Programming Languages

Comprehensive Exam Syllabus

Revised: September 1, 2017

1 Topics

1. Lexical analysis and syntax specifications. BNF.
2. Parsing: top-down and bottom-up.
3. Knowledge of the Scheme programming language.
4. Recursively specified programs.
5. Scoping and binding of variables. Lexical address.
7. Parameter passing variations.
8. Stack-based runtime environment augmented with dynamic heap memory allocation.
11. Transformation to continuation passing style.
12. Type inference.

2 References

1. Essentials of Programming Languages, 3rd Ed, Daniel P. Friedman and Mitchell Wand, MIT Press, 2008. (For topics 3-12 above)