

Roll.No.

24UAIET5B01

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc. CS with AI - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - V

24UAIET5B01 - Natural Language Processing

Total Duration : 1 Hrs.30 Mins.

Total Marks : 40

Section B

Answer any **TEN** questions ($10 \times 2 = 20$ Marks)

1. Define Stopwords in NLP.
2. List two common POS tags with examples.
3. Define Term Frequency (TF).
4. What is the purpose of a Confusion Matrix?
5. What is the difference between stemming and lemmatization?
6. What is the difference between ML and AI?
7. What is Reinforcement Learning?
8. State one role of Activation Functions in Neural Networks.
9. What is TensorFlow used for?
10. What is Pooling in CNN?
11. What is the purpose of Autocomplete in NLP?
12. Define Curse of Dimensionality.

Section C

Answer any **FOUR** questions ($4 \times 5 = 20$ Marks)

13. Describe the Bag of Words approach. Illustrate with a text classification example.
14. Explain the process of Part-of-Speech (POS) tagging. Describe how a Hidden Markov Model (HMM) is used for POS tagging with a suitable example.
15. Compare and contrast Supervised, Unsupervised, and Reinforcement Learning with examples.
16. Explain Convolutional Neural Networks (CNN). Discuss Convolution Layer, ReLU Layer, and Pooling with diagrams.

Contd...

17. Explain N-grams and their role in building Language Models with probabilities.
18. Describe the Viterbi Algorithm. Explain Forward and Backward Pass with examples.
