

Reg.No.:

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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 13010

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – MAY / JUNE 2024

Sixth Semester

Information Technology

U19CTV35 – NATURAL LANGUAGE PROCESSING

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	What is inflectional morphology in NLP?	2	K1	CO1
2.	Explain derivational morphology with examples.	2	K2	CO1
3.	Explain any 2 methods of part-of-speech tagging?	2	K2	CO2
4.	What is the function of parts of speech tagging?	2	K1	CO2
5.	What is context-free grammar and give an example?	2	K1	CO3
6.	List the advantages of context-free grammar.	2	K1	CO3
7.	Why is semantic analysis used in NLP?	2	K1	CO4
8.	List the two types of semantics.	2	K1	CO4
9.	Differentiate natural language generation and natural language processing?	2	K2	CO5
10.	What is the application of discourse analysis in NLP?	2	K1	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Give algorithmic steps in Porter Stemmer algorithm, explain.	13	K1	CO1

(OR)

	b)	Define Morphological Parsing. Explain the steps of morphological parser.	13	K2	CO1
12.	a)	List the problems associated with the n-gram model. Explain how these problems are handled.	13	K2	CO2
		(OR)			
	b)	Illustrate parts of speech tagging and explain different categories of POS tagging.	13	K2	CO2
13.	a)	Explain Probabilistic Context free grammar with listing its disadvantage.	13	K1	CO3
		(OR)			
	b)	Explain top down parsing and bottom up parsing with an example.	13	K2	CO3
14.	a)	What is word sense disambiguation and its importance in NLP? Explain in detail.	13	K1	CO4
		(OR)			
	b)	Explain syntax-driven semantic analysis with example.	13	K2	CO4
15.	a)	Explain conversational agent and give examples?	13	K2	CO5
		(OR)			
	b)	Explain architecture of any large language model generation in NLP.	13	K2	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16.	a) Find the context free rules and hence the Context free grammar (CFG) for the following English sentences: I want a morning flight. I want a flight from Ontario to Chicago. Show me the cheapest fare that has lunch. Do any of these flights have stops? Which flights serve breakfast?	15	K5	CO3
	(OR)			
	b) Explain in detail recent large language model (LLM) trends in NLP.	15	K5	CO5
