

Midterm Exam 1: Study Guide

CSE 30151 Spring 2016

2016/02/11

You will have the whole class period of 75 minutes. The exam will be open book and open (paper) notes. No computers, smartphones, or any other Turing-equivalent machines are allowed.

The exam covers everything up to and including HW3. There will be six questions, worth 10 points each, for a total of 60 points (10% of your grade).

- Design:
 - Write a finite automaton that recognizes a given language (like HW2 Q1, HW4 Q2a, HW4 Q3a).
 - Write a regular expression that matches a given language.
- Construction: Two out of the following three types of questions.
 - Convert a NFA to a DFA (like HW2 Q3).
 - Convert a regular expression to a NFA (like HW3 Q1).
 - Convert a NFA to a regular expression (like HW3 Q3).
- Proofs:
 - Show that regular languages are closed under some operation (like HW2 Q2c, HW4 Q1b).
 - Something else!