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*) ∧ ¬*Have*(*Speaker, LotOfTime)*

AyCaramba is a Mexican restaurant near ICSI

**Restaurant(AyCaramba)∧Serves(AyCaramba,MexicanFood) ∧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

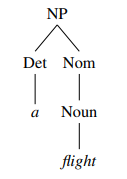
6.Illustrate Hidden markov model with neat sketch

**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”**

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**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.**

∀*x VegetarianRestaurant*(*x*) ⇒ *Serves*(*x, 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