CS8602 - Compiler Design
Unitwise Important Question.

UNIT - 1

Phases of Compiler (or) structure of compiler

Role of Lexical Analyzer

Specification and Recognition of Tokens.

Lex Explanation & Example program.

Finite Automata - Eample problems

Regular Expressions to Automata (conversion problem)

Minimizing DFA - problem.

UNIT-2

1) Role of Parser
2) Context Free grammars - problems
3) Error Handling in Parser.
4) Recursive Descent Parser - problem
5) Predictive Parser - Problem.
6) Shift Reduce Parser - Problem.
7) SLR parser - problem.
8) LALR parser - problem.
9) YACC Explanation - Example program.
10) Ambiguous grammar.

UNIT-3

1) Syntax Directed Definitions.
2) Evaluation Orders for syntax Directed Definitions (or) Bottom-up Evaluation of S-attribute def.
3) Intermediate Languages.
4) Three Address codes
   a) Quadruple
   b) Triple
   c) Indirect Triple.
5) Types and Declarations of Expressions.
6) Type checking - Explanation & Example.

UNIT-4

1) Storage Organization strategies.
2) Access to Non-local Data on the stack.
3) Heap Management.
4) Issues in design of code generation
5) Design of a simple code generator algorithm.

UNIT-5

1) Principal sources of optimization.
2) Peep-hole optimization.
3) DAG (Directed Acyclic Graph) - problems.
4) Basic blocks and Flow graphs.
5) Optimization of basic blocks.
6) Global data flow Analysis.
7) Efficient Data Flow Algorithm