



R20 Regulation

Subject code: 3P6HB

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Regular/Supplementary Examinations, July 2024

## NATURAL LANGUAGE PROCESSING

(CSE(DS))

Maximum Marks: 70

Date:22.07.2024 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)	CO	Bloom Tx
1	List the challenges in NLP.		CO1	L2
2	Why do we need to do morphological analysis.		CO1	L2
3	Define Unification-Based Morphology		CO2	L1
4	What is parsing.		CO2	L1
5	List the semantic rules.		CO3	L1
6	Define semantic interpretation in the context of semantic parsing.		CO3	L1
7	Explain argument structure.		CO4	L1
8	What is meaning representation in the context of natural language processing?		CO4	L1
9	Define N-gram models.		CO5	L1
10	Define language model adaptation.		CO5	L1

### Part-B

Answer All the following questions.		(5X10M=50Marks)		
11	a) Discuss about challenging issues of Morphological models. [5] b) Differentiate between Topic boundary detection and sentence boundary detection. [5]		CO1	L3&L4
OR				
12	a) Discuss the Complexity of the approaches in NLP. [5] b) Explain the Performance of various methods in NLP. [5]		CO1	L4
13	a) Explain about data driven approach to syntax. [5] b) Give an overview of parsing algorithms. [5]		CO2	L4
OR				
14	Elaborate the tokenization and top down, bottom-up approaches with an example. [10]		CO2	L5
15	Explain in detail about semantic interpretation with an example. [10]		CO3	L2
OR				
16	Describe the methods for word sense disambiguation and the software support for it. [10]		CO3	L4

17	a) Explain Predicate Argument Structure. [5] b) How many kinds of predicates are used to handle a basic statement? Give example. [5]	CO4	L2 L3
	OR		
18	Explain Semantic role labelling using SRL algorithm. [10]	CO4	L4
19	Explain class-based language model and max ent language model. [10]	CO5	L4
	OR		
20	a) How Parameter Estimation supports Language Modelling? [5] b) Differentiate Multilingual and Cross lingual Language Models. [5]	CO5	L4