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Roll No.

TCS-771

**B. TECH. (CSE)
(SEVENTH SEMESTER)**

MID SEMESTER

EXAMINATION, Oct., 2023

NATURAL LANGUAGE PROCESSING

USING BIG DATA

Time : 1½ Hours

Maximum Marks : 50

Note : (i) Answer all the questions by choosing any *one* of the sub-questions.

(ii) Each sub-question carries 10 marks.

1. (a) Discuss the difference between programming language and natural language. (CO1)

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(2)

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OR

(b) What is Natural Language Processing ?
Define its task and applications with
example. (CO1)

2. (a) Define various technologies embedded in
natural language Processing. (CO1, CO2)

OR

(b) How is web scrapping methods used in
python that leads to natural language
processing ? (CO1, CO2)

3. (a) Discuss the role of Part-of-Speech (POS)
tagging in natural language understanding.
Give an example of its importance. (CO1)

OR

(b) How does Named Entity Recognition
(NER) contribute to information extraction
from text ? Provide an example. (CO1)

4. (a) Discuss the role of language ambiguity in
making NLP challenging. Provide
examples of different types of ambiguity.
(CO1)

(3)

OR

(b) Provide an example use case for which
you would choose SpaCy over NLTK, and
vice versa. (CO1)

5. (a) Explain the concept of the Bag of Words
(BoW) model in natural language
processing. What are its key
characteristics and limitation? (CO2)

OR

(b) Explain the fundamental language
properties that NLP models like BoW rely
on, such as syntax, semantics and
morphology. (CO2)