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Overview of phases of a compiler, Languages and grammar.
Lexical analysis : Finite automata, Lexical analyzer, Lexical analyzer generator.
Parsing : Top-down and Bottom-up parsers, shift-reduce parser, recursive descent
(operator precedence) parser, LL(1); LR(0), SLR, LALR parsers, Syntax-directed translation, Parser
generator.
Semantic Analysis : Declaration processing, Type checking. Symbol tables.
Intermediate Code Generation : Run-time environments, translation of language constructs.
Code Generation: Flow-graphs; Register allocation, Code-generation algorithms.
Error handling and recovery.
Code optimization: An introduction to the techniques.

Books/References:
1. Aho, A.V., Sethi, and Ullman J.D: compiler design.
2. Dhandhere, System programming and operating systems, Tata McGraw Hill.