

5776  
FACULTY OF SCIENCE  
B.Sc. (V-Semester) Examination  
DATA SCIENCE  
Paper-V (a)  
NATURAL LANGUAGE PROCESSING

Time: 3 Hours]

[Max. Marks: 80

**Section – A (Marks: 8 x 4 = 32)**

1. Attempt any **EIGHT** Questions.
  - (a). What do you understand by Natural Language Processing?
  - (b). Write about Frequency Distributions.
  - (c). Define Collection in Python
  - (d). Why do we need text processing?
  - (e). Write few instances of real-world NLP uses.
  - (f). How unknown words can be handled in the tagging process?
  - (g). How natural language processing useful for text categorization?
  - (h). Write about naive bayes classifiers.
  - (i). What are the most used applications of Deep Learning
  - (j). How do you extract information from data?
  - (k). Define Linguistic structures
  - (l). What does it mean by analyzing a sentence?

**Section– B (Marks: 4 x 12 = 48)**

Answer all questions

2. (a) Explain interesting challenges of natural language processing?

Or

(b) Discuss some useful text corpora and lexical resources, and how can you access them with Python?
3. (a) Explain Segmentation in detail

Or

(b) Explain N-Gram Tagging.
4. (a) Discuss Supervised Classification.

Or

(b) What is Deep Learning? List out deep learning benefits and limitations.
5. (a) Explain Named Entity Recognition.

Or

(b) Discuss parsing with Context-Free Grammar.

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