Code No.: R22AI603PC

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Supply) - December- 2025
NATURAL LANGUAGE PROCESSING
(CSM)

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

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A **(10 Marks)**

1. a)	List Out the challenges in word segmentation.	[1M]
b)	What is meant by the complexity of an NLP approach?	[1M]
c)	Mention one benefit of a data-driven approach to syntax.	[1M]
d)	What is syntactic parsing?	[1M]
e)	Define word sense disambiguation.	[1M]
f)	Define semantic interpretation.	[1M]
g)	What is predicate-argument structure with an example?	[1M]
h)	What is a frame in Frame Semantics?	[1M]
i)	What is language model evaluation?	[1M]
j)	What is the difference between class-based and variable-length language models?	[1M]

PART-B **(50 Marks)**

2.	Explain the morphological models used for word structure analysis in NLP.	[10M]
	OR	
3.	How are features extracted from documents for NLP tasks? Explain with examples.	[10M]
4.	Discuss syntactic structures and how they are represented in NLP.	[10M]
	OR	
5.	Compare rule-based and data-driven approaches to parsing.	[10M]
6.	Describe the steps involved in semantic interpretation.	[10M]
	OR	
7.	What is the system paradigms used in semantic parsing? Illustrate with diagrams.	[10M]
8.	Explain the predicate-argument structure and its relevance to NLP.	[10M]
	OR	
9.	Discuss the challenges in building semantic representations for complex sentences.	[10M]
10.	Discuss the process of language model adaptation for different domains.	[10M]
	OR	
11.	Explain N-Gram language models and their limitations.	[10M]

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