

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Department of Electrical Engineering and Computer Science

1998 Midterm and Solutions

There are *four* problems on this examination. They are followed by an appendix that contains reference material from the course notes. *The appendix contains no problems*; it is just a handy reference.

You will have eighty-five minutes in which to work the problems. Some problems are easier than others: read all problems before beginning to work, and use your time wisely!

This examination is open-book: you may use whatever reference books or papers you have brought to class. The number of points awarded for each problem is placed in brackets next to the problem number. There are 100 points total on the exam.

Do all written work in your examination booklet – we will not collect the examination handout itself; you will only be graded for what appears in your examination booklet. It will be to your advantage to show your work – we will award partial credit for incorrect solutions that make use of the right techniques.

If you feel rushed, be sure to write a brief statement indicating the key idea you expect to use in your solutions. We understand time pressure, but we can't read your mind.

This examination has text printed on only one side of each page. Rather than flipping back and forth between pages, you may find it helpful to rip pages out of the exam so that you can look at more than one page at the same time.

Appendix:

Page 6 FLK SOS

Page 8 Standard denotational semantics of FLK! from Chapter 11

The figures in the Appendix are very similar to the ones in the course notes. Some bugs have been fixed, and some figures have been simplified to remove parts inessential for this exam. You will not be marked down if you use the corresponding figures in the course notes instead of the appendices.

