

[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 : 3 Hours

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

(SECTION -A)

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

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

(SECTION -B)

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

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

