MthSc 985: Topics in Discrete Mathematical Biology (Fall 2011)
Quiz 7 (20 points)

NAME:

Instructions: Answer each of the following questions completely. If something is unclear, or if you have any questions, then please ask. Good luck!

1. (5 points) Let $d$ be the arc diagram picture below. Draw its $L$-graph, $L(d)$.

![Arc diagram]

2. (5 points) Define a multi-loop of a $k$-noncrossing RNA structure. Use the terminology of arcs $(i, j)$ and sequences $[k, \ell]$ of isolated vertices, and substructures.
3. (10 points) Draw the arc diagram of a balanced pseudoknot, and an unbalanced pseudoknot. Clearly mark which edges and vertices are part of the pseudoknot. For example, you can draw the vertices as circles, and fill in the vertices of the pseudoknot.