

CMSI 284
COMPUTER SYSTEMS ORGANIZATION /
SYSTEMS PROGRAMMING
Spring 2010

Final Exam Review Sheet

The final exam will take place on May 6, at 11:00am. It will be open everything: book, notes, handouts, and computer (which means that we will have the test in the Keck lab, with everyone using either a lab workstation or a personal machine). This guide should help you to prepare for the final properly.

Covered Material

The final exam covers the following areas, including all handouts and sample code that have been distributed in support of this content:

- C programming, to the level required by the “C Major” assignment
- Intel assembly language programming, to the level required by the “Art of ASM” assignment
- Content in Intel developer manuals, the Linux 64-bit ABI specification, and the 64-bit ELF object file specification
- Linux system calls
- Assembly language encoding and decoding

Sample Tasks and Questions

In addition to the possible questions and tasks that were fair game for the midterm, you may also be asked to accomplish one or more of the following:

- Answer a conceptual question about any of the covered material
- Answer a question about a C or Intel assembly language code fragment
- Debug or write a C or Intel assembly language code fragment
- Demonstrate the ability to hand encode or decode a simple Intel assembly language code fragment or byte sequence, respectively
- Correctly interpret and apply information from the covered technical documentation
- Answer a “big picture” computer systems organization/systems programming question — something that tests your overall understanding of “close to the hardware” computing