

ECE 379: Introduction to Computer Engineering

Midterm Exam 2: Apr. 12, 2006, 7:15pm-8:15pm, EH2265

Exam guidelines:

- Closed book, closed notes
- No calculators, computers, or other electronic devices
- Paper and pencil only
- One page (8.5" x 11") cheat sheet (can be double-sided)

Exam topics:

- Chapter 4
 - Von Neumann execution model
 - Basic components
 - Instruction processing
- Chapter 5
 - LC-3 ISA
 - Memory, registers, data types
 - Opcodes, operands
 - Addressing modes
 - Control instructions
 - Data path of the LC-3
- Chapter 6
 - Programming as problem solving
 - Systematic decomposition
 - Sequential, conditional, iterative constructs
 - Debugging
- Chapter 7
 - Assembly language
 - Instructions, pseudo-ops, labels, comments
 - Two-pass assembler
- Chapter 9, section 2
 - Subroutines
 - Call/return, JSR, JSRR
- Other topics: engineering ethics (brief essay question)

Problems for review:

- Chapter 4: 4.1-4.12, 4.14
- Chapter 5: 5.1-5.25, 5.27-5.41,
- Chapter 6: 6.1-6.15, 6.17
- Chapter 7: 7.1-7.20, 7.24, 7.25
- Chapter 9.2: 9.12, 9.13, 9.17, 9.18