

[Total No. of Questions: 02]

[Total No. of Printed Pages:01]

LNCT UNIVERSITY, BHOPAL

Enrolment No. _____

CS - 104

**B.TECH (CS/AI ML) I SEMESTER
EXAMINATION [DEC-2024]**

PROGRAMMING AND PROBLEM SOLVING WITH C++

Maximum Marks:70

Time Allowed :3Hours

Note:-Attempt all questions. Internal choices are given.

(SECTION -A)

1. Short Answer Type Questions(Attempt Any Five) [5x6=30]

- Differentiate between system software and application software with examples.
- What are registers in a computer system, and why are they important?
- What do you mean by common header file? Explain with examples of header file.
- What are C tokens? List the different types of tokens in C.
- Explain "if-else" statement in C with example.
- What is the purpose of a structure in C? How does it differ from a union?
- Define a Python dictionary and give an example of its usage.

(SECTION -B)

2. Long Answer Type Questions (Attempt Any Four) [4x10=40]

- Describe the organization of a computer, including the roles of CPU, registers, buses, memory, and storage systems.
- Define algorithms and explain different methods for representing them, such as pseudo-code and flowcharts, with examples.
- What is the basic structure of a C program? Explain with an example.
- Describe the different types of operators in C and explain their precedence and associativity with examples.
- What are arrays? Explain the concepts of one-dimensional, two-dimensional, and multidimensional arrays with examples.
- Explain the basic data types in Python. How are variables declared and initialized in Python?

