PAPER ID-410828

Subject Code: KCA053

Roll No: | | | | | | | | | | | | | |

MCA

(SEM IV) THEORY EXAMINATION 2023-24

NATURAL LANGUAGE PROCESSING

TIME: 3 HRS **M.MARKS: 100**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief.

a.	What is meant by natural language processing (NLP)?	2
b.	List any four applications of NLP.	2
c.	Explain knowledge representation.	2
d.	List any four applications of knowledge representation.	2
e.	What is meant by parsing?	2
f.	Explain morphological analysis.	2
g.	Explain verb phrases.	2
h.	What is meant by deterministic parser?	2
i.	Explain ambiguity resolution.	2
j.	What is meant by Part-of Speech (POS) tagging?	2

SECTION B

2. Attempt any *three* of the following:

a.	Explain the evaluating process of language understanding system.	10
b.	Why semantic analysis difficult? Explain various approaches to semantic analysis.	10
c.	Describe various syntactic parsing techniques.	10
d.	Illustrate about the deterministic parser in details.	10
e.	What are the common problems with part of speech tagging systems? Describe In detail.	10

SECTION C

3. Attempt any *one* part of the following:

a.	Explain the Challenges that can be faced while designing NLP software.	10
b.	Explain the different levels of language analysis process.	10

4. Attempt any *one* part of the following:

a.	What is semantic analysis? Discuss different semantic relationships between the words.	10
b.	How is the man-machine interface designed using NLP techniques?	10

5. Attempt any *one* part of the following:

a.	What is syntactic parsing? What are the difficulties in creating syntactic parsing?	10
b.	Explain Top-down & Bottom-up approach of parsing with suitable example.	10

6. Attempt any *one* part of the following:

a.	Describe generative models. Also compare it with PCFG model.	10
b.	How syntactic parsing can be done using context free grammar? Explain with example.	10

7. Attempt any *one* part of the following:

a.	What is lexical analysis? Explain in brief. Also explain finite state automaton.	10
b.	Discuss the advanced issues in part-of-speech tagging in detail.	10