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?)