

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code:3170718****Date:15/12/2021****Subject Name:Information Retrieval****Time:10:30 AM TO 01:00 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) Define information retrieval. What are the applications of IR?	03
	(b) Write a short note on index optimization.	04
	(c) What is text encoding? Explain tokenization and stemming with example.	07
Q.2	(a) Differentiate between semi structure text and unstructured text.	03
	(b) What is Boolean Queries and inverted index in IR?	04
	(c) Discuss the Boolean retrieval in detail with diagram.	07
	OR	
	(c) Explain Naive Bayes models with suitable example.	07
Q.3	(a) Write a short note on Zipf's Law.	03
	(b) Differentiate between dynamic indexing and static indexing.	04
	(c) Explain the retrieval performance evaluation.	07
	OR	
Q.3	(a) What is the need of Filtering against spamming?	03
	(b) Explain following terms: TFIDF and Okapi.	04
	(c) Describe how to performed Document length normalization.	07
Q.4	(a) Define the terms: precision, recall, and F-measure.	03
	(b) Write Short notes on: kappa measure and interjudge agreement.	04
	(c) Give brief notes about user Relevance feedback method and how it is used in query expansion.	07
	OR	
Q.4	(a) What is classification and clustering?	03
	(b) How agglomerative hierarchical clustering works? Explain with an example.	04
	(c) Illustrate the Vector space retrieval model with example.	07
Q.5	(a) Compare HITS with page rank.	03
	(b) Which is the fastest search engine to retrieval of information? Justify.	04
	(c) Describe Cross language information retrieval and its limitation in web search.	07
	OR	
Q.5	(a) Define web crawling. How to characterize the web?	03
	(b) Write notes on: Summarization and Question Answering.	04
	(c) Explain XML retrieval? Also write down the major challenges in XML retrieval?	07

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2022****Subject Code:3170718****Date:08/06/2022****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) Mention various applications of IR.	03
	(b) What is Information Retrieval? Explain.	04
	(c) What is the basis for the boolean model? List the advantages and Disadvantages of it.	07
Q.2	(a) Define indexing & document indexing.	03
	(b) Describe and Explain Zipf's law in Detail.	04
	(c) Explain Vector Space Model with advantages and disadvantages.	07
	OR	
	(c) Define Relevance feedback model. What are the Advantages of the User Relevance Feedback method?	07
Q.3	(a) Define Precision and Recall.	03
	(b) What is Kappa Measure? Explain using an Example.	04
	(c) What's the "kernel trick" and how is it useful? Explain Soft-Margin.	07
	OR	
Q.3	(a) Mention Interjudge Agreement.	03
	(b) What is F-Measure? Explain using an Example.	04
	(c) Explain KNN algorithm with an example.	07
Q.4	(a) What is boosting? List out different boosting algorithms.	03
	(b) Briefly explain K-Means Algorithm.	04
	(c) Explain Naive Bayes Classifiers in detail.	07
	OR	
Q.4	(a) What is a dendrogram?	03
	(b) Explain Structured and Unstructured Data.	04
	(c) Explain SVM(Support Vector Machine).	07
Q.5	(a) Mention Topic Detection.	03
	(b) What is the use of Link analysis? Explain any one of the link analysis techniques.	04
	(c) Explain CLIR(Cross Language Information Retrieval).	07
	OR	
Q.5	(a) What is personalization? Mention types of personalization.	03
	(b) How can we assign a page Rank score to each node of the graph?	04
	(c) Explain XML retrieval.	07
