Sample Question Format

KIIT Deemed to be University
Online Mid Semester Examination(Spring Semester-2021)

Subject Name & Code: Natural Language Processing (NLP)-IT-3035
Applicable to Courses: **B.Tech**

Full Marks=20 **Time:1 Hour**

SECTION-A(Answer All Questions. All questions carry 2 Marks)

Time:20 Minutes **(5×2=10 Marks)**

Question No	Question Type(MCQ/SAT)	Question	Answer Key(if MCQ)	CO Mapping
Q.No:1(a)	MCQ	Which of the following is(are) application(s) of NLP ? a. Email Filter b. Alexa c. Google Translate d. All of the Above	d	CO1
	MCQ	Which of the following is an application of NLP ? a. Text analytics b. Google Assistant c. Cortana d. Speech Recognition	a	CO1
	MCQ	Which of the following is not an application of NLP ? a. Alexa b. Chatbots c. Sentiment Analysis d. Cortana	d	CO1
	MCQ	_____is not an example of Applications of Natural Language Processing. a) Google Assistant b) Automatic Summarization c) Sentiment Analysis d) Siri	a	CO1
Q.No:1(b)	MCQ	To keep a language model from assigning zero probability to the unseen events is a concept known as _____ _____.	c	CO2

		a. Stemming b. Normalizing c. Smoothing d. Perplexity		
	MCQ	The assumption that the probability of a tag is dependent only on the previous 2 tags, rather than the entire tag sequence is known as _____. a. Unigram assumption b. Bigram assumption c. Trigram assumption d. N-gram assumption	c	CO2
	MCQ	The assumption that the probability of a tag is dependent only on the previous tag, rather than the entire tag sequence is known as _____. a. Unigram assumption b. Bigram assumption c. Trigram assumption d. N-gram assumption	b	CO2
	MCQ	In linguistic morphology _____ is the process for reducing inflected words to their root form. a) Rooting b) Stemming c) Text-Proofing d) Both Rooting & Stemming	b	CO2
Q.No:1(c)	MCQ	_____measures the percentage of items that the system detected positive that are in fact positive. a) Precision b) Accuracy c) F1-score d) Recall	a	CO2
	MCQ	_____measures the percentage of items actually present in the input that were correctly identified by the system. a) Precision	d	CO2

		b) Accuracy c) F1-score d) Recall		
	MCQ	False negatives are- A. Predicted negatives that are actually positives B. Predicted positives that are actually negatives C. Predicted negatives that are actually negatives D. Predicted positives that are actually positives	A	CO2
	MCQ	The true positive value is 10 and the false positive value is 15. Calculate the value of precision- A. 0.6 B. 0.4 C. 0.5 D. None	B	CO2
Q.No:1(d)	MCQ	The sentence “I saw bats” contains which type of ambiguity ? A. Syntactic B. Semantic C. Lexical D. Pragmatic	C	CO3
	MCQ	The sentence "The car hit the pole while it was moving" is an example of which ambiguity ? a) Lexical b) Syntactic c) Semantic d) Anaphoric	c	CO3
	MCQ	The sentence "The man saw the girl with the telescope." is an example of which ambiguity ? a) Lexical b) Scope c) Semantic d) Structural	d	CO3
	MCQ	The sentence "Old men and women were taken to safe locations." is an example of which ambiguity ? a) Lexical b) Syntactic c) Semantic	b	CO3

		d) Anaphoric		
Q.No:1(e)	MCQ	In _____ each probability expresses likelihood of an observation being generated from a state. a. Transition probability b. Forward probability c. Emission probability d. Backward probability	c	CO3
	MCQ	Naive Bayes classifier is an example of _____. a. Generative classifier b. Discriminative classifier c. Multinomial classifier d. None of these	a	CO3
	MCQ	Group of words behaving as a single unit is known as _____. a) Phrase b) Constituent c) Lexicon d) Rule	b	CO3
	MCQ	Examples of sentiment analysis are : a. Review of a movie b. Extracting consumer preference c. Editorial Text toward a political candidate d. All of these	d	CO3

SECTION-B(Answer Any One Question. Each Question carries 10 Marks)

Time: 30 Minutes **(1×10=10 Marks)**

Question No	Question	CO Mapping
Q.No:2	A) Following is the sentiment analysis domain with the two classes positive (+) and negative (-). **Cat** **Documents** Training - just plain boring - entirely predictable and lacks energy - no surprises and very few laughs + very powerful + the most fun film of the summer Test ? predictable with no fun Predict the class for the test sentence. [8] B) Write a note on Named Entity Recognition. [2]	CO2

Q.No:3	A) Given the following short movie reviews, each labeled with a genre, either comedy or action: compute the most likely class for D. Assume a naive Bayes classifier. [8]. B. Write a note on Word Sense Disambiguation. [2]	CO2
Q.No:4	A) From the above chart find the fruit type if it's features are yellow, sweet and long ? [8] B) Write a short note on N-gram language model. [2]	CO2
Q.No:5	A) Describe Expectation Maximization (EM) algorithm with proper flow-chart. [8] B) Write a short note on Smoothing. [2]	CO3
Q.No:6	A) Describe Viterbi Algorithm with a suitable example. [8] B) Write a short note on POS tagging. [2]	CO3
Q. No:7	A) Describe Hidden Markov Model (HMM) with a suitable example. [8] B) Write a short note on Sentiment Analysis. [2]	CO3

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