

QP CODE: 24900068



Reg No:.....

Name:.....

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

First Semester

**Discipline Specific Core Course -MG1DSCECC101, MG1DSCCSC100 - ART OF
COMPUTING AND PROBLEM SOLVING**

(2024 ADMISSION ONWARDS)

Duration: 1.5 Hours

Maximum Marks: 50

**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 1 mark

- | | | |
|---|---------------------------------------------------------------------------------------------------------|---------|
| 1 | How many bytes are there in a megabyte (MB)? | [U] [1] |
| 2 | Identify the characteristics of a computer that allow it to process large volumes of data quickly. | [U] [1] |
| 3 | Name the error that you encounter if you try to access an array element out of its bounds. | [K] [1] |
| 4 | Name the type of software that is designed to manage and control the hardware components of a computer. | [K] [1] |
| 5 | Which symbol indicates that the line is a preprocessor directive? | [K] [2] |
| 6 | Identify the use of '&&' operator. | [U] [2] |
| 7 | Illustrate how the syntax of a for loop is structured? | [U] [3] |

- | | | |
|----|-----------------------------------------------------------------|---------|
| 8 | Describe the outcome of the following expression: $5 + 2 * 3$. | [U] [2] |
| 9 | How do you declare a string in C? | [K] [3] |
| 10 | How do you skip to the next iteration of a loop? | [U] [3] |

(10 × 1 = 10)

Part B

Short Answer Questions

Answer any 4 questions.

Each question carries 5 marks

- | | | |
|----|---------------------------------------------------------------------------------------------------------------|---------|
| 11 | List the steps of the problem-solving life cycle and briefly explain each step. | [K] [1] |
| 12 | Write an algorithm to find the sum of first n natural numbers. | [U] [1] |
| 13 | Demonstrate the use of at least five keywords in C with an application program. | [U] [2] |
| 14 | Differentiate goto statement and structured control flow statements in C. | [U] [3] |
| 15 | Discuss the commonly used string handling functions in C, highlighting their purpose and usage with examples. | [U] [3] |
| 16 | When would you use the break statement in loops? Explain with an example. | [U] [3] |

(4 × 5 = 20)

Part C

Essay Questions

Answer any 2 questions.

Each question carries 10 marks

- | | | |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 17 | Explain the differences between syntax errors, logical errors, and runtime errors. Provide examples for each type of error and how they can be resolved. | [U] [1] |
| 18 | Discuss the use of variables and constants in programming. Explain different types of constants with examples. | [K] [2] |
| 19 | Explain the different forms of 'if' statements with syntax and examples. | [U] [3] |

(2 × 10 = 20)

END OF THE QUESTION PAPER
