

**Time: 3Hours**

**Marks: 80**

N.B. Attempt any Four  
Assume suitable data wherever necessary

Q.1

- A. Explain lexicon, lexeme and the different types of relations that hold between lexemes 10
- B. What is a language model? Write a note on the N-Gram language model. 10

Q2

- A. What do you mean by word sense disambiguation (WSD)? Discuss knowledge-based WSD. 10
- B. Why is POS tagging hard? Discuss possible challenges while performing POS tagging. 10

Q3

- A. Explain Natural Language Understanding and Natural Language Generation 10
- B. Explain regular expression in Natural language processing 10

Q4

- A. What is the role of FSA in morphological analysis? Explain FST in detail 10
- B. Explain the generic NLP system and the ambiguities of NLP 10

Q5

- A. What is the need for preprocessing text data in natural language? Explain the steps of preprocessing with an example. 10
- B. Explain information retrieval versus Information extraction systems 10

Q6

- A. Define discourse & pragmatic analysis. Discuss reference resolution problem in detail. 10
- B. Explain derivational and inflectional morphology in detail with suitable example 10