



R20 Regulation

Subject code:3P5GC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, June/July 2023

NATURAL LANGUAGE PROCESSING

(CSE(AI & ML))

Maximum Marks: 70

Date:28.06.2023 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

(10 X 2 Marks=20 Marks)

- 1 How words are represented in NLP?
- 2 Mention the main issues of NLP.
- 3 What is syntax and semantic analysis in NLP?
- 4 Define Tree bank.
- 5 How do you analyze semantics?
- 6 Which software is used for NLP?
- 7 Give the predicate argument structure.
- 8 List out the primary representational system in NLP.
- 9 Why language modeling is crucial in modern NLP applications?
- 10 What are the different types of language models?

Part-B

Answer All the following questions.

(5 X 10 Marks=50 Marks)

- 11 List and explain the challenges of Natural Language processing. (10 Marks)
OR
- 12 Explain Morphology and its models. (10 Marks)
- 13 Define parsing algorithm and explain its types. (10 Marks)
OR
- 14 Explain top-down parsing and bottom up parsing with an example. (10 Marks)
- 15 a) What is semantic parsing? (2 Marks)
b) Describe the semantic interpretation of system paradigms. (8 Marks)
OR
- 16 Explain word sense with suitable examples. (10 Marks)
- 17 a) Define predicate parser. (2 Marks)
b) Briefly explain argument structure with an example. (8 Marks)
OR
- 18 Explain the working principles of representational systems within Natural Language processing. (10 Marks)

- 19 How Language models are useful for a variety of problems in computational linguistics? Explain. (10 Marks)

OR

- 20 a) Write short notes on parameter estimation in Natural Language processing. (5 Marks)
b) Briefly explain types of Language Models in Natural Language processing. (5 Marks)