Problem Set 2 **CAS705 Fall 2003**

1. Exercises and un-starred problems in Chapter 2.

2. Show that all regular languages can be generated with CFG which only have rules of the form:

$$A \longrightarrow tA|t$$

   where A is a variable, and t is a terminal.

3. All the exercises and problems in Chapter 3 (including the starred problem 3.16), except for 3.17 and 3.19. (In my opinion, problem 3.17 is missing something: you can simply copy the input further down the tape, and hence simulate any computation without overwriting the original input—if you can see what is wrong with this question, let me know.)

4. All the exercises and problems in Chapter 4, including the starred problems.

5. All the exercises and problems in Chapter 5, including the starred problems. (In particular, problem 5.22—Rice's Theorem—is important.)