

CSCI 5832 Spring 2007 Quiz 3

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 now?
2. **(5 points) True or False:** Translating natural language text into a logical form such as First Order Logic is *by itself* sufficient to permit valid semantic processing (eg. Determining truth, supporting valid inference, etc.).

3. **(5 Points)** Give a standard semantic attachment for the ditransitive grammar rule: $VP \rightarrow V NP NP$ (eg. as in the verb phrase *sent Mary a letter*) in the context of compositional syntax-driven approach to semantic analysis. I don't want a grammar, and I don't want the verb semantics --- just the attachment for the single rule given above.

4. **(5 Points)** Describe a major difficulty with detecting and normalizing mentions of proteins and genes in biological articles.

5. **(5 Points) True or False:** Wordnet contains relations that constitute a class inheritance hierarchy (ISA hierarchy) over the words.

6. **(15 Points)** Wordnet contains **part-of** relations among the words in the database (eg. Part-of(wheel, car)). Assume you wanted to increase the English Wordnet coverage. Describe a method for automatically doing that, given access to a large amount of representative English text. (Use the back).

7. **(10 Points)** Consider the setting where we're translating from language F to English using the standard statistical approach. Describe concisely the translation probabilities that are associated with individual words (ie. What does the lexical translation probability table consist of?)