



R20 Regulation

Subject code: 3P6HB

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VI Semester Supplementary Examinations, February 2024

NATURAL LANGUAGE PROCESSING (CSE(DS))

Maximum Marks: 70

Date: 17.02.2024 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	What do you mean by ambiguity in Natural language?	CO1	L1
2	What is the role of FSA in Morphological analysis?	CO1	L1
3	What are the two approaches to construct treebank?	CO2	L1
4	List the parsing algorithms.	CO2	L4
5	Define semantic parsing	CO3	L1
6	What is Coreference resolution?	CO3	L1
7	Give example for predicate logic.	CO4	L2
8	Define frame elements.	CO4	L1
9	What is the formula for probability of n-Gram model?	CO5	L1
10	Draw the diagram of neural network language model.	CO5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)			
11	Explain the performance of approaches in structure of documents? (10M)	CO1	L2
	OR		
12	A. Explain the complexity approaches. (5M) B. Explain the Performances analysis. (5M)	CO1	L5
13	A. Discuss multilingual issues in detail. (5M) B. Explain various types of parsers in NLP? (5M)	CO2	L6 L2
	OR		
14	A. Explain the models of ambiguity resolution. (5M) B. Find out the probability for the grammar (5M) S ->NP VP [0.80] NP->Det N [0.3] VP->V NP [0.20] V->includes [0.05] Det->the [0.4] Det->a [0.4]	CO2	L2 L1

	N->meal [0.013] N->flight [0.02] for the input string "The flight includes a meal"		
15	A. Explain System paradigms. (5M) B. What is entity and event resolution. (5M)	CO3	L1
	OR		
16	A. Explain the software's associated with semantic interpretation. (5M) B. Explain Lesk algorithm. (5M)	CO3	L1
17	A. Explain in detail about meaning representation system. (5M) B. List and explain the meaning representation. (5M)	CO4	L1
	OR		
18	A. Explain Phrase Structure Grammar. (5M) B. What are the syntactic representations? (5M)	CO4	L1
19	A. Discuss about language model adaptation. (5M) B. Illustrate spoken versus written languages. (5M)	CO5	L6 L2
	OR		
20	A. What are the different types of language models? (5M) B. Describe cross lingual language modeling. (5M)	CO5	L1 L2