B.Tech. (Computer Science & Engineering / Information Technology / Computer Engineering) Seventh Semester (C.B.C.S.)

Program Elective-V : Natural Language Processing

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Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Due credit will be given to neatness and adequate dimensions.
8. Assume suitable data whenever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

1.	a)	What are the applications of natural language processing.	**7**
	b)	Give various stages in Natural language processing.	**7**

OR

2.	a)	Discuss the key issues in Natural language processing.	**7**
	b)	Natural language has ambiguous constructs. How such ambiguous constructs in NLP is handled.	**7**

3.	a)	What do you understand by N-gram? What is the role of N-gram in NLP.	**7**
	b)	What are the techniques used for evaluating a Language model.	**7**

OR

4.	a)	What do you understand by classification and categorization of text data.	**7**
	b)	What are the algorithms used for text classification. Explain any one of them.	**7**

5.	a)	What is the significance of sequence labelling in Information extraction (IE).	**7**
	b)	Explain information retrieval vector space model. Explain with suitable example.	**7**

OR

6.	a)	Explain retrieval of relevant document using Query Expansion.	**7**
	b)	Write a short note on application of Name Entity Recognition (NER).	**7**

7.	a)	Explain the difference between word classes and part-of-speech tagging.	**7**
	b)	What is Semantic and Sentiment analysis. Explain with suitable examples.	**7**

OR

8.	a)	What is the role of Dependency Parsing. Explain with suitable example.	**7**
	b)	Explain role of word Embedding in brief.	**7**

9.	a)	State and explain various techniques of text summarization.	**7**
	b)	How Neural Networks can be used to implement NLP tasks.	**7**

OR

10.	a)	Explain the use of Deep Leaning for NLP tasks.	**7**
	b)	Write short note on Text summarization.	**7**

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