SET	A

Roll No.	A-63

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WALCHAND INSTITUTE OF TECHNOLOGY, SOLAPUR

Information Technology, Even Semester, 2024-25

In Semester Examination Test –I

Course: 21CSU6HA1T : NATURAL LANGUAGE PROCESSING

Class: T.Y. B. Tech **Semester: VI** **Maximum Marks: 30**

Date: 10/2/2025 **Time : 60 min**

Instructions:

1. All the questions are compulsory.
2. Please write down the Serial Number of the question before attempting it.
3. Consider the proper data wherever needed.

Que No.	Sub Que.		Marks	CO Mapping
Q.No.1.		**Choose the correct option**	6	CO1
	(i)	------- is the process of identifying and extracting opinions and emotions expressed in text data, a. Text Classification b. Sentiment Analysis c. Speech Recognition d. Text Summarization		
	(ii)	Chatbots and virtual assistants use NLP to understand natural language and provide human-like responses to -------. a. social media posts, and customer review b. queries and requests c. automatically identify and classify named entities d. recognize and transcribe spoken language		
	(iii)	Algorithms are often used in NLP applications to ------- a. Predict solutions readily available b. automatically learn patterns and relationships in language data. c. Fix language constructs d. Decide language sequences		
	(iv)	Speech processing is a complex and highly coordinated process that involves multiple areas of the ----- working together a. Heart b. Brain c. Soul d. Mind		

	(v)	Sounds produced by the lower lip and upper teeth a. Bilabial b. Labiodental c. Alveolar d. Palatal		
	(vi)	Word boundary detection is the process of identifying the ------ -between words in a stream of spoken or written language. a. mean b. boundary c. median d. variance		
Q.No.2.		**Answer the questions**	**10**	**CO**
	a	Illustrate the various techniques used for understanding Text in NLP systems. OR		
	b	What roles do Affixes play in Morphology? Give examples.		
	c	List various applications of NLP. Illustrate any one.		
Q.No.3.		**Attempt any two**	**14**	**CO**
	a	List the stages in a speech recognition process and demonstrate each stage.		
	b	Elaborate with illustrations the challenges faced in developing an NLP system.		
	c	Compare and contrast between Programming Languages and Natural languages.		

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WALCHAND INSTITUTE OF TECHNOLOGY, SOLAPUR
Information Technology, Even Semester, 2024-25
In Semester Examination Test –II

Course: 21CSU6HA1T : NATURAL LANGUAGE PROCESSING

Class: T.Y. B. Tech **Semester: VI** **Maximum Marks: 30**
Date: 14/3/2025 **Time : 60 min**

Que No.	Sub Que.		Marks	CO Mapping
Q1		Objective Type Questions-	6M	CO3
	(i)	What is the technique of generating words one at a time from a fixed distribution called? a) trigtam b) bigram c) Unigram d) All of the mentioned		
	(ii)	What is Maximum entrophy condition? a) identify the class of the morphemes b) Does Discourse Analysis c) lots of other random features can contribute d) None of the mentioned Algorithms are often used		
	(iii)	In Markov property at any given time a)next state is independent b)next state is always final state c)next state depends on the current state only d)next state depends on predictions of future		
	(iv)	As vocabulary size increases in Bag of Words implementation vector representation ------- a) does not change b)decreases		

		c) increases d) fails		
	(v)	Word2Vec is a technique / model to produce word ----- for better word represenrations a) Ambiguity b) Phonetics c) Embeddings d) Semantics		
	(vi)	Which of these activities refer to obtaining material that can be documented on as unstructured nature? a) Auditory phonetics b) Acoustic phonetics c) information Retrieval d) Laboratory phonetics		
Q.2		Attempt any two -	10M	CO3
	(i)	Illustrate the various Probabilistic Language modeling Techniques.		
	(ii)	How are Markov models used for Modeling Natural Languages? Illustrate.		
	(iii)	List various Word Embedding Algorithms. Illustrate any one.		
Q.3		Attempt any two -	14M	Co4
	(i)	Illustrate the use of NLP in Information Retrieval. List the Algorithms used..		
	I(ii)	Give the basic characteristics of Vector space models with examples.		
	(iii)	Examine the 'Name Entity Recognition' model and state the characteristics it can process. How is this model implemented?		

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WALCHAND INSTITUTE OF TECHNOLOGY, SOLAPUR

Information Technology, Even Semester, 2024-25

In Semester Examination Test –III

Course: 21CSU6HA1T : NATURAL LANGUAGE PROCESSING

Class: T.Y. B. Tech **Semester: VI** **Maximum Marks: 30**

Date:16/4/2025 **Time : 60 min**

Que No.	Sub Que.		Marks	CO mapping
Q1		Objective Type Questions-	6M	CO4
	(i)	What is the purpose of sentiment analysis in natural language processing? a) To identify the author of a text b) To translate a text from one language to another c) To summarize the main points of a text d) To determine the tone or emotion expressed in a text		
	(ii)	Which of the following is an example of a machine translation system? a) Microsoft Word b) Siri c) Amazon Alexa d) Google Translate		
	(iii)	Which of the following is an example of a natural language processing tool? a) Microsoft Excel b) Google Maps c) Adobe Photoshop d) Python's NLTK library		
	(iv)	What does spaCy tagging do? a) Identifies word order relationships b) Identifies more frequent words c) Identifies importance and relevance d) Identifies parts of speech		

	(v)	A polarity score of negative 0.5 means that the text statement has a positive sentiment has a negative sentiment is more of a factual statement is more of an opinion statement		
	(vi)	While performing Topic Modeling (LDA) which python _____ package we use? a) Sklearn b) LDAviz c) Nltk d) Gensim		
Q.2		Attempt any two -	10M	CO4
	(i)	Illustrate the various features of NLTK. Give code snippets to illustrate features.		
	(ii)	How is word sense disambiguity dealt with? Illustrate.		
	(iii)	List various linguistic resources. Illustrate any one of them.		
Q.3		Attempt any two -	14M	CO4
	(i)	Illustrate the use of Cross lingual translations. List the advantageous involved..		
	I(ii)	Give the basic characteristics of text entailment with examples.		
	(iii)	Examine the 'Lesh algorithm and Walker's algorithm and state the results produced by these algorithms		