III B. Tech II Semester Regular Examinations, June-2022
INFORMATION RETRIEVAL SYSTEM
(Computer Science and Engineering)

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
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UNIT-I

1.	a)	Discuss the text normalization process with a neat sketch.	[8M]
	b)	Explain about public and private index files.	[7M]

(OR)

2.	a)	What problems does multimedia information retrieval introduce? What solutions would you recommend to resolve the problems?	[8M]
	b)	Explain about the browse capabilities.	[7M]

UNIT-II

3.	a)	Discuss the automatic indexing.	[8M]
	b)	What are the problems with Luhn's concept of "resolving power"?	[7M]

(OR)

4.	a)	Describe how a bigram data structure would be used to search for the search term "computer science". What are the possible sources of errors that could cause non-relevant items to be retrieved?	[8M]
	b)	Explain about N-Gram Data Structure.	[7M]

UNIT-III

5.	a)	Explain about the data flow in information processing system.	[8M]
	b)	Write short notes on simple term frequency algorithm.	[7M]

(OR)

6.	a)	Discuss the agglomerative and divisive clustering.	[8M]
	b)	Write short notes on item clustering.	[7M]

UNIT-IV

7.	a)	What are some potential ambiguities in use of relevance feedback on hypertext documents?	[8M]
	b)	List out the different examples for query binding.	[7M]

(OR)

8.	a)	Write short notes on information visualization.	[8M]
	b)	Describe how other senses could be used in displaying results from searches.	[7M]

1 of 2

UNIT-V

9. a) Explain the functions supported by the fast data finder.   [8M]
    b) Discuss about hardware text search systems.   [7M]

(OR)

10. a) What elements in video can be used to index the content?   [8M]
    b) Discuss about graph retrieval.   [7M]

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2 of 2

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UNIT-I

1. a) Discuss the total Information retrieval systems with a neat sketch. [8M]
   b) What is the impact on precision and recall in the use of Stop Lists and Stop Algorithms? [7M]

(OR)

2. a) What are the similarities and differences between use of fuzzy searches and term masking? What are the potentials for each to introduce errors? [8M]
   b) Ranking is one of the most important concepts in Information Retrieval Systems. What are the difficulties in applying ranking when Boolean queries are used? [7M]

UNIT-II

3. a) What are the objectives of Indexing? [8M]
   b) How does the process of information extraction differ from the process of document indexing? [7M]

(OR)

4. a) Write short notes on dictionary look-up stemmers. [8M]
   b) Discuss the PAT Data Structure and draw a PAT Binary Tree for input "100110001101". [7M]

UNIT-III

5. a) List out the problem with weighting schemes. [8M]
   b) Explain about the concept indexing. [7M]

(OR)

6. a) What is the effect of clustering techniques on reducing the user overhead of finding relevant items. [8M]
   b) Discuss the impact of merging the domains into a single cluster for both term clustering and item clustering. [7M]

UNIT-IV

7. a) Discuss about ranking algorithms. [8M]
   b) Is the use of positive feedback always better than using negative feedback to improve a query? Explain. [7M]

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(OR)

8. a) Describe the need for information visualization. Under what circumstances is information visualization not useful?   [8M]
    b) Discuss the limits associated with use of preattentive processes, configural aspects, and spatial frequency as a basis for information visualization.   [7M]

UNIT-V

9. a) Explain the Fast data finder architecture with a neat sketch.   [8M]
    b) Discuss the elements of finite automata with a neat sketch.   [7M]

(OR)

10. a) Write short notes on Multimedia Information Retrieval.   [8M]
    b) What kind of features in audio can be used to index the content?   [7M]

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R19

III B. Tech II Semester Regular Examinations, June-2022
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Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**
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*****

UNIT-I

1. a) Describe the relationship between Information Retrieval Systems and Database Management Systems. [8M]
   b) Outline the role of Digital Libraries and Data warehouses in the context of information retrieval. [7M]

(OR)

2. a) Write short notes on canned query and WAIS standards. [8M]
   b) Which would users prefer, Boolean queries or Natural Language queries? Why? [7M]

UNIT-II

3. a) Discuss the indexing by term. [8M]
   b) Explain about information extraction. [7M]

(OR)

4. a) Explain about the porter stemming algorithm. [8M]
   b) Discuss Symbol tree and Draw a Symbol Tree for terms bag, barn, bring, box, bottle and both. [7M]

UNIT-III

5. a) What are the tradeoffs in use of Zoning as part of the indexing process? [8M]
   b) Under what conditions would the Bayesian and the Vector approach be the same? Explain. [7M]

(OR)

6. a) Discuss the steps involved in the process of clustering. [8M]
   b) Write short notes on automatic term clustering. [7M]

UNIT-IV

7. a) List out the different examples for query binding. [8M]
   b) How would you define an item on the Internet with respect to a search statement and similarity function? [7M]

(OR)

8.   a)   Discuss the difficulties of a user being able to correlate his search to the Hit file. What approach would you use to overcome these problems?   [8M]

       b)   Write short notes on aspects of the visualization process.   [7M]

UNIT-V

9.   a)   Explain KMP technique with an example.   [8M]

       b)   Discuss the Text Array processor with a neat sketch.   [7M]

(OR)

10.   a)   Write short notes on Non-speech audio retrieval.   [8M]

       b)   What new media do you believe will appear in the future and benefit from content based retrieval?   [7M]

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Code No: R193205B   **R19**   **SET - 4**

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*****

UNIT-I

1. a) Discuss about the objectives of Information Retrieval System. [8M]
   b) Outline the major functional processes of Information Retrieval System. [7M]

(OR)

2. a) Describe the rationale why use of proximity will improve precision versus use of just the Boolean functions. Discuss its effect on improvement of recall. [8M]
   b) Why should researchers in information retrieval care about standards? [7M]

UNIT-II

3. a) Discuss the indexing by concept. [8M]
   b) Describe about indexing process. [7M]

(OR)

4. a) Describe the similarities and differences between term stemming algorithms and n-grams. Describe how they affect precision and recall. [8M]
   b) Explain about the inverted file structure. [7M]

UNIT-III

5. a) Explain the different techniques for length normalization of an item. [8M]
   b) What are the benefits of a weighted index system over a Binary index system? Are there benefits that the binary system can provide over a weighted system? [7M]

(OR)

6. a) Write short notes on hierarchal clustering. [8M]
   b) Will the clustering process always come to the same final set of clusters no matter what the starting clusters? Explain. [7M]

UNIT-IV

7. a) Discuss the similarity measures. [8M]
   b) List out the key characteristics of intelligent agents. [7M]

(OR)

8. a) Describe the need for information visualization. Under what circumstances is information visualization not useful?   [8M]

    b) Write short notes on information visualization technologies.   [7M]

UNIT-V

9. a) Discuss about the text streaming architecture.   [8M]

    b) Explain the Boyer-Moore technique with an example.   [7M]

(OR)

10. a) Discuss the spoken language audio retrieval.   [8M]

    b) What new application areas do you envision being enabled by content based multimedia retrieval?   [7M]

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