

Midterm Review Sheet CS560

Exam: February 10, 2005

Closed book and notes.

The exam will cover Chapters 1-7 in the textbook. Questions will be similar in nature to the homework assignments. There will also be short essay questions and definitions.

Chapter 1: Intro

Why are there so many PL? What makes a PL good?

Questions from lecture notes.

Compilation phases

Chapter 2: Computability

What is the relationship between computability and PL?

Chapter 3: Lisp

What features are important in Lisp? How did Lisp influence later languages?

Memory structures of Lisp, lists and atoms.

Chapter 4: Fundamentals

Syntax and Semantics

Regular expressions, grammars, syntax trees, ambiguous grammars

Lambda Calculus

Function abstraction, application, beta equivalence, alpha equivalence

Chapter 5: Algol and ML

Functional vs. Imperative is there a better language?

ML: general ideas of language, understanding of types, patterns, references

Chapter 6: Types

Type Inference

Type Safety

Type Checking

Chapter 7: Scope

Blocks, scope vs lifetime, parameter passing, global vars, activation records

History of PL is always good for extra credit questions.