**CS 5316–Natural Language Processing**

**Assignment 1**

Deadline: Jan. 31 (Wednesday) at 11:55 PM

**Question 1**

Provide a definition and some examples of the following branches of linguistics:

1. Phonetics
2. Phonology
3. Morphology
4. Syntax
5. Semantics
6. Pragmatics

**Question 2**

Answer the following

1. Define grammar. Can natural language (English) grammar be explicitly coded?
2. What are the common parts-of-speech in English?
3. Distinguish between a phrase and clause.
4. What is transliteration? Distinguish between forward and backward transliteration.

**Question 3**

1. Read about IBM Watson and its win in Jeopardy. Summarize your findings in a paragraph
2. Study IBM Watson as a service / product of IBM. List down its key features, and provide an overview of its key techniques.

**Question 4**

Study NLTK and spaCy, toolkits on NLP. Describe how textual data can read and tokenized using these toolkits.