

What is the role of Morphology?
Briefly write about Topic Boundary Detection
Differentiate Syntactic and Semantic Parsing
What is Hyper graphs explain with example
What is Dependency Graphs?
What is Meaning Representation?
Explain about Systems?
What is Predicate-Argument Structure?
Write short notes on N-Gram model.
Write the Selections of Sub word units

Discuss Lexicon, Morphitic, Orthographic
List out Ambiguity in issues and challenges.
What is parsing? Describe Parsing in NLP
What is Tree Banks? Write an example program.
What is Case Grammar? Write an example.
Describe Frame based Knowledge Representation.
Explain Stemming with example Program?
Explain Lemmatization with example Program?
What is Chunking explain its types?
Write about Maximum-Likelihood Estimation and Smoothing?

What is NLP? Explain two major approaches of NLP
Explain Finite-state of Morphology
What is Syntax Analysis?
What is Dependency Graphs with example
State homonymy and polysemy with example.
Explain in briefly semantic net?
What is Predicate Argument Structure in Syntax?
What is the work of Word Sense?
Write a short notes on N-Gram model
Write a short note on Adaption.

What is the important of Morphology? Define its types.
Define Tokenization and Hybrid Approaches?
Perform parsing using simple top down parsing for the sentence “The dogs cried” using the grammar given below: S->NP VP,NP->ART N NP->ART ADJ N ,VP->V VP->V NP
Discuss Structural ambiguity, Semantic ambiguity, Pragmatic ambiguity?
What is FOPC? Write FOPC for the following sentences: S1:jack loves Jill S2:Suman takes Egg or Pharmacy
What is Structural Ambiguity?
Write a short notes on: a) Frame net b)POS Tagging c)Stemming d)Named entity Reorganization.
What is software?
What is Large-Scale Language Model?
Define N-Gram Model?

What is Morphology? Explain two types of Morphological models.

[10]

a) Differentiate Lexeme, Morphitic, Orthographic.

b) List out Ambiguity in Issues and Challenges

[5+5]

Explain the working of Shift Reduce Parsing with Example.

[10]

Explain CYK Algorithm using Given CFG rules.

[10]

“Book the flight through the Houston”

Grammar		Lexicon	
$S \rightarrow NP VP$	[.80]	$Det \rightarrow that [.10] \mid a [.30] \mid the [.60]$	
$S \rightarrow Aux NP VP$	[.15]	$Noun \rightarrow book [.10] \mid flight [.30]$	
$S \rightarrow VP$	[.05]	$\mid meal [.15] \mid money [.05]$	
$NP \rightarrow Pronoun$	[.35]	$\mid flights [.40] \mid dinner [.10]$	
$NP \rightarrow Proper-Noun$	[.30]	$Verb \rightarrow book [.30] \mid include [.30]$	
$NP \rightarrow Det Nominal$	[.20]	$\mid prefer; [.40]$	
$NP \rightarrow Nominal$	[.15]	$Pronoun \rightarrow I [.40] \mid she [.05]$	
$Nominal \rightarrow Noun$	[.75]	$\mid me [.15] \mid you [.40]$	
$Nominal \rightarrow Nominal Noun$	[.20]	$Proper-Noun \rightarrow Houston [.60]$	
$Nominal \rightarrow Nominal PP$	[.05]	$\mid NWA [.40]$	
$VP \rightarrow Verb$	[.35]	$Aux \rightarrow does [.60] \mid can [.40]$	
$VP \rightarrow Verb NP$	[.20]	$Preposition \rightarrow from [.30] \mid to [.30]$	
$VP \rightarrow Verb NP PP$	[.10]	$\mid on [.20] \mid near [.15]$	
$VP \rightarrow Verb PP$	[.15]	$\mid through [.05]$	
$VP \rightarrow Verb NP NP$	[.05]		
$VP \rightarrow VP PP$	[.15]		
$PP \rightarrow Preposition NP$	[1.0]		

What is the System Paradigm? Explain with an Example.

[10]

Explain Lesk Algorithm With Example.

[10]

What is Predicate-Argument Structure? What are the resources to address Predicate-Argument Structure?

[10]

Discuss the Dependency Architecture and Tree adjoining grammar (TAG).

[10]

Explain Multilingual and Cross lingual Language Modeling

[10]

Discuss Tree Based Language Model.

[10]

Explain Sentence Boundary Detection and Topic Boundary Detection with example. [10]	
a) Discuss Hybrid Approaches In NLP. b) What are the Issues and Challenge of NLP? [6+4]	
Explain Representation of syntactic structure.  [10]	
What is a Data-Driven Approach? Explain following Bottom-up grammar in Tree Banks. [10]	
$  \begin{aligned}  S &\rightarrow NP VP \\  VP &\rightarrow Vt NP \\  NP &\rightarrow Det N \\  N &\rightarrow Adj N \\  \\   Vt &\rightarrow \text{ saw } \\  Det &\rightarrow \text{ the } \\  Det &\rightarrow \text{ a } \\  N &\rightarrow \text{ dragon } \\  N &\rightarrow \text{ boy } \\  Adj &\rightarrow \text{ young }  \end{aligned}  $	
Input String: " The young boy saw a dragon".	
What are the different approaches for practical simple mention of semantic Interpretation? [5+5]	
Explain Word Sense Disambiguation (WSD). [10]	
Explain FrameNet and PropBank [10]	
Explain Semantic Role Labeling Algorithm.	
Explain different Tree based modeling. [10]	
Explain large scale language modeling [10]	

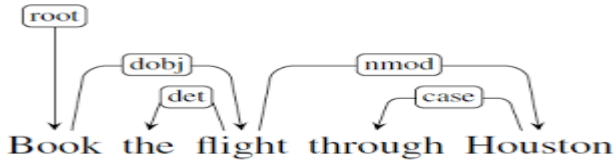
What do you mean Morphology, Explain different Morphological Models?  
[10]

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Write about Generative Model. Apply the naïve Bayes algorithm to Likelihood table by finding the probabilities of given features. [10]

Sl. No.	Play	Outlook	Sl. No.	Play	Outlook
0	Rainy	Yes	7	Overcast	Yes
1	Sunny	Yes	8	Rainy	No
2	Overcast	Yes	9	Sunny	No
3	Overcast	Yes	10	Sunny	Yes
4	Sunny	No	11	Rainy	No
5	Rainy	Yes	12	Overcast	Yes

6	Sunny	Yes	13	Overcast	Yes			
Explain Minimum Spanning Tree Algorithm and Dependency Parsing.								
[10]								
Given the following CFG grammar Perform syntactic analysis of the following sentence using any of the parsing method.								
[10]								
“Book the flight through Houston”.								
<table><tr><td><math>S \rightarrow NP VP</math> <math>S \rightarrow Aux NP VP</math> <math>S \rightarrow VP</math> <math>NP \rightarrow Pronoun</math> <math>NP \rightarrow Proper-Noun</math> <math>NP \rightarrow Det Nominal</math> <math>Nominal \rightarrow Noun</math> <math>Nominal \rightarrow Nominal Noun</math></td><td><math>Det \rightarrow that   this   a   the</math> <math>Noun \rightarrow book   man   flight</math> <math>Verb \rightarrow book   include   prefer   man</math> <math>Pronoun \rightarrow I   she   me</math> <math>Proper-Noun \rightarrow Houston   TWA</math> <math>Aux \rightarrow does</math> <math>Preposition \rightarrow from   to   through</math></td><td><math>Nominal \rightarrow Nominal PP</math> <math>VP \rightarrow Verb</math> <math>VP \rightarrow Verb NP</math> <math>VP \rightarrow Verb NP PP</math> <math>VP \rightarrow Verb PP</math> <math>VP \rightarrow VP PP</math> <math>PP \rightarrow Preposition NP</math></td></tr></table>						$S \rightarrow NP VP$ $S \rightarrow Aux NP VP$ $S \rightarrow VP$ $NP \rightarrow Pronoun$ $NP \rightarrow Proper-Noun$ $NP \rightarrow Det Nominal$ $Nominal \rightarrow Noun$ $Nominal \rightarrow Nominal Noun$	$Det \rightarrow that   this   a   the$ $Noun \rightarrow book   man   flight$ $Verb \rightarrow book   include   prefer   man$ $Pronoun \rightarrow I   she   me$ $Proper-Noun \rightarrow Houston   TWA$ $Aux \rightarrow does$ $Preposition \rightarrow from   to   through$	$Nominal \rightarrow Nominal PP$ $VP \rightarrow Verb$ $VP \rightarrow Verb NP$ $VP \rightarrow Verb NP PP$ $VP \rightarrow Verb PP$ $VP \rightarrow VP PP$ $PP \rightarrow Preposition NP$
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Explain about list of Resources in Word Sense Disambiguation (WSD).								
[10]								
Explain Lesk Algorithm With Example.								
[10]								
What is Frame net? Explain its goals, replacement and Inherited Frames.								
[10]								
Explain Prop Bank with parsing Tree and find out Predicate and arguments.								
[10]								
Write about Language Modeling. Explain its Types?								
[10]								
What is Bigram model? Explain with example.								
[10]								

Explain in briefly Morphological Models.	[10]
What are methods in structure of documents?	[10]
What is Dependency Graphs? Explain with Example	[10]
Explain Shift-Reduce Algorithm.	[10]
 <p>Book the flight through Houston</p>	
Discuss Salaam and Yarowsky Algorithm for Semi supervised.	[10]
Explain different algorithms of WSD by Unsupervised approach	[10]
Explain Predicate Structure Argument.	[10]
What is Frame net? Explain is goals, replacement and Inherited Frames.	[10]
Explain Bayesian parameter estimation method	[10]
Explain Multilingual Language Modeling.	[10]