

Examination 1

CSC315 Programming Language Concepts

09 October 2015

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Chapter 1

Eric Andow

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Chapter 14

Cameron Seebach

1. Most programming languages require the use of brackets to enclose the index in a reference to an element of an array.
 - (a) Identify a language that requires the use of parentheses to enclose the index in a reference to an element of an array.
 - (b) Why did the designers of the language choose parentheses rather than brackets?
-

- (a) Write your answer here.
 - (b) Write your answer here.

2. What is the relationship between a lexeme and a token?
-

Write your answer here.

3.
 - (a) What kind of symbols are found at the internal nodes of a parse tree?
 - (b) What kind of symbols are found at the leaves of a parse tree?
-

- (a) Write your answer here.
 - (b) Write your answer here.

4. One of the most significant contributions from the developers of ALGOL 60 also limited the success of that language. What was that contribution?

Write your answer here.

5. What problem were the creators of Common LISP trying to solve?

Write your answer here.

6. What is an ambiguous context free grammar?

Write your answer here.

7. Contrast the complexity of algorithms that can parse strings that conform to the most general kinds of context free grammars and the complexity of the algorithms that can parse strings that conform to the grammars of programming languages?

Write your answer here.

8. Java represents characters with Unicode. It is the first widely used programming language with this feature. What is the significance of this feature?

Write your answer here.

9. How does the binary coded decimal type differ from the floating point type?

Write your answer here.

10. Identify a user-defined ordinal type in the Java programming language.

Write your answer here.

11. Mathematicians and programmers might have different ideas about the precedence of Boolean operators. Explain.

Write your answer here.

12. Programmers should use `===` rather than `==` to test the equality of the values of two expressions in JavaScript. Why?

Write your answer here.

13. Describe a hazard of allowing short-circuited evaluation of expressions and side effects in expressions at the same time.

Write your answer here.

14. Briefly describe the three steps in the mark-sweep algorithm for garbage collection.

Write your answer here.

15. What led Yukihiro Matsumoto to create the Ruby programming language?

Write your answer here.

16. What did Microsoft aim to achieve with its development of the C# language?

Write your answer here.

Chapter 15

Joe Sterchele

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Htut Khine Win

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