Exam Strategies and Policies

This handout contains information about our exam policies and procedures, as well as what we tend to look at during grading. We hope this helps you understand our expectations for you when you take the exam and your expectations from us when we administer and grade it.

Clarification on the Limited-Computer Policy

The CS103 exams are open-book and open-note, with limited computer access. Specifically, you can use a computer to do the following:

- **Visit the CS103 course website (http://cs103.stanford.edu) and use any resources on the site.** This means that you may have a network connection open, but you *must not* visit any websites other than the CS103 website. You also must not look at any archived versions of websites for previous versions of CS103. If you want to use any of the tools that will be available on the website (such as the DFA/NFA editor), you're welcome to do so. You are welcome to look over any of the handouts on the website, including problem set solutions.
- **Read notes for which you are the original author.** If you have taken notes on your computer, you are allowed to use your computer to reference them during the exam. You must be the original author of any notes you read. This means that you *must not* use notes that another student has prepared, or use notes containing content copied or paraphrased from other sources. This is to ensure that someone doesn't copy down proofs of all sorts of results, then copy them to the exam if they happen to be on the test. (The restriction on authorship applies to physical notes as well.)
- **Read electronic copies of the recommended readings for the course.** You're welcome to read the course notes online. If you have an electronic copy of the Sipser books, you may use a computer to read your electronic copy. I'm not actually sure if you can legally own an electronic copy, though I'm not going to protest if you have one. ☺

All other uses of a computer are prohibited. This means that you must not use Google to search for answers, email your friends with hints or answers, use Wikipedia as a resource, write programs or scripts, etc. We have had problems with people violating the limited-computer policy in the past, and we will treat any violations of the limited-computer policy as a serious violation of the Stanford Honor Code.

Citing Results

You are more than welcome to cite results from lecture, the course notes, the course website, the readings, or the problem sets and state them without proof. Please don't copy the proofs to the exam – you have limited time, and we're more interested in seeing what you do with the results than seeing whether you can copy down the proofs under time pressure.

If you do use a result from elsewhere in the course, please mention where the result you are citing can be found. We're happy to let you use results we've covered as a starting point, as long as we know what result you're referring to. For example, you could write something like

As mentioned in Lecture 01, the ⊕ operator is associative.

Partial Credit Policy

We are happy to award partial credit for answers on the exams. However, because of the open-book, open-note, limited-computer policy, we typically do not award partial credit for copying terms and definitions from the notes, lectures, or problem sets into the exam. We usually reserve partial credit for good, honest attempts made at the problem that either run into a dead end or contain logical errors. For example, suppose that the exam question was

Prove that the relation $=_Z$ over the set A is an equivalence relation.

(I just made up the relation $=_Z$; don't worry if you haven't seen it before!) The following answer will not get much partial credit, since it consists mostly of definitions copied from the lecture slides:

> $=_Z$ is an equivalence relation iff it is reflexive, symmetric, and transitive. The relation $=_Z$ is reflexive iff for any $a \in A$, we have $a =_Z a$. The relation $=_Z$ is symmetric iff for any a, $b \in A$, if $a =_Z b$, then $b =_Z a$. Finally, the relation $=_Z$ is transitive iff for any a, b, $c \in A$, if $a =_Z b$ and $b =_Z c$, then $a =_Z b$. I don't actually know how to prove any of these, though… sorry!

Although it's nice that an answer like this gives the definitions of the appropriate terms, it probably wouldn't earn much partial credit. On the exams, we want to see your ability to synthesize concepts and solve problems, rather than to measure your recall of existing concepts.

Write One Answer

If you start writing out an answer to a problem and realize that it is incorrect, *please cross it off* so that we don't accidentally grade it. If you put down multiple answers to a question, we will grade whichever answer gives you the fewest number of points. This policy is in place to prevent "shotgunning" down multiple answers with the hope that one of them will work, and we're sorry for the harsh policy.

Grading for Style

On the problem sets, we grade both on style and correctness because we expect that you've had the whole week to work through the problem set, write out draft proofs, and submit your final versions to us. These assumptions aren't valid on the exams. We still expect you to write proofs, but we will not grade as strictly on style. As long as you're writing in complete sentences and have a logical flow, you should be fine.

How to Prepare

Here's some advice we've come up with over the past offerings of CS103 on how to start preparing for the exam. We hope that you find it useful!

- **Take the practice exams under realistic conditions**. The practice exams we're giving out are real exams that we've given out in past quarters (typically, I release exams from the last two quarters in which I've taught the course). We *strongly recommend* taking the practice exams under realistic conditions – three hours, open-book, open-note, somewhat-open-laptop – to get a sense for what it's like to work through these problems under time pressure.
- **Review the problem sets**. The exam questions are often similar to questions given out on the problem sets, and it's a good idea to make sure you understand how to solve all the problems given out in the problem sets. Look over your graded problem sets and make sure you understand any mistakes you made. Review the solution sets to the problem sets, especially if the solution we've written looks different from your own.
- **Ask us questions!** Have a nagging doubt about why something works (or why something *doesn't* work?) Is there a concept you're having trouble building an intuition for? Was there a question on the problem set that completely tripped you up? Please feel free to stop by office hours or to email the staff list with questions. We'd be happy to help out – after all, we want you to have a strong understanding of the material, and if there's anything we can do to help out, please let us know!