



R20 Regulation

Subject code:3P6HB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, May 2025

**NATURAL LANGUAGE PROCESSING
(CSD)**

Maximum Marks: 70

Date: 18.06.2025

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.
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)		Marks	CO	BTL
1	What is the role of Morphology?	2M	1	L1
2	Briefly write about Topic Boundary Detection.	2M	1	L1
3	Differentiate Syntactic and Semantic Parsing.	2M	2	L1
4	What is Treebank?	2M	2	L1
5	What is semantic parsing?	2M	3	L1
6	Describe word Net.	2M	3	L1
7	What is deep semantic parsing?	2M	4	L1
8	List the tasks of semantic role labeling.	2M	4	L1
9	What is Language Model?	2M	5	L1
10	Define N-Gram Model?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	What is Morphology? Explain two types of Morphological models.	10M	1	L2
	OR			
12	a) Differentiate Lexeme, Morphemes tokens. b) List out Ambiguity in Issues and Challenges.	5M 5M	1	L2
13	Explain Minimum Spanning Tree Algorithm and Dependency Parsing.	10M	2	L2
	OR			
14	Given the following CFG grammar Perform syntactic analysis of the following sentence using any of the parsing method. "Book the flight through Houston".	10M	2	L2

	<p>S → NP VP S → Aux NP VP S → VP NP → Pronoun NP → Proper-Noun NP → Det Nominal Nominal → Noun Nominal → Nominal Noun</p>	<p>Det → that this a the Noun → book man flight Verb → book include prefer man Pronoun → I she me Proper-Noun → Houston TWA Aux → does Preposition → from to through</p>			
	<p>Nominal → Nominal PP VP → Verb VP → Verb NP VP → Verb NP PP VP → Verb PP VP → VP PP PP → Preposition NP</p>				
15	What are the different approaches for practical simple mention of semantic Interpretation?		10M	3	L2
	OR				
16	Explain Word Sense Disambiguation (WSD).		10M	3	L2
17	Explain Predicate Argument Structure.		10M	4	L2
	OR				
18	What is Frame net? Explain its components.		10M	4	L2
19	Explain Multilingual and Cross lingual Language Modeling.		10M	5	L2
	OR				
20	Discuss Tree Based Language Model.		10M	5	L2