Final Review
General

Bring student ID card
  • Show ID when you turn in your exam

Seating
  • Randomized seating chart
  • Check when you enter the room

Exam
  • 120 minutes, 100 points
  • Multiple versions of exam
  • NO notes, calculators, or other aides
  • Put your smartwatch in your pocket!
Review Topics

Digital Logic Structures
• Transistors
• Karnaugh Maps
• Combinational Logic
• Sequential Logic
• Finite State Machines

Midterm 1 & 2 Reviews
Midterm 2 Review
General

Bring student ID card
• Show ID when you turn in your exam

Seating
• Randomized seating chart
• Front rows
• Check when you enter the room

Exam
• 75 minutes, 75 points
• Multiple versions of exam
• NO notes, calculators, or other aides
• Put your smartwatch in your pocket!
Review Topics

LC-3 Instruction
• Translate instructions to hex
• Translate hex to instructions

LC-3 Interpreter
• Interpret some assembly code
• Show register and memory values
Review Topics

LC-3 Stack
• Activation Records
• Write assembly code

LC-3 Function
• Solve a small problem
• Write assembly code
Review Topics

LC-3 Microarchitecture

- Instruction Cycles
- Register Transfer Notation
- Active control signals
Midterm 1 Review
General

Bring student ID card
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Seating
  • Randomized seating chart
  • Front rows
  • Check when you enter the room

Exam
  • 75 minutes, 75 points
  • Multiple versions of exam
  • NO notes, calculators, or other aides
  • Put your smartwatch in your pocket!
Review Topics

Integer representation
- conversions to/from decimal/binary/hex
- twos complement arithmetic
- bitwise logical operations

Floating point representation
- conversions to/from decimal
- sign, exponent/bias, fraction
- normalized and not-normalized

Character representation
- literals, encoding, conversion
Review Topics

Functions
  • pass by value, pass by reference
  • recursion, call tree

Selected features
  • structures
  • pointers
  • malloc / free

Type casting
  • arithmetic
  • pointers
Review Topics

Memory Layout
  • segment names
  • descriptions
  • location/order

Stack Frame
  • general layout
  • order of locals and parameters
  • stack pointer, frame pointer
  • space allocation