

Date : 25-05-22

<b>K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22</b> <b>(Autonomous College Affiliated to University of Mumbai)</b>				
<b>End Semester Exam</b>				
May – June 2022				
Program: B. Tech <b>EXTC</b>				
Examination: LY Semester: VIII				
Course Code: IUEXDLC8031		Course Name: Natural Language Processing		
Duration: 03 Hours		Max. Marks: 60		
Instructions:				
(1) All questions are compulsory.				
(2) Draw neat diagrams wherever applicable.				
(3) Assume suitable data, if necessary.				
		Max. Marks	CO	BT level
<b>Q 1</b>	<b>Solve any six questions out of eight.</b>	<b>12</b>		
i)	What is the significance of study of NLP in Natural languages?	02	1	U
ii)	What is stemming and Lemmatization?	02	2	U
iii)	What is non deterministic Finite State Automata function?	02	2	U
iv)	What is Penn tree bank?	02	3	U
v)	What is difference between syntactic and semantic information?	02	4	U
vi)	What is Word Sense Disambiguation?	02	4	U
vii)	List any 5 applications of Pragmatic Analysis.	02	5	U
viii)	What are the features used in sentiment analysis?	02	6	U
<b>Q.2</b>	<b>Solve any four questions out of six.</b>	<b>16</b>		
i)	What is Conditional Random field? Analyse its significance in sequencing.	04	3	AN
ii)	Compare the syntax analysis and Semantic Analysis with respect to different steps applied.	04	4	AN

iii)	What is regular expression? How it is related to finite automata	04	2	U
iv)	Describe the ambiguity and types of ambiguity.	04	1	U
v)	What do you understand by logical interpretation? Give examples for applying the same.	04	5	A
vi)	Evaluate the steps in information retrieval with respect to NLP.	04	6	U
<b>Q.3 Solve any two questions out of three.</b>				
Q.3	<b>Solve any two questions out of three.</b>	16		
i)	Explain the different stages of NLP with example.	08	1	U
ii)	Evaluate and explain the rules of Deterministic Finite Automata with a transition status table.	08	2	E
iii)	What are different subcategories of Nouns, Verbs, Adjectives and Adverbs? Explain with examples	08	3	AN
<b>Q.4 Solve any two questions out of three.</b>				
Q.4	<b>Solve any two questions out of three.</b>	16		
i)	Identify the head and morphological type (Noun Phrase, Verb Phrase, Adjective Phrase, and Adverbial Phrase) of the following sentence segments. Draw parsing tree for the first two sentences <ol style="list-style-type: none"> <li>1. The president of the company</li> <li>2. Looked up the chimney</li> <li>3. Angry as a hippo</li> <li>4. Rapidly like a bat</li> <li>5. important to Bill</li> </ol>	08	3	A
ii)	Evaluate Homonymy, Polysemy, Synonymy and Hyponymy with respect to Semantic Analysis?	08	4	E
iii)	Describe Referring Expression and Referent, One-Anaphora.	08	5	U