carries **2** marks

1. Describe the purpose of interpreter. [U] / [CO1]
2. Define tokens and list various tokens. [U] / [CO2]
3. Define the goto statement and list two reasons why it is generally avoided in programming. [U] / [CO3]
4. Implement a function to concatenate two strings. [A] / [CO4]
5. Compare the use of * and & in C pointers. [U] / [CO4]
6. Explain syntax error in programming with an example. [U] / [CO1]
7. Explain how high level language simplifies the process of writing program. [U] / [CO1]
8. What is the difference between & and && in C? [U] / [CO2]
9. Define qualifier? [K] / [CO2]
10. Why scanf is considered as a formatted input function? [U] / [CO3]

[10x2 = 20]

Part B

Short Answer Questions

Answer any **5** out of **7** Questions

Each Question carries **6** marks

11. How do we check whether a given number is a perfect number or not. [A perfect number is a positive integer that is equal to the sum of its proper divisors, excluding itself. Example: The number 6 is a perfect number because its proper divisors are 1, 2, and 3 and 1+2+3=6] [An] / [CO3]

12. Construct a C program that initializes an array to store the marks of five subjects for a student. Write a program that calculates and displays the student's grade based on their average score with the following criteria: 'A' grade for an average of 85 and above, 'B' for 70-84, 'C' for 50-69, 'D' for 35-49, and 'F' for below 35. Also add error handling to manage cases where input marks are invalid (such as negative numbers or values exceeding 100) [A] / [CO4]

13. Explain how to calculate the sum of diagonal elements in a two-dimensional array. Write an example program for a 3x3 matrix to compute this. [A] / [CO4]

14. List and describe the different types of decision-making statements available in C. Provide the syntax for each type. [U] / [CO3]

15. List the precedence and associativity of the following operators: +, *, =, &&, ||, ==. Give examples. [K] / [CO2]

16. Identify a decision-making statement in programming. Describe how it is used to control program flow. [U] / [CO1]

17. Explain the features of structures and demonstrate how to declare and initialize a structure with an example. [U] / [CO4]

[5x6 = 30]

Part C

Essay Questions

Answer any **2** out of **3** Questions

Each Question carries **10** marks

18. Implement a program in C to find the product of digits of an integer number. You have to read the number from the user. [A] / [CO3]

19. Explain types of modifiers and their importance in C programming. [U] / [CO2]

20. How can you pass arrays to functions in C? Explain with an example. [U] / [CO4]

[2x10 = 20]