

Code No: **R20A6609****MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, April 2024**Natural Language Processing****(CSE-AIML)**

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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 A Outline the various steps followed in the NLP. [8M]
 B Differentiate various morphemes, with examples. [6M]
 OR
- 2 A Explain text summarization and multiple document text summarization with neat diagram [10M]
 B List out the stop words. Which words in a corpus have the highest values and which ones have the least? [4M]

SECTION-II

- 3 A For the CFGs given: [10M]
 $S \rightarrow NP VP$
 $VP \rightarrow V NP$
 $NP \rightarrow Det N$
 Draw the shift-reduce parser in processing the sentence
 The woman saw a puppy
 Use the following lexical entries to create the chart parser.
 The | a: Det
 woman | puppy : N
 saw : V
- B What are the three principles that predict when garden paths will arise in Syntactic interpretations of sentences? [4M]

OR

- 4 A Identify the various parsing algorithms. Explain any one of the algorithm with suitable example. [7M]
 B What is tree bank and explain in detail. [7M]

SECTION-III

- 5 A Explain the concept of N Grams in detail. [5M]
 B Describe the concept of maximum likelihood estimate [9M]
 OR
- 6 How do you evaluate the parameters using Bayesian Parameter Estimation and Large-Scale Language Models [14M]

SECTION-IV

- 7 A Write about semantic interpretation [7M]
 B Discuss the Language-Specific Modeling Problems. [7M]

OR

8 Analyze the naive Bayes classifier approach to Word Sense Disambiguation in NLP. [14M]

SECTION-V

9 A Explain the difference of discourse structure from other reference mechanisms [7M]

B Describe in detail about predicate logic with examples. [7M]

OR

10 A Elucidate in detail about predicate argument structure in NLP. [7M]

B Illustrate the meaning representation system. [7M]
