

# NLP

1. Compare between NLU and NLG.
2. Carry out the driving force of NLP.
3. Infer the various challenges involved in developing NLP applications.
4. Construct the various applications and Phases of NLP with relevant examples.
5. Organize and explain about the design features of Information Retrieval System.
6. Criticize the process of document retrieval using Boolean Model with neat example.
7. Outline the Porter Stemmer and Lemmatizer be used for stemming and lemmatization in NLP
8. Relate the process of Morphological Analysis and Generation using FSA.
9. Construct the regular expressions and their application in NLP.
10. Organize the concept of Finite-State Automata (FSA) and explain their role in NLP.
11. Integrate the purpose of smoothing in N-gram model.
12. Generalize the challenges faced in Natural Language Processing and mention the process of tokenization in Natural Language Processing
13. Compare the relationship between word senses and relations in NLP. How do they help in semantic analysis.
14. (i) Outline the different types of smoothing techniques used in N-gram models.  
(ii) Conclude the Proposition Bank and its significance in computational semantics and how is it used in information extraction task
15. Conclude the Proposition Bank and its significance in computational semantics. How is it used in information extraction tasks
16. Integrate the process and significance of Coreference Resolution in NLP.

1. The main challenge in Natural Language Processing (NLP).  
a) Lack of computational power    b) Ambiguity and variability in language  
c) Limited resources for training    d) Lack of suitable hardware \
2. Among in which of the following is a type of Language Model.  
a) Regular Expressions    b) Statistical Language Model  
c) Finite-State Automata    d) Tokenization
3. Tokenization in NLP refers to \_\_\_\_\_.
4. \_\_\_\_\_ algorithm is used for spelling error detection and correction.  
a) Minimum Edit Distance    b) Hidden Markov Models  
c) Cyclical Redundancy Check    d) K-means Clustering
5. The primary goal of Part-of-Speech (PoS) Tagging.  
a) To identify word meanings    b) To assign grammatical categories to words  
c) To break text into tokens    d) To identify named entities
6. Hidden Markov Models (HMMs) are primarily used in:  
a) Text classification    b) Part-of-Speech tagging  
c) Machine translation    d) Sentiment analysis
7. \_\_\_\_\_ is NOT a common application of Semantic Role Labeling.  
a) Machine Translation    b) Question Answering  
c) Information Extraction    d) Sentiment Analysis
8. Context-Free Grammar (CFG) is mainly used for:  
a) Machine learning    b) Syntactic structure representation  
c) Sentiment analysis    d) Word sense disambiguation
9. Word2Vec is a technique used to represent words as \_\_\_\_\_ vectors  
in a continuous vector space.
10. N-grams are used primarily for:  
a) Parsing syntactic structures    b) Representing semantic relationships  
c) Language modeling    d) Named Entity Recognition

11. Which of the following is used for Word Sense Disambiguation (WSD)?

- a) Clustering algorithms                      b) Supervised learning
- c) Named entity recognition              d) Part-of-speech tagging

12. TF-IDF stands for Term Frequency-Inverse Document \_\_\_\_\_ and

is used to measure the importance of words in a document relative to a corpus.

13. The field of Natural Language Processing (NLP) is.

- a. Computer Science                      b. Artificial Intelligence
- c. Linguistics                              d. All of the mentioned

14. The input and output of an NLP system

- a. Speech and noise                      b. Speech and Written Text
- c. Noise and Written Text              d. Noise and value

15. The primary goal of syntax in Natural Language Processing (NLP).

- a. Sentiment analysis                      b. Speech recognition
- c. Understanding the structure              d. Named Entity Recognition

16. The following NLP task is most closely associated with syntax.

- a. Part-of-speech tagging                      b. Text summarization
- c. Topic modeling                              d. Word embedding

17. The main focus of semantics in NLP \_\_\_\_\_

18. An NLP task is most concerned with capturing the meaning and relationships between words in a sentence

- a. Named Entity Recognition              b. Sentiment analysis
- c. Word sense disambiguation              d. Part-of-speech tagging

19. The primary goal of discourse analysis in NLP is \_\_\_\_\_

20. The common application of NLP in customer support and service.

- a. Image recognition                      b. Sentiment Analysis
- c. Database management                      d. Network security

21. Among which probability distribution is commonly used in NLP for modeling the likelihood of a sequence of events

- a. Uniform distribution                      b. Gaussian distribution

c. Poisson distribution      d. Conditional probability

22. In regular expressions, what does the symbol '^' typically represent

- a. End of a line      b. Start of a line
- c. Any character      d. Zero or more occurrences

23. \_\_\_\_\_ typical unit of analysis in morphological parsing.

24. In NLP, what is the term for the smallest unit of meaning in language that can stand alone

- a. Morpheme    b. Syntactic unit    c. Lexeme    d. Sememe