

EECS 203-1 – Winter 2002
Review for Midterm 1

Exam room: Chrysler Auditorium
Time: 9:30-11am (regular class time) Tuesday, Feb. 5

The midterm will be closed book and notes. It will cover everything through 1.5 in the text; you will have to do a proof, most likely involving either the concept of logical equivalence or implication, or involving set expressions or material on other aspects of set theory covered through 1.5.

You should bring your own blue book to the exam.

I usually ask you (i) to repeat definitions; (ii) to work a couple of specific examples; and (iii) to prove something. Four questions in all.

Definitions and topics:

- Propositional variable and propositional expression;
- Truth tables for the various connectives;
- Be able to translate English into propositional calculus;
- Definitions of tautology, contradictory formula, satisfiable formula;
- Be able to check these definitions using truth tables;
- Logical equivalence and implication in prop. calculus;
- predicate symbols for first order logic; logical expressions; quantifiers used in building these.
- How to interpret first order logic sentences using a world or universe;
- Definitions of: logical equivalence; universally valid sentences; logical implication;
- Translation of English sentences into first order logic;
- Set theory. Definitions of union, intersection, complement.
- Definition of subset relation using “element of” relation.
- Power set and Cartesian product; empty set.
- Be able to prove (easy) inclusions and identities between set expressions.