CSCI 5832 Spring 2007 Quiz 2

Name: _____

On my honor, as a University of Colorado at Boulder student, I have neither given nor received unauthorized assistance on this work. _____.

1. **(5 points)** What is your favorite month?
2. **(5 points) True or False:** Context-free grammars permit any number of terminals **and** non-terminals on the right-hand side.
3. **(10 points)** Consider the following grammar rules that capture phrases such as *flight, morning flight,* and *morning breakfast flight.*

   Nominal → Nominal Noun
   Nominal → Noun

   How would these phrases be captured in a treebank-style grammar (a grammar derived from a typical Treebank; you can give me some alternate rules as illustration)?

4. **(10 points) True or False:** The following phrase is ambiguous given the attached grammar: *a flight from Boston to Dublin.*

5. **(15 points)** *Starting* with the attached grammar, apply the CKY algorithm to the phrase *an evening flight.* (Give the table; just show the entries, not the backpointers. Use the back of the page).

6. **(5 Points)** Chunk the following phrase assuming base-phrase chunks for NPs and PPs: *a flight from Boston to Miami.*

7. **(5 Points)** Given a treebank how would you go about assigning a probability to the rule *VP → VBD NP PP*?

NP → Det Nom
NP → Proper-Noun

Nominal → Noun
Nominal → Nominal PP
Nominal → Nominal Noun

PP → P NP

Det → *a, an*
Noun → *flight, evening, morning, breakfast*
Proper-Noun → *Miami, Boston, Dublin*
P → *from, to*