

| UNIT- I | INTRODUCTION AND LEXICAL ANALYSIS | Hrs |
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| | Introduction: Language Processors - Phases of a Compiler - The Science of Building Compiler Applications of Compiler Technology - Cousins of a compiler - Compiler Construction Tools, Lexical Analysis: The Role of the Lexical Analyzer - Specification of Tokens - Recognition of Tokens - Finite Automata | 12 |
| UNIT- II | SYNTAX ANALYSIS | Hrs |
| | Syntax Analysis: Role of the Parser - Writing a Grammar - Top Down Parsing - Recursive Descent Parsing - Predictive Parsing - Bottom Up Parsing - Shift Reduces Parsing - LR Parsers - SLR Parser - CLR Parser | 12 |
| UNIT- III | INTERMEDIATE CODE GENERATION | Hrs |
| | Syntax-Directed Translation: Syntax-Directed Definitions - Applications of Syntax-Directed Translation - Syntax-Directed Translation Schemes - Intermediate Code Generation - Types of Three Address Code - Type Checking - Control Flow Statements - Switch Statements - Procedures - Backpatching | 12 |
| UNIT- IV | CODE GENERATION | Hrs |
| | Code Generation: Issues in the Design of a Code Generator - Basic Blocks and Flow Graphs - Optimization of Basic Blocks - Peephole Optimization - Register Allocation and Assignment Optimal Code Generation for Expressions - Dynamic Programming Code - Generation | 12 |
| UNIT- V | CODE OPTIMIZATION | Hrs |
| | Introduction to Optimization: Background - Scope of Optimization - Local and Global Optimization - Inter-procedural Optimization. Dataflow Analysis: Iterative Data Flow Analysis - Static Single Assignment Form - Inter-procedural Analysis | 12 |
| Total: 60 Periods | | |