

QP CODE: 24900063



Reg No:.....

Name:.....

MAHATMA GANDHI UNIVERSITY, KOTTAYAM
FIRST SEMESTER MGU-UGP (HONOURS) REGULAR
EXAMINATION NOVEMBER 2024

First Semester

**Skill Enhancement Course - 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), Interest (I),
Appreciation (Ap), and Skill (S)**

*Students should attempt atleast one question from each course outcome to enhance their overall
outcome attainability.*

[Learning Domain][CO No(s)]

Part A

Very Short Answer Questions
Answer all questions.
Each question carries 2 marks

- | | | |
|---|--|----------|
| 1 | State the purpose of a hierarchy chart in problem solving. | [K] [1] |
| 2 | List any three common attributes of an algorithm. | [K] [1] |
| 3 | Write the ASCII codes correspond to letters 'A' and 'a' in C. | [U] [2] |
| 4 | Compare the effect of using scanf() with "%d" versus "%f" to read an integer and a float. | [An] [3] |
| 5 | Identify the type modifier used to reduce the storage size of an integer. | [K] [2] |
| 6 | Express the syntax of 'for' loop in C with an example. | [K] [3] |
| 7 | Write a C program to swap two variables using pointers. | [A] [4] |
| 8 | "Given the following code, analyze the output and explain how printf() handles formatted output: | [An] [3] |

float num = 45.6789; printf("%.2f", num);"

- 9 Given an array arr, containing even numbers from 2 to 20 .Write the code to print the last element in the array. [A] [4]

- 10 Define recursive function in C? [U] [4]

(10 × 2 = 20)

Part B

Short Answer Questions
Answer any 5 out of 7 questions.
Each question carries 6 marks

- 11 Explain how a hierarchy chart helps in organizing complex tasks. [U] [1]

- 12 Explain how a C program can determine if a given number is even or odd using the bitwise AND operator. Describe why this method is more efficient than using the modulus operator(%). [U] [2]

- 13 Describe the C character set that is essential for writing C programmes. [K] [2]

- 14 Write a C program to find the average of non negative from a list of numbers using continue statement and do not use array [A] [3]

- 15 You have defined a union as union data { int i;float f ;} what will happen if you store a value in i and then try to read from f? [A] [4]

- 16 Analyse the statement: "The switch statement is less flexible but more efficient than if-else." Provide reasons to support your answer. [An] [3]

- 17 Calculate the factorial of a number using function. [A] [4]

(5 × 6 = 30)

Part C

Essay Questions
Answer any 2 out of 3 questions.
Each question carries 10 marks

- 18 Analyze the differences between using a simple if statement, a nested if-else, and an if-else-if ladder in C. In what scenarios is each one useful? Support your answer with examples. [An] [3]

- 19 Classify the various categories of functions in C based on the number of arguments and return values. [U] [4]

- 20 Explain the concept of "call by value" with an example. How does passing a value differ from passing a reference to a function? [U] [4]

(2 × 10 = 20)

END OF THE QUESTION PAPER
