Question Paper Code: AM603PC

R22

Model Question Paper
ANURAG Engineering College
(An Autonomous Institution)
III B.Tech. II Semester Regular Examinations, June -2025
NATURAL LANGUAGE PROCESSING
(CSE-(AI&ML))

Time: 3 Hours **Max.Marks:60**

Section – A (Short Answer type questions)				**(10 Marks)**
Answer All Questions		**Course Outcome**	**B.T Level**	**Marks**
1.	What is inflection in morphological analysis? Give an example.	CO1	L1	1M
2.	Write three major challenges for morphological parsing.	CO1	L1	1M
3.	What is a Treebank?	CO2	L1	1M
4.	Define projectivity in dependency parsing.	CO2	L1	1M
5.	Differentiate homonymy and polysemy with examples.	CO3	L2	1M
6.	What is the major difference between shallow semantic parsing and deep semantic parsing?	CO3	L1	1M
7.	List the resources used for semantic role labelling.	CO4	L1	1M
8.	What is argument identification?	CO4	L1	1M
9.	How backoff technique is used for smoothing?	CO5	L1	1M
10.	What is Language model adaptation?	CO5	L1	1M
Section – B (Essay Questions)				
Answer all questions, each question carries equal marks.				**(5 X10M = 50M)**
11.	Compare and contrast different morphological models used in morphological analysis.	CO1	L2	10M
	OR			
12.	a) Describe various features used for sentence and topic segmentation.	CO1	L2	5M
	b) Discuss various methods used for segmentation to find the structure of documents?	CO1	L2	5M
13.	a) Discuss the challenges for syntax parsing in Natural Language Processing with suitable examples.	CO2	L2	5M
	b) Explain the concept of treebanks as a data-driven approach to syntax analysis.	CO2	L2	5M
	OR			
14.	a) Describe CKY parsing algorithm with an example	CO2	L2	5M
	b) Explain shift-reduce parsing algorithm with an example.	CO2	L2	5M
15.	a) How probabilistic context free grammars help in resolving ambiguity in parsing? Explain.	CO3	L3	5M
	b) Describe the components of semantic interpretation with suitable examples.	CO3	L2	5M
	OR			

16.	a) What is the role of Word Sense Disambiguation (WSD) in semantic interpretation, and how the Lesk Algorithm is used for Word Sense Disambiguation?	CO3	L2	6M
	b) Explain the common features used in supervised learning of Word sense.	CO3	L2	4M
17.	Describe the features of FrameNet and PropBank resources in Semantic parsing. Compare their methodologies and applications.	CO4	L2	10M
	OR			
18.	a) What are the main features used in semantic role labeling (SRL) models?	CO4	L2	7M
	b) How do syntactic features contribute to argument classification?	CO4	L3	3M
19.	Describe different parameter estimation techniques in language modelling.	CO5	L2	10M
	OR			
20.	Describe various types of Language models.	CO5	L2	10M