PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date 10-10-2025   **Time:** 09.30am to 11.00am

School: SOIS	**Program:** Bachelor of Science (AI & ML)	
Course Code: CSA3014	**Course Name:** Natural Language Processing	
Semester: V	**Max Marks**: 50	**Weightage**: 25%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	24	26			

Instructions:

(i) *Read all questions carefully and answer accordingly.*

(ii) *Do not write anything on the question paper other than roll number.*

Part A

Answer ALL the Questions. Each question carries 2marks.   **5Q x 2M=10M**

1	List any two applications of n-grams.	2 Marks	L1	CO2
2	What is meant by POS tagging?	2 Marks	L1	CO1
3	Outline the purpose of *text normalization* in NLP?	2 Marks	L2	CO1
4	Discuss feature extraction in NLP with example.	2 Marks	L2	CO2
5	Define polarity in sentiment analysis.	2 Marks	L1	CO2

Part B

Answer the Questions.   **Total Marks 40M**

6.	a.	Explain different *levels of NLP analysis* with suitable examples.	10 Marks	L2	CO1
		Or			
7.	a.	Write a Python program using **NLTK** to perform *tokenization* and *POS tagging* for the sentence:	10 Marks	L3	CO1

		"The quick brown fox jumps over the lazy dog."			

8.	a.	Discuss the importance of *Word Sense Disambiguation* in NLP. Explain the *Lesk Algorithm.*	10 Marks	L2	CO 1
		Or			
9.	a.	Using **NLTK WordNet**, write Python code to find all possible meanings (synsets) of the word "bank" and display definitions.	10 Marks	L3	CO 1

10.	a.	Explain the *Bag of Words* and *TF–IDF* feature extraction methods with an example.	10 Marks	L2	CO 2
		Or			
11.	a.	Write Python code to implement a simple **Bag of Words model** for the text: ["I love NLP", "NLP is powerful", "I love learning NLP"] and display the word frequency matrix.	10 Marks	L3	CO 2

12.	a.	Explain the role of *sentiment analysis* in NLP with examples. Discuss polarity and subjectivity.	10 Marks	L2	CO 2
		Or			
13.	a.	Write Python code using **TextBlob** to analyze sentiment (polarity & subjectivity) of the following text: "The movie was fantastic but the ending was disappointing."	10 Marks	L3	CO 2