CSCI 1323 (Discrete Structures), Spring 2004

Homework 8

Assigned: April 23, 2004.

Due: April 30, 2004, at 5pm. *Accepted until May 3 at 5pm without penalty. Not accepted past May 4 at 5pm.*

Credit: 30 points.

1 Problems

Do the following problems. You do not need to turn in answers for the ones marked "Not to turn in". Most such problems will be those for which the textbook provides an answer in the back of the book, so you can check your work.

1. (4 points) Do problem 2 on p. 362 of the textbook.
2. (Not to turn in.) Do problem 7 on p. 362 of the textbook.
3. (3 points) Do problem 8 on p. 362 of the textbook.
4. (3 points) Do problem 32 on p. 365 of the textbook.
5. (3 points) Do problem 47 on p. 367 of the textbook.
6. (Not to turn in.) Do problem 66 on p. 368 of the textbook.
7. (3 points) Do problem 17 on p. 384 of the textbook.
8. (3 points) Do problem 32 on p. 384 of the textbook. (Use the textbook's definition of height — maximum number of "hops" from root to leaf, which would mean that a tree with only a root node would have height 0.)
9. (Not to turn in.) Do problem 38 on p. 385 of the textbook.
10. (4 points) Do problem 39 on p. 385 of the textbook. (Use the textbook's definition of height — maximum number of "hops" from root to leaf, which would mean that a tree with only a root node would have height 0.)
11. (Not to turn in.) Do problem 1 on p. 404 of the textbook. You may find it helpful to draw a tree structure to represent the encoding scheme.
12. (3 points) Do problem 2 on p. 404 of the textbook. You may find it helpful to draw a tree structure to represent the encoding scheme.
13. (Not to turn in.) Do problem 7 on p. 405 of the textbook.
14. (4 points) Do problem 8 on p. 405 of the textbook. Also state how many bits would be needed to encode 100 characters (1) with the Huffman encoding and (2) using the smallest possible fixed-length encoding.