



R20 Regulation

Subject code: 3P5GC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, November 2025

NATURAL LANGUAGE PROCESSING

(CSE(AI&ML))

Maximum Marks: 70

Date: 22.11.2025

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	Write about Morpheme, and Token.	2M	1	L1
2	List out Ambiguity in issues and challenges.	2M	1	L1
3	What is parsing? Describe Parsing in NLP	2M	2	L1
4	What is Tree Banks?	2M	2	L1
5	What is Case Grammar?	2M	3	L1
6	What is Meaning Representation?	2M	3	L1
7	Write about System Paradigms.	2M	4	L1
8	What is Predicate-Argument Structure?	2M	4	L1
9	Write short notes on N-Gram model.	2M	5	L1
10	Write About Language 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	Write about Generative Model. Apply the naïve Bayes algorithm to Likelihood table by finding the probabilities of given features.	10M	1	L2																																																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sl. No.</th> <th>Play</th> <th>Outlook</th> <th>Sl. No.</th> <th>Play</th> <th>Outlook</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Rainy</td> <td>Yes</td> <td>7</td> <td>Overcast</td> <td>Yes</td> </tr> <tr> <td>1</td> <td>Sunny</td> <td>Yes</td> <td>8</td> <td>Rainy</td> <td>No</td> </tr> <tr> <td>2</td> <td>Overcast</td> <td>Yes</td> <td>9</td> <td>Sunny</td> <td>No</td> </tr> <tr> <td>3</td> <td>Overcast</td> <td>Yes</td> <td>10</td> <td>Sunny</td> <td>Yes</td> </tr> <tr> <td>4</td> <td>Sunny</td> <td>No</td> <td>11</td> <td>Rainy</td> <td>No</td> </tr> <tr> <td>5</td> <td>Rainy</td> <td>Yes</td> <td>12</td> <td>Overcast</td> <td>Yes</td> </tr> <tr> <td>6</td> <td>Sunny</td> <td>Yes</td> <td>13</td> <td>Overcast</td> <td>Yes</td> </tr> </tbody> </table>	Sl. No.	Play	Outlook	Sl. No.	Play	Outlook	0	Rainy	Yes	7	Overcast	Yes	1	Sunny	Yes	8	Rainy	No	2	Overcast	Yes	9	Sunny	No	3	Overcast	Yes	10	Sunny	Yes	4	Sunny	No	11	Rainy	No	5	Rainy	Yes	12	Overcast	Yes	6	Sunny	Yes	13	Overcast	Yes			
Sl. No.	Play	Outlook	Sl. No.	Play	Outlook																																															
0	Rainy	Yes	7	Overcast	Yes																																															
1	Sunny	Yes	8	Rainy	No																																															
2	Overcast	Yes	9	Sunny	No																																															
3	Overcast	Yes	10	Sunny	Yes																																															
4	Sunny	No	11	Rainy	No																																															
5	Rainy	Yes	12	Overcast	Yes																																															
6	Sunny	Yes	13	Overcast	Yes																																															

13	a) Explain Dependency Parsing with given sentence. S: "John gave marry an apple" b) Explain about Hyper graphs and Chat Parsing	5M 5M	2	L2
	OR			
14	Explain Data Driven Approach and NLP Architecture.	10M	2	L2
15	Explain in briefly Word Sense Disambiguation (WSD).	10M	3	L2
	OR			
16	a) State homonymy and polysemy with example. b) Explain about Systems and Software.	5M 5M	3	L2
17	Describe Architecture of Dependency Tree.	10M	4	L2
	OR			
18	a) Explain Prop Bank with Example parsing Tree. b) Write about System Paradigms.	5M 5M	4	L2
19	Write about Language Modelling and explain its types.	10M	5	L2
	OR			
20	a) Write about Maximum-Likelihood Estimation and Smoothing. b) What is Chunking explain its types?	5M 5M	5	L2