**Tutorial 6**

**Natural Language Processing**

1. “Parts of speech” are the basic types of words that English has. Most grammar books say that there are eight parts of speech: nouns, verbs, adjectives, adverbs, pronouns, conjunctions, prepositions and interjections.

Decide which parts of speech are the underlined words.

* 1. You have to believe in yourself if you ever expect to be successful at something. \_\_\_
  2. We left for the mountain just before six in the morning. \_\_\_
  3. We first went to the store to buy a few things. \_\_\_
  4. We had a breakfast at a café near the rail station. \_\_\_
  5. My friend wasn't strong enough to lift his heavy rucksack. \_\_\_
  6. I helped him carry it. \_\_\_
  7. The weather was very cold. \_\_\_
  8. My friend said, "Oh! What a cold weather!" \_\_\_
  9. We didn't spend the night there. \_\_\_
  10. We got back home late at night but we didn't go to sleep immediately. We were very hungry. \_\_\_

[ 20 marks]

1. Discuss the differences of NLP tasks such as *morphology*, *syntax* and *semantic*. You can use one or more sentences from the question 1 above as a reference.

[ 30 marks]

1. Consider the following context-free grammar:

S -> NP VP N -> dog V -> seesNP -> Det N N -> cat V -> hatesVP -> V N -> mouse V -> sneezesVP -> V NP Det -> the

Which of the following sentences are recognised by this grammar, and why? (Tip: Draw tree structure phrase for grammar understanding)

1. the dog sneezes the cat
2. the mouse hates
3. the cat the mouse hates
4. the mouse hates the mouse

[ 30 marks]

1. Name TWO applications of NLP which you are using in your daily life. Do you know how it works?

[ 20 marks]