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PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations - March 2026

Date: 11-03- 2026

Time: 11.45am to 01.15pm

School: SOCSE	Program: IST and CSI	
Course Code : IST2001	Course Name: Fundamentals of Natural Language Processing	
Semester: VI	Max Marks: 50	Weightage: 25%

CO - Levels	C01	C02	C03	C04	C05
Marks	26	24			

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	Define tokenization	2 Marks	L1	C01
2	Define Lexical Analysis	2 Marks	L1	C01
3	List the types of Text Representations.	2 Marks	L1	C01
4	List the types of Supervised Learning.	2 Marks	L1	C02
5	Define Regression and Give examples.	2 Marks	L1	C02

Part B

Answer the Questions.

Total Marks 40M

6.	a.	Solve the given problem using EDIT Distance for the 2 strings Execution and Intention with substitution cost of insert, delete and Replace is 1.	10 Marks	L3	C01
	b.	Explain the various stages of NLP.	10 Marks	L2	C01
Or					
7.	a.	Construct the Histogram Intersection String Kernel (HISK) between the two strings using trigrams (k = 3): String X = "apple" String Y = "pineapple" Show the raw HISK and the normalized HISK	10 Marks	L3	C01
	b.	Define Text classification. Explain the text classification methods.	10 Marks	L2	C01

8.	a.	<p>Consider a text classification problem where mails must be classified as Spam or Not Spam. The training dataset contains the following:</p> <ul style="list-style-type: none"> • Spam <ol style="list-style-type: none"> 1. Send us your Password 2. Review Us • Not Spam <ol style="list-style-type: none"> 1. Password Review 2. Send us the Review <p>Using Naïve Bayes classifier , classify the new review: "Review us Now"</p>	10 Marks	L3	C02
	b.	Explain Feed forward Neural network and its applications.	10 Marks	L2	C02
Or					
9.	a.	Explain the architecture and working principle of a Feed Forward Neural Network (FFNN). How does information flow from the input layer to the output layer?	10 Marks	L2	C02
	b.	Explain the working principle of Logistic Regression for binary text classification. How does it differ from Linear Regression?	10 Marks	L2	C02