

GUJARAT TECHNOLOGICAL UNIVERSITY

BCA/MCA INTEGRATED – SEMESTER I- EXAMINATION –WINTER-2024

Subject Code: BC01001021

Date: 01/01/2025

Subject Name: Fundamental of Programming

Time:10:30 AM TO 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1** (a) I. Explain the scanf() and printf() function. **07**
II. Give the difference between WHILE and DO...WHILE loop.
III. Explain any two string functions.
IV. Define syntax Error.
V. What is Algorithm?
VI. Write different ways of writing comments on program.
VII. What is the use of EOF?
- (b) List and describe the basic data types available in C. **07**
- Q.2** (a) What is a compiler, and how does it differ from an interpreter? **07**
(b) Define flowchart. Explain the importance of flowchart. Also describe various symbols of flowchart. **07**

OR

- (b) Explain the structure of a C program, including its essential components. **07**
- Q.3** (a) Explain the concept of type conversion and typecasting in C with example. **07**
(b) Design a function in C that calculates the factorial of a number using recursion. **07**

OR

- Q.3** (a) Create a simple program using conditional execution (if-else statements) to determine if a number is odd or even. **07**
(b) Explain Entry and Exit Loops with Example. **07**
- Q.4** (a) Explain four different category of Function based on argument and return type. **07**
(b) Explain Union with proper example. What is the difference between Union & Structure. **07**

OR

- Q.4** (a) What is a string? List out all built-in string functions and Write a C Program for comparing two strings **07**
(b) Explain 2-D array with examples. **07**
- Q.5** (a) What is a Pointer? Explain array of pointer with suitable example. **07**
(b) Describe how to define and use a structure in C. **07**

OR

- Q.5** (a) Explain the process of declaring, opening, and closing a file in C with example **07**
(b) What are the differences between working with text files and binary files in C? **07**
