Comp R16 Sem VIII DLO8012 Natural Language Processing +Sample Questions

Natural language Processing (University of Mumbai)

Sample Questions

Computer Engineering

Subject Name: Natural Language Processing **Semester: VIII**

Multiple Choice Questions

Choose the correct option for following questions. All the Questions carry equal marks	
1.	"He went to the bank". identify the challenge of NLP
Option A:	Discourse resolution
Option B:	Noun resolution
Option C:	Verb resolution
Option D:	Pronoun resolution
2.	" Bat is flying in the sky" Identify the dependency checking to perform sense disambiguation of 'Bat'
Option A:	Bat -> sky, fly
Option B:	Bat-> sky
Option C:	Sky-> fly
Option D:	Bat-> fly
3.	N-grams are defined as the combination of N keywords together. How many bigram can be generated from given sentence: "Data segmentation is a great source to learn text summarization"
Option A:	7
Option B:	8
Option C:	9
Option D:	10
4.	"Given a input sentence "" The crane is loaded"" How will you determine the correct sense of the word 'crane'"
Option A:	Word will be searched in lexicon and first sense of crane will be identified
Option B:	Identify the POS of crane and load, apply rule and determine correct meaning
Option C:	Determine the clue word load and find the dependency between crane and load. Match with all the definitions of crane in the lexicon. Best match is the answer.
Option D:	As clue words such as fly, sky are not part of input, so correct sense of crane is machinery sense
5.	HMM model formula P(q2|x2,q1)=p(x2|q2)*P(q2|q1) This formula does not contain
Option A:	State transition Probability
Option B:	Emission probability
Option C:	CDF
Option D:	Initial state
6.	In Porter stemmer algorithm,*v* indicates
Option A:	Stem contains a vowel
Option B:	Stem contains any character
Option C:	Stem contains VC combinations
Option D:	Stem contains CV combinations
7.	Who invented Wordnet
Option A:	Tomas Mikolov
Option B:	Atlas University

Option C:	PENN treebank
Option D:	Princeton University
8.	"The Tajmahal is one of the seventh wonder of the world". Identify the application of NLP in the word 'TajMahal'
Option A:	Named entity recognition
Option B:	QA system
Option C:	Text categorization
Option D:	Sentiment analysis
9.	The contraction of the morpheme “is”, as in, “That’s the way to do it.” is an example of:
Option A:	Clitic
Option B:	Inflection
Option C:	Derivation
Option D:	Suffix
10.	Lesk algorithm
Option A:	converts words to vectors
Option B:	finds comparison between two words
Option C:	measures overlap between sense definitions for all words in context
Option D:	check for similarity between words in context
11.	What is morphology?
Option A:	The study of linguistic sounds
Option B:	It is a study of the way words are built up from smaller meaning-bearing units called morphemes.
Option C:	The study of the structural relationships between words.
Option D:	The study of linguistic units larger than a single utterance.
12.	Select correct example of inflectional morpheme?
Option A:	Read --> Reader
Option B:	Teach --> Teacher
Option C:	Tall --> Taller
Option D:	Play --> Player
13.	Parts of speech can be divided into two broad super categories _____
Option A:	Parent class and derived class
Option B:	Closed class and open class
Option C:	Sentence class and character class
Option D:	Sub class and child class
14.	Bigram model also called as _____
Option A:	First-order Morkov model
Option B:	Second-order Morkov model
Option C:	Third-order Morkov model
Option D:	(N-1)th-order Morkov model
15.	"Custemer Review system" is example of one of the following?
Option A:	Machine Translation
Option B:	Sentiment Analysis
Option C:	Question-Answering system
Option D:	Text-Summerization
16.	"I saw someone on the hill with a telescope." is the example of which type of ambiguity?

Option A:	Lexical Ambiguity
Option B:	Semantic Ambiguity
Option C:	Syntactic Ambiguity
Option D:	Pragmatic Ambiguity
17.	Sentiment analysis is also called as ____
Option A:	Summarization
Option B:	Question-Answering
Option C:	Opinion Mining
Option D:	Named-Entity Recognition.
18.	What is the task of Robust Word Sense Disambiguation (WSD) for word in given sentence?
Option A:	Define a concept or word meaning
Option B:	Measure overlap between sense definitions for all words in context
Option C:	Define word without senses
Option D:	selecting the correct sense for a word in a given sentence
19.	"Please maintain silence" is the example of _____
Option A:	Wh-subject Question
Option B:	Yes-No Question
Option C:	Imperative sentence
Option D:	Declarative sentence
20.	Select correct constraint on coreference for given example “John and Mary have Hyundai cars. They love them".
Option A:	Number agreement
Option B:	Gender agreement
Option C:	Person and Case agreement
Option D:	Syntactic constraint.
21.	Natural language processing is a sub-domain of,
Option A:	Networking
Option B:	Artificial Intelligence
Option C:	Algorithms
Option D:	Databases
22.	Which of this is not an application of NLP?
Option A:	Speech Understanding
Option B:	Chatbot
Option C:	Scanned Image Classification
Option D:	News Clustering
23.	This kind of ambiguity occurs when a sentence is parsed in different ways.
Option A:	Lexical Ambiguity
Option B:	Syntactic Ambiguity
Option C:	Semantic Ambiguity
Option D:	Pragmatic Ambiguity
24.	“Appoint→Appointee” is an example of ---------- morphology.
Option A:	Derivational
Option B:	Inflectional
Option C:	Compounding
Option D:	Cliticization

25.	The stemming algorithm is used to,
Option A:	Form complex words from base form
Option B:	Generats the parse tree of a sentence
Option C:	Check meaning of a word in dictionary
Option D:	Reduce inflected form of a word to a single base form
26.	P(dog | the big) is an example of ------ model
Option A:	Unigram
Option B:	Bigram
Option C:	Trigram
Option D:	Quadrigram
27.	Which of this is not true about Morphology?
Option A:	Provides systematic rules for forming new words in a language
Option B:	Provide rules for forming sentences in a language
Option C:	Can be used to verify if a word is legitimate in a language
Option D:	Group words into classes
28.	CFG captures ----------
Option A:	Constituency and ordering
Option B:	word meaning
Option C:	relation between words
Option D:	sentence meaning
29.	Which of the following is a Rule based POS tagger?
Option A:	HMM Tagger
Option B:	Ngram Tagger
Option C:	ENGTWOL Tagger
Option D:	Brill Tagger
30.	Syntax analysis concerns with:
Option A:	the way words are built up from smaller meaning bearing units
Option B:	what words mean and how these meanings combine in sentences to form sentence meanings
Option C:	how the immediately preceding sentences affect the interpretation of the next sentence
Option D:	how words are put together to form correct sentences and what structural role each word has
31.	Which of the following is not a sequence labeling technique?
Option A:	Maximum Entropy
Option B:	Context Free Grammar
Option C:	Conditional Random Fields
Option D:	Hidden Markov Model
32.	Which of the following is an example of “hyponym-hypernym” semantic relationship?
Option A:	Car-Vehicle
Option B:	Car-Wheel
Option C:	Wheel-Car
Option D:	Car-Ford
33.	The root form of a word in Wordnet dictionary is called
Option A:	Stem

Option B:	Sense
Option C:	Gloss
Option D:	Lemma
34.	Roughly, Semantic analysis is----------
Option A:	Language Understanding
Option B:	Language Generation
Option C:	Language Preprocessing
Option D:	Language Translation
35.	“All boys love cricket ”. How is this sentence represented in First Order Logic form?
Option A:	∃x boys(x)→love(x,cricket)
Option B:	∀x boys(x)→love(x,cricket)
Option C:	∃x,y love(x) ∧ cricket(y)
Option D:	∀x boys(x) ∧ love(x,cricket)
36.	Pragmatic refers to
Option A:	Literal meaning
Option B:	Intended meaning
Option C:	Structural meaning
Option D:	Wordnet dictionary meaning
37.	“John bought an Acura Integra today, but the engine seemed noisy.” Which of the following is an Inferrable referent?
Option A:	John
Option B:	Acura
Option C:	Engine
Option D:	Noisy
38.	Shivaji→ □□□□□□ Is an example of:
Option A:	Translation
Option B:	Transfer
Option C:	Transliteration
Option D:	Generation
39.	In which of the summarization technique, summary contains the sentences from the given document only?
Option A:	Extractive Summarization
Option B:	Abstractive summarization
Option C:	Mixed Summarization
Option D:	Copied summarization
40.	Which of this is not a reference resolution algorithm?
Option A:	Hobb’s Algorithm
Option B:	Lappin and Leass’s Algorithm
Option C:	Centering Algorithm
Option D:	Lesk’s Algorithm

Descriptive Questions

Explain how word sense disambiguation will be useful for resolving ambiguity
Explain the text preprocessing steps of Natural language processing with an example
Explain machine translation and its types
What is language model? Explain N gram model
What is parsing? Explain Top-down and Bottom-up approach of parsing with suitable example.
Discuss various approaches to perform Part-Of-Speech (POS) tagging
Explain derivational and inflectional morphology in detail with suitable example
Explain following Relations among lexemes & their senses, Homonymy, Synonymy, Hyponymy with example
What are the five types of referring expression? Explain with example
What are the stages of NLP? Explain with example.
What are basic regular expression patterns? Give brief answer for each with example.
What are the attachments for fragment of English? Explain with example.
Differentiate between Derivational and Inflectional morphemes.
Define POS tagging. Explain rule-based POS tagging with example.
What are the reference phenomenons? Explain types of referring expression.
Differentiate between closed classes and open classes with example.
Show derivation of "The boy likes a girl" in parse tree, consider following grammar rule: S→NP VP VP →Verb NP NP→ Det NOM NOM → Noun Noun→ boy | girl Verb → sees | likes Adj → big | small Adv → very Det → a | the
What is information retrieval and machine translation in applications? Give brief answer on both.
Discuss various challenges in processing natural language.
What is the role of FSA in Morphological analysis?
What is WordNet? How is "sense" defined in WordNet? Explain with example.
What do you mean by stemming? Explain Porter's stemming algorithm in detail.
How HMM is used for POS tagging? Explain in detail.
Explain use of CFG in Natural Language Processing with suitable example.
Consider a suitable training data and show the Bigram probability calculation for the same.
Compare Information Retrieval with Information Extraction system.
What is Word Sense Disambiguation? Illustrate with example how Dictionary-based approach identifies correct sense of an ambiguous word.
Discuss in detail any application considering any Indian regional language of your choice.