

Time: 3 hours

Total Marks: 80

- N.B. 1. Question No. 1 is compulsory
2. Attempt any three questions from remaining five questions
3. Assume suitable data if necessary and justify the assumptions
4. Figures to the right indicate full marks

- Q1 Answer the Following. 20
- A Explain open and closed word classes in English Language. Show how the tags are assigned to the words of following sentence: 05
"He used to provide help to other people"
- B Discuss Information Retrieval vs Information Extraction in detail 05
- C Define Discourse & Pragmatic analysis. 05
- D What do you mean by word sense disambiguation (WSD)? 05
- Q2 A What is language model? Write a note on N-gram model. 10
- B Explain Porter's Stemming algorithm with example. 10
- Q3 A Explain with suitable example following relationships between word meanings: Homonymy, Polysemy, Synonymy, Antonymy, Hypernymy, Hyponymy, Meronymy. 10
- B What is Natural language processing (NLP)? Discuss various stages involved in NLP process with suitable example. 10
- Q4 A Discuss reference resolution problem in detail. 10
- B What do you mean by ambiguity in natural Language? Explain its types and ways to resolve it with suitable example 10
- Q5 A Explain Lesk's algorithm in detail. 10
- B Discuss the following potential problems in CFG such as 1) Agreement 2) Sub categorization 3) Movement 10
- Q6 Write Short Notes.(5 marks each) 20
- a. Text Summarization
- b. Named Entity Resolution
- c. Machine Translation
- d. Question Answering System
