

NLP Question Bank

UNIT–I: Structure of Words & Documents

Short Answer Questions

1. What is morphology in NLP?
2. Define morpheme with example.
3. What are inflectional and derivational morphemes?
4. What are the challenges in morphological analysis?
5. What is a morphological model?
6. What is document structure in NLP?
7. Name different document structure analysis methods.
8. What are features used in document classification?
9. Define tokenization.
10. What is stemming vs lemmatization?

Long Answer Questions

1. Explain words and their components with suitable examples.
2. Discuss issues and challenges in morphological processing.
3. Describe different morphological models in detail.
4. Explain methods for finding document structure.
5. Compare different approaches for document structure analysis based on complexity and performance.
6. Discuss features used in document classification and structuring.

UNIT–II: Syntax I

Short Answer Questions

1. What is syntax in NLP?
2. Define parsing.
3. What is a parse tree?
4. What are treebanks?
5. Give examples of treebanks.
6. What is constituency parsing?
7. What is dependency parsing?
8. Define CFG (Context-Free Grammar).
9. What are parsing algorithms?
10. What is ambiguity in parsing?

Long Answer Questions

1. Explain parsing natural language with examples.
2. Describe treebanks and their importance in NLP.
3. Explain representation of syntactic structure.
4. Discuss different parsing algorithms (Top-down, Bottom-up, CYK, Earley).
5. Compare constituency and dependency parsing.

UNIT–III: Syntax II & Semantic Parsing I

Short Answer Questions

1. What is ambiguity in parsing?
2. Define syntactic ambiguity.
3. What is semantic parsing?
4. What is word sense disambiguation (WSD)?
5. What are system paradigms in semantic parsing?
6. Define multilingual NLP.
7. What is lexical ambiguity?
8. What is semantic interpretation?
9. What are probabilistic parsing models?
10. What is POS tagging?

Long Answer Questions

1. Explain models for ambiguity resolution in parsing.
2. Discuss multilingual issues in NLP.
3. Explain semantic parsing and its importance.
4. Describe semantic interpretation techniques.
5. Discuss different system paradigms in semantic parsing.
6. Explain word sense disambiguation with approaches.

UNIT–IV: Semantic Parsing II

Short Answer Questions

1. What is predicate-argument structure?
2. Define semantic roles.

3. What is meaning representation?
4. What are semantic networks?
5. What is frame semantics?
6. What is first-order logic in NLP?
7. What are knowledge representation systems?
8. Define ontology.
9. What is semantic role labeling (SRL)?
10. What is discourse representation?

Long Answer Questions

1. Explain predicate-argument structure with examples.
2. Discuss semantic role labeling in detail.
3. Explain different meaning representation systems.
4. Compare logical and non-logical semantic representations.
5. Describe applications of semantic parsing.

UNIT–V: Language Modeling

Short Answer Questions

1. What is a language model?
2. Define N-gram model.
3. What is unigram, bigram, trigram?
4. What is perplexity?
5. What is smoothing in language models?
6. Define Bayesian estimation.
7. What is language model adaptation?
8. What are class-based language models?
9. What is cross-lingual modeling?
10. What is topic-based language model?

Long Answer Questions

1. Explain N-gram models with examples.
2. Discuss language model evaluation techniques.
3. Explain Bayesian parameter estimation in language models.
4. Describe different types of language models (class-based, variable length, topic-based).
5. Explain multilingual and cross-lingual language modeling.

6. Discuss challenges in language modeling and possible solutions.