

CSCI 1312 (Introduction to Programming for Engineering), Fall 2015

Review for Midterm Exam

1 Format of the exam

The exam will be in class October 26. You will have 50 minutes. Like the quizzes, it is “open book/notes”, which means you can consult paper or electronic copies of the textbook and your notes, sample solutions *from this year only*, your own graded work, and anything on the course Web site. You may not use other books, materials from this course from previous years, a calculator or computer (except as needed to consult allowed sources), or (of course) each other’s papers. Questions will mostly be similar in format to the ones in quizzes and minute essays — some short-answer or multiple choice, some “what does this program do/print”, some “write a program to do this task” — but probably somewhat longer and/or more difficult.

2 Lecture topics to review

You are responsible for all material presented during lecture, including the sample programs, but the following is a list of topics I consider most important.

- Basics of how computers/programs work — source code, object code, executables; text editors and compilers.
- Number systems — converting decimal to binary/octal/hexadecimal and vice versa, including fractions.
- Data representation — basic idea of how negative integers and floating point numbers are represented.
- Variables in C (types, declarations).
- Expressions and statements in C.
- Conditional execution in C.
- Recursive functions and loops in C.
- I/O in C (use of `scanf` and `printf`).
- Use of other C library functions (e.g., `sqrt`).

3 Reading to review

You should have read, or at least skimmed, all of the assigned reading from chapters 1 through 6, but the focus will be on material presented or at least mentioned in class.