

Compiler Construction Past Paper

General Concepts

- [y2018p4q3](#)
 - lexical analysis and parsing
 - ambiguous grammar
 - closure in functional programming
 - Static Links
 - Opt

Lexical and Syntax analysis

Grammar ambiguity, Operator associativity / precedence.

- [y2004p4q1 \(a-e\)](#)

Lexical analysis based on regex and FSA, Parsing based on CFG and PDA.

Recursive Descent

- [y2004p4q1 \(a-e\)](#)

LL(k)

LR(k), SLR(k)

- [y2015p3q3](#)
- [y2020p4q4](#)
- [y2021p4q4](#)
- [y2002p4q2](#)
 - LEX / YACCtools

Compiler Correctness

- [y2005p5q6](#)

CPS

- [y2017p23q4](#)

Run-time Memory

- [y2000p3q3](#)
 - allocation and recovery of heap records, union type
 - arrays with non-manifest bounds, labels and GOTO commands

Stack

- [y2014p3q4](#)
- [y2018p4q4](#)

JARGON VM

- [y2019p4q3](#)

Garbage Collection

- Reference Counting
- Tracing Collection
 - Mark and Sweep
 - Copy Collection
 - Generational Collection

Example

- [y2006p5q6 \(b\)](#)
 - Tracing Collection def

Linking

- [y2001p6q6](#)

Exception

- [y2019p4q4](#)
 - front-end, type safety
 - Optimise
 - stack-oriented code

Bootstrapping