



R20 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

Subject code: 3P5GC

B.Tech V Semester Regular Examinations, January 2023

NATURAL LANGUAGE PROCESSING

(CSE (AI & ML))

Maximum Marks: 70

Date: 11.01.2022 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 Define Lexemes?
- 2 Define typology and morphology.
- 3 What is Token?
- 4 List out different types of parsing Algorithms?
- 5 What is mean by System paradigms?
- 6 Define Entity and Event resolution?
- 7 Define Predicate-Argument?
- 8 What is mean by Meaning Representation?
- 9 Define n-Gram Model?
- 10 Explain about language Model evaluation?

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 a) What are the issues and challenges that are need to be taken care to find words in NLP?
b) Explain different types of boundary detection techniques? [5+5]
- OR
- 12 a) Explain Different types of designing and implementing morphological models in NLP?
b) Discriminate between Local and Sequence Classifications methods. [5+5]
- 13 a) Representation of Syntax structure using Dependency Parsing?
b) How the Phrase structure used to Represent Syntax Structure? [5+5]
- OR
- 14 a) How the Hyper graphs and minimum spanning parsing works in parsing algorithms?
b) Demonstrate the working procedure of Shift-Reduce Parsing with an example? [5+5]
- 15 How Word Sense work and what are the basic requirements it need? [10]
- OR
- 16 Explain in detail about Semantic Interpretation working procedure? [10]
- 17 Explain different types of Meaning Representation Techniques? [10]

OR

- 18 Explain about Predicate-Argument Structure? [10]
- 19 a) Explain in detail about Parameter Estimation? [4]
b) Explain the working process of Following Language Models [2+2+2]
i) Variable-Length Language ii) Factored iii) Neural Network Language Models
OR
- 20 a) Explain the working process of Following Language Models [2+2+2]
i) Discriminative ii) MaxEnt iii) Bayesian Topic-Based Language Models
b) Explain about any three types of Language-Specific Modeling problems in details? [4]