PVP 19

Code: 19CS4801A

IV B.Tech - II Semester – Regular Examinations – MAY 2023

NATURAL LANGUAGE PROCESSING
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours Max. Marks: 70

Note: 1. This question paper contains two Parts A and B.
2. Part-A contains 5 short answer questions. Each Question carries 2 Marks.
3. Part-B contains 5 essay questions with an internal choice from each unit. Each question carries 12 marks.
4. All parts of Question paper must be answered in one place.

BL – Blooms Level CO – Course Outcome

PART – A

		BL	CO
1. a)	Define Natural Language Processing.	L2	CO1
1. b)	Differentiate between closed class and open class part of speech.	L2	CO1
1. c)	Define Context free grammar.	L2	CO1
1. d)	Draw a dependency parse tree.	L2	CO1
1. e)	What is Relation extraction?	L2	CO1

PART – B

			BL	CO	Max. Marks
UNIT-I					
2	a)	Explain the concept of minimum edit distance with example.	L2	CO2	6 M
	b)	Explain in detail about perplexity Text normalization.	L2	CO2	6 M

OR					
3	a)	Explain about Evaluating languages models.	L2	CO1	6 M
	b)	Define smoothing. Summarize the concepts of Add k-smoothing.	L2	CO1	6 M
UNIT-II					
4	a)	What is POS tagging? Demonstrate POS tagging with an example.	L2	CO2	6 M
	b)	Demonstrate Viterbi algorithm with an example.	L3	CO2	6 M
OR					
5	a)	Summarize the concept of Markov chains.	L2	CO2	6 M
	b)	Illustrate the features for CRF Named entity recognizers.	L3	CO2	6 M
UNIT-III					
6	a)	Describe sentence level constructions and grammar rules for English language.	L2	CO4	6 M
	b)	What is ambiguity in parsing? Explain with an example.	L2	CO4	6 M
OR					
7	a)	Explain in detail about the Verb phrase CKY passing.	L2	CO4	6 M
	b)	Explain in detail about super tagging.	L2	CO4	6 M

UNIT-IV					
8	a)	Illustrate with a neat diagram explain the configuration of a Transition based dependency parser.	L3	CO3	6 M
	b)	Explain basic elements of first order logic.	L2	CO3	6 M
OR					
9	a)	Apply Reichenbach's approach for primary English tenses.	L3	CO3	6 M
	b)	Apply Chu-Liu-Edmonds algorithm to parse the sentence "Book that flight".	L3	CO3	6 M
UNIT-V					
10	a)	List 17 relations used in ACE relation extraction task.	L2	CO3	6 M
	b)	Explain Plutchik wheel of emotion with examples.	L2	CO3	6 M
OR					
11	a)	Explain supervised relation learning of word classifiers.	L2	CO3	6 M
	b)	Summarize semi-supervised lexicon induction algorithms.	L2	CO3	6 M