

**Computer Science & Engineering AI & ML**  
**BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)**  
**B. Tech. Sem - VII CS&E-A&M : WINTER : 2024**  
**SUBJECT: ITC-V: NATURAL LANGUAGE PROCESSING**

Day : Wednesday  
Date : 11/12/2024

**W-23985-2024**

Time : 02:30 PM-05:30 PM  
Max. Marks : 60

**N.B.**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data **WHEREVER** necessary.
- 4) Draw neat diagrams **WHEREVER** necessary.

**Q. 1** Explain the importance and application of Natural language processing. (10)

**OR**

**Q. 1** What are the techniques used for POS tagging in NLP. (10)

**Q. 2** Explain Bottom-up parsing and tokenization with example. (10)

**OR**

**Q. 2** What do you mean by text similarity used in NLP? Explain any one techniques used. (10)

**Q. 3** Explain the Viterbi algorithm with an example and its significance. (10)

**OR**

**Q. 3** Demonstrate Hidden Markov Model with its application in processing natural languages. (10)

**Q. 4** Explain shift reduce parser with suitable example. (10)

**OR**

**Q. 4** Explain the context free grammar used in NLP with suitable example. (10)

**Q. 5** Write detailed note on text summarization approaches used in NLP. (10)

**OR**

**Q. 5** Explain in detail character level word level and sentence level embedding. (10)

**Q. 6** What is Corpus? Explain its significance in developing NLP applications. (10)

**OR**

**Q. 6** Discuss how gate is useful in managing linguistic data. (10)

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