R20 Regulation *Subject code: 3P6HB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech VI Semester Regular Examinations, June/July 2023

NATURAL LANGUAGE PROCESSING

(CSE(DS))

Maximum Marks: 70 Date:24.06.2023 Duration: 3 hours

Note:
1. **This question paper contains two parts A and B.**
2. **Part A is compulsory which carries 20 marks. Answer all questions in Part A.**
3. **Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.**
4. **Each question carries 10 marks and may have a, b, c, d as sub questions.**

Part-A

All the following questions carry equal marks (10x2M=20 Marks)

1 Why do we need to do Morphological Analysis?
2 Write the various challenges in processing natural language.
3 What is parsing.
4 Define Minimum spanning tree.
5 List the semantic rules.
6 Define named entity recognition.
7 Define argument structure.
8 Name the other resource of prop Bank.
9 What is Baye's rule?
10 What is cross lingual language modeling?

Part-B

Answer All the following questions. (5X10M=50Marks)

11 A. Discuss about challenging issues of Morphological model. (5)
B. Differentiate between surface and deep structure in NLP with suitable examples. (5)

OR

12 A. Explain the two types of morphemes in detail. (5)
B. Explain how the morphological typology divides languages into groups. (5)

13 A. Explain the parsing of NLP. (5)
B. Explain the TreeBank method with example. (5)

OR

14 A. Explain Syntax analysis using phrase structure trees. (5)
B. Explain hyper graphs and chart parsing with an example. (5)

15 A. Explain in detail about semantic interpretation. (5)
B. Briefly explain the structural ambiguity. (5)

OR

16 A. Explain the methods of word sense systems. (5)
B. What is Unsupervised system for word sense disambiguation? (5)

17 A. Explain in detail about predicate logic with examples. (5)
B. Explain in detail about argument structure in NLP. (5)

OR

18 A. Describe the supervised system in predicate structure. (5)
B. Illustrate the Frame Net of predicate argument structure. (5)

19 A. Explain in detail about N-Gram Models. (5)
B. Explain in detail about language specific models. (5)

OR

20 A. Describe multilingual language modeling. (5)
B. Explain neural network language models. (5)