

# CS323 2025F Quiz #1

There are ten questions in this quiz.

1. Please put down your student ID. \*

2. What is the primary output of a compiler's lexical analyzer? \*

- Parse Tree
- Abstract Syntax Tree
- Sequence of Tokens
- Optimized Intermediate Code

3. Which of the following is a key responsibility of the symbol table management? \*

- Generating target machine code
- Allocating memory for variables at runtime
- Storing and retrieving information about identifiers
- Removing white space and comments

4. A finite automaton is most directly used in which phase of compilation? \*

- Syntax Analysis
- Semantic Analysis
- Code Optimization
- Lexical Analysis

5.Which concept is used to define the structure of programming language constructs like expressions and statements? \*

- Regular Expressions
- Finite Automata
- Context-Free Grammars
- Directed Acyclic Graphs

6.The string "123.45e-6" would most likely be recognized by a lexical analyzer as what? \*

- An Integer
- A Floating-Point Number
- An Identifier
- A Keyword

7.In a context-free grammar, a production that results in the same non-terminal on the left-hand side as the first symbol on the right-hand side (e.g., A -> Aa) is said to be: \*

- Right-recursive
- Ambiguous
- Left-recursive
- Unreachable

8.Which parsing technique builds the parse tree from the leaves (tokens) to the root (start symbol)? \*

- Top-down Parsing
- Backtracking Parsing
- Bottom-up Parsing
- Recursive Descent Parsing

9.A grammar that produces two or more distinct parse trees for the same input string is called: \*

- Recursive
- Left-factored
- Ambiguous
- Non-deterministic

10.Which of the following is a common tool used to automatically generate lexical analyzers from a specification of tokens? \*

- YACC
- Bison
- Lex
- LLVM

11.In a predictive LL(1) parser, the parse table is constructed using which function to determine which production to apply? \*

- FOLLOW
- FIRST and FOLLOW
- GOTO
- ACTION