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# NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

Roll. No:

Subject Code:- ACSAI0622N

#### (An Autonomous Institute Affiliated to AKTU, Lucknow)

#### **B.Tech**

## SEM: VI - THEORY EXAMINATION (2023 - 2024)

## Subject: Social Media Analytics

Time: 3 Hours

### **General Instructions:**

**IMP:** Verify that you have received the question paper with the correct course, code, branch etc.

**1.** This Question paper comprises of **three Sections -A**, **B**, **& C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

**2.** *Maximum marks for each question are indicated on right -hand side of each question.* 

- **3.** Illustrate your answers with neat sketches wherever necessary.
- **4.** Assume suitable data if necessary.
- **5.** *Preferably, write the answers in sequential order.*

**6.** No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

## SECTION A

## 1. Attempt all parts:-

- 1-a. The primary objective of semantic analysis is?(CO1)
  - (a) Identifying the syntactic structure of sentences
  - (b) Extracting named entities from text data
  - (c) Understanding the meaning and context of words and phrases
  - (d) Analyzing the sentiment expressed in text data
- 1-b. Select the root form of the word "running" after stemming?(CO1)
  - (a) run
  - (b) runner
  - (c) runn
  - (d) running
- 1-c. The primary goal of web analytics is\_(CO2)
  - (a) Creating web content
  - (b) Indexing web pages
  - (c) Understanding and optimizing web usage

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Max. Marks: 100

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(d) Crawling web pages

- 1-d. The term used for the process of automatically categorizing web documents 1 into predefined categories based on their content is\_(CO2)
  - (a) Sentiment analysis
  - (b) Document clustering
  - (c) Topic modeling
  - (d) Content classification
- 1-e. The step that involves the use of algorithms to uncover patterns and insights 1 from social media data is\_(CO3)
  - (a) Data Collection
  - (b) Data Preprocessing
  - (c) Data Analysis
  - (d) Data Visualization
- 1-f. Type of social graph that is used to represent relationships between different 1 types of entities is\_(CO3)
  - (a) Bipartite graph
  - (b) Directed graph
  - (c) Weighted graph
  - (d) Undirected graph
- 1-g. The purpose of N-gram frequency count in text processing is(CO4)
  - (a) To identify the most frequently occurring words in a text
  - (b) To identify the grammatical structure of a sentence
  - (c) To identify the sentiment of a text
  - (d) To identify the frequency of occurrence of sequences of N words in a text
- 1-h. To normalize keywords in NLP, which technique do we follow(CO4)
  - (a) Lemmatization
  - (b) Parts of speech
  - (c) TF-IDF
  - (d) N-Gram
- 1-i. Trend analysis is significant for(CO5)
  - (a) forecasting and budgeting
  - (b) profit planning
  - (c) capital rationing

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	(d) working capital management	
1-ј.	Upward trend is also known as(CO5)	1
	(a) Bull market	
	(b) Bear market	
	(c) Range bound	
	(d) None of the above	
2. Attempt all parts:-		
2.a.	Define Speech Analytics.(CO1)	2
2.b.	Define Web Graph.(CO2)	2
2.c.	Define Recommendation in social media.(CO3)	2
2.d.	Describe semantic topic tagging.(CO4)	2
2.e.	List three types of trend analysis.(CO5)	2
	SECTION B	30
3. Answer any <u>five</u> of the following:-		
З-а.	Explain Named Entity Recognition (NER).(CO1)	6
3-b.	Explain Sentiment Classification.(CO1)	6
3-c.	Explain Boolean queries.(CO2)	6
3-d.	Explain Web Scraping.(CO2)	6
3.e.	Explain key concepts and applications of Homophily .(CO3)	6
3.f.	Elaborate on a drawback of Extractive Summarization models.(CO4)	6
3.g.	Differentiate between web analytics and social media analytics.(CO5)	6
	SECTION C	50
4. Answer any <u>one</u> of the following:-		
4-a.	Elaborate Text Clustering with examples.(CO1)	10
4-b.	Describe how N-grams represent sequences of words or characters within a text corpus and discuss the significance of different N-gram sizes in capturing linguistic patterns and dependencies.(CO1)	10
5. Answer any <u>one</u> of the following:-		
5-a.	Describe Web Mining , its types and Applications in detail.(CO2)	10
5-b.	Elaborate with examples Boolean query with logical operators such as AND, OR, and NOT that specify the criteria for retrieving documents.(CO2)	10
6. Answer any <u>one</u> of the following:-		

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- 6-a. Elaborate all the steps involved in the process of Social media mining.(CO3) 10
- 6-b. Describe Key Concepts and Applications of Influence and Homophily in 10 detail.(CO3)

#### 7. Answer any one of the following:-

- 7-a. Describe the difference between Phrase Mining and N-gram frequency 10 count.(CO4)
- 7-b. Explain Machine-Learned Classification, and how is it different from other 10 machine learning tasks, such as regression and clustering.(CO4)

#### 8. Answer any one of the following:-

8-a. Explain the uses of trend analysis in surveys. Explain few advantages of 10 analyzing trends in survey data.(CO5)

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8-b. Explain ten latest web development trends.(CO5)

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