

CS311 – Computational Structures – HW7

Tuesday, May 17, 2011
due in class Tuesday, May 24, 2011

Answer each question below. Write your answers neatly on paper. Be sure your name is on the paper, and the paper is clearly identified as Homework 7.

1. Problem 2, Section 13.1, page 827. Give all 7 parts of the septuple that defines your Turing machine. Also draw a picture of your machine as a state automata as we did in the class notes. (10 points each)
2. Problem 5, part b. Section 13.1, page 827. Give all 7 parts of the septuple that defines your Turing machine. Also draw a picture of your machine as a state automata as we did in the class notes. (10 points each)
3. Problem 1, Section 13.2, page 841. Parts c,d,e,f. You may use any "macro" defined in the text, or in the class notes, or in a solution to a previous part of this question. I.e. you may use a macro for part c, to define the macro for part d, etc. For each "macro" you define give a short sentence or two describing how it works. (10 points each, 40 total)
4. Problem 2, Section 13.2, page 842. parts a and b. Define Partial recursive functions. (5 points each, 10 total)
5. Problem 3, Section 13.2, page 842. parts a,b,c,d. Describe Partial Recursive functions. (10 points, total)
6. Problem 5, Section 13.2, page 842. Part b. Execute a Markov algorithm. (10 points)
7. Problem 6, Section 13.2, page 842. Part b. Write a Markov algorithm. (10 points)