

## **(CT-22005) Compiler Construction Laboratory**

### **Teaching Scheme:**

Laboratory: 2 Hrs/ Week

### **Examination Scheme:**

Continuous evaluation: 50 Marks

End Sem Exam: 50 Marks

### **Course Outcomes:**

Students will be able to:

1. Implement lexical analyzers using Lex tool
2. Write a parser and semantic analyzer for different Context-Free Grammars using Yacc tool.
3. Implement different representations of Intermediate code
4. Demonstrate ability to optimize intermediate code using different techniques

### **Suggested List of Assignments:**

1. Design a lexical analyzer for a subset of C language using Lex tool.
2. Design a hand-coded lexical analyzer for a subset of C language, draw the transition diagrams and then implement the lexical analyzer in C language.
3. Design a scientific calculator using Lex & Yacc or PLY or ANTLR tools.
4. Write a code for finding FIRST & FOLLOW of a grammar.
5. Design a SQL parser / html parser.
6. Implement a SLR parser for a given grammar.
7. Implement a static semantics analyzer.
8. Implement an intermediate code generator in three-address code form represented in quadruples.
9. Implement different optimization techniques on intermediate code.