

CISC 1100: Structures of Computer Science

Review Topics Midterm Exam

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General info

- ▶ Date: Tuesday 14 June 2016
- ▶ 110 points' worth of questions on Chapters 1–3
- ▶ Graded on a 100-point basis
- ▶ Questions based on exercises on text (either assigned or unassigned)
- ▶ One double-sided $8\frac{1}{2} \times 11$ -inch sheet of notes

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Chapter 1: Sets

- ▶ Operations (\in , \subset , \subseteq , \cap , \cup , $-$, \times , \mathcal{P} , $'$, $|\cdot|$)
- ▶ Venn diagrams
- ▶ Principle of inclusion/exclusion

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Chapter 2: Sequences

- ▶ Sequences
 - ▶ What is the next term in a sequence?
 - ▶ Determine recursive formula for a sequence
 - ▶ Determine closed formula for a sequence
- ▶ Summation notation

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Chapter 3: Logic

- ▶ English into propositions (and vice versa)
- ▶ Operations $'$, \wedge , \vee , \oplus , \Leftrightarrow , \Rightarrow
- ▶ Propositional equivalence
- ▶ Truth tables
 - ▶ Definition of operations
 - ▶ Proving and disproving propositional equivalences and implications
- ▶ Parse trees
- ▶ Duality
- ▶ No material on predicates