

1. Discuss with suitable examples about the Relations Between Senses

2. Write the FOL Representation for the following sentences.

I only have five dollars and I don't have a lot of time.

$Have(Speaker, FiveDollars) \wedge \neg Have(Speaker, LotOfTime)$

AyCaramba is a Mexican restaurant near ICSI

**$Restaurant(AyCaramba) \wedge Serves(AyCaramba, MexicanFood)$**

**$\wedge Near((LocationOf(AyCaramba), LocationOf(ICSI)))$**

3. Discuss about modus ponens and explain how it is used in forward and backward chaining?

4. Illustrate Description Logics with suitable examples

5. Write a short notes on Named Entities and Named Entity Tagging

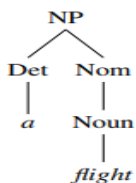
6. Illustrate Hidden markov model with neat sketch

### 1 Mark Questions

#### **Define Treebank?**

A corpus in which every sentence is annotated with a parse tree is called a treebank.

#### **Write the parse tree for “ a flight”**



#### **Define Strong equivalence**

If two grammars generate the same set of strings *and* if they assign the same phrase structure to each sentence

## **Define Weak equivalence**

Two grammars generate the same set of strings but do not assign the same phrase structure to each sentence.

## **Define CNF**

## **Define Named Entity.**

**Write FOL representation for All vegetarian restaurants serve vegetarian food.**

$$\forall x \text{VegetarianRestaurant}(x) \Rightarrow \text{Serves}(x, \text{VegetarianFood})$$

## **Define Verifiability**

Verifiability is a system's ability to compare the state of affairs described by a representation to the state of affairs in some world as modeled in a knowledge base

## **Define Model**

A model is a formal construct that stands for the particular state of affairs in the world.

## **Define Inference**

The ability to add valid new propositions to a knowledge base

## **Define Description Logics**

It refers to a family of logical approaches that correspond to varying subsets of FOL

## **Define WordSense?**

A sense (or word sense) is a discrete representation of one aspect of the meaning of a word.

## **Define zeugma**

if two senses are distinct is to conjoin two uses of a word in a single sentence; this kind of conjunction of antagonistic readings