GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – SUMMER 2024

Subject Code:3170718   **Date:22-05-2024**
Subject Name:Information Retrieval
Time:02:30 PM TO 05:00 PM   **Total Marks:70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			MARKS
Q.1	**(a)**	Discuss: stop words and tokenization.	03
	(b)	Draw and discuss information retrieval process.	04
	(c)	Explain structured and unstructured data used in information retrieval system with suitable example.	07
Q.2	**(a)**	Discuss: stemming and phrases.	03
	(b)	Write a note on Boolean queries in information retrieval.	04
	(c)	Explain working of naive bayes models with suitable example.	
		OR	
	(c)	Discuss inverted index in information retrieval with the help of example.	07
Q.3	**(a)**	Write a short note on cosine measure.	03
	(b)	Describe text classification technique with appropriate example.	04
	(c)	Discuss in brief: precision, recall and f-measure.	07
		OR	
Q.3	**(a)**	Discuss kernel function.	03
	(b)	Write the differences between dynamic indexing and static indexing.	04
	(c)	Briefly discuss working of k-nearest neighbor with the help of appropriate example.	07
Q.4	**(a)**	Discuss spam filtering.	03
	(b)	Write a short note on text clustering.	04
	(c)	Explain hierarchical agglomerative clustering technique with appropriate example.	07
		OR	
Q.4	**(a)**	Discuss support vector machine classifier.	03
	(b)	Write the differences between classification and clustering.	04
	(c)	Explain working of k-means clustering algorithm with suitable example.	07
Q.5	**(a)**	Write a note on semantic web.	03
	(b)	Discuss: PageRank and HITS.	04
	(c)	Write a note on cross language information retrieval with its limitation in web search for information retrieval.	07

OR

Q.5 **(a)** Discuss search engine for web information retrieval.   **03**
  (b) Discuss: ranking and link analysis.   **04**
  (c) Define XML retrieval. Also, discuss the major challenges in XML retrieval.   **07**

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