

(Time: 3 Hours)

[Total Marks: 80]

- N.B.:** 1) Question No.1 is **compulsory**.
2) Attempt any **three** from the remaining **five** questions.

1. Write Short Notes on any four :- (20)
 - (a) Ambiguity
 - (b) Text Classification
 - (c) Finite State Transducer
 - (d) Stemming
 - (e) Applications of NLP
 2. (a) What is Semantic Analysis? Explain various approaches to Semantic Analysis. (10)
(b) Explain types of POS tagging with example. (10)
 3. (a) What is N-Gram? Explain N-Gram language model. (10)
(b) Define the term sentiment analysis. Explain Aspect based sentiment analysis in details. (10)
 4. (a) What is Natural Language Processing (NLP)? Discuss various stages involved in NLP process with suitable example. (10)
(b) Explain the following relations among lexemes and their senses: Homonymy, Polysemy, Synonymy, Hyponymy, Hypernymy, Meronymy, Antonymy (10)
 5. (a) What is Morphology? Explain Derivational and Inflectional Morphology in detail with suitable example. (10)
(b) Explain Hidden Markov Model (HMM) in detail. (10)
 6. (a) Define Text Summarization and explain its types. (10)
(b) Explain the term top down or bottom up parsing with the help of example. Compare Top down parsing with Bottom up parsing (10)
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