

LNCT UNIVERSITY, BHOPAL

Enrollment No. LNCT/BTC21036

CS-404

B.TECH (CS) IV SEMESTER(NEW BATCH) EXAMINATION[JUNE-2025] COMPILER DESIGN

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. Define compiler and differentiate between compiler and interpreter.
- ii. Define dead code elimination with an example.
- iii. Write a short note on predictive parsing.
- iv. Explain the role of LEX in lexical analysis.
- v. What are left recursion and right recursion in grammar?
- vi. Define token, pattern, and lexeme.
- vii. What is syntax directed translation?

(SECTION-B)

2. Long Answer Type Questions (Attempt Any Four)

[4x10=40]

- i. Generate intermediate code for the expression: $a = b + c * d$ using quadruples and triples.
 - ii. Explain DAG construction for basic blocks with an example.
 - iii. Design a code generator that converts three address code to assembly.
 - iv. Explain register allocation and assignment using flow graphs.
 - v. Discuss code generation for Boolean expressions using back patching.
 - vi. Write intermediate code for switch-case statement and explain its translation.
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