

Code No: R42059

R10

Set No. 1

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016

INFORMATION RETRIEVAL SYSTEMS

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

Answer any FIVE Questions

All Questions carry equal marks

- 1 a) Describe the functional overview of information retrieval system. [8]
b) Write the similarities between information retrieval systems and data warehouses. [7]
- 2 a) Explain the miscellaneous capabilities of information retrieval systems. [8]
b) Discuss the process of information extraction. [7]
- 3 a) What are the data files used to control and limit the stemming process by k-stem system? Explain. [8]
b) Write the advantages of N-grams. How N-grams is used in spelling error detection and correction? [7]
- 4 a) Explain the techniques for creation of index when the terms of original item are used as basis of index process. [10]
b) Explain the role of automatic indexing in Natural languages. [5]
- 5 a) With an example explain the steps in manual clustering process. [8]
b) Explain about statistical thesauri and theoretically thesauri. [7]
- 6 a) How the similarity measures are applied to statistical systems? Explain. [8]
b) What are the six key characteristics of intelligent agents used in the searching of Internet and hypertext? [7]
- 7 a) Describe what cognitive engineering principles are being used in the Information visualization techniques. [8]
b) What are the main aspects of human visualization process? Explain. [7]
- 8 a) How finite state Automata is used for hardware and software searchers? [8]
b) Explain Knuth – Pratt – Morris algorithm. [7]

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Set No. 2

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INFORMATION RETRIEVAL SYSTEMS

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

Answer any FIVE Questions

All Questions carry equal marks

- 1 a) Discuss how Databases can be used as a source of Information Retrieval Systems. [8]
b) Describe about various standards used in Information Retrieval Systems. [7]
- 2 a) How to define the measures with the search process? [8]
b) Explain about public file indexer. [7]
- 3 a) Explain the importance of stemming algorithm. [8]
b) Describe briefly Hypertext data structure. [7]
- 4 a) Explain about classes of Automatic Indexing. [8]
b) What is linkage? Explain pre-coordination and post-coordination. [7]
- 5 a) What are the approaches used to account for different document lengths while determining the value of term frequency? [9]
b) What is the purpose of Thesaurus? Explain what it contains. [6]
- 6 a) What are the processing steps used in automatic relevance feed back to enhance user query? [8]
b) Discuss the role of weighted searches in Boolean systems. [7]
- 7 a) Explain the *Perspective Wall* information visualization technology. [8]
b) Describe the need for information visualization. Under what circumstances is information visualization is not useful? Quote an example. [7]
- 8 a) Discuss the concept of text search with relevant examples. [8]
b) Explain the Boyer-Moore text search algorithm with an example. [7]

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Set No. 3

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016

INFORMATION RETRIEVAL SYSTEMS

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any FIVE Questions
All Questions carry equal marks**

- 1 a) What were the reasons for origination of Information Retrieval Systems? [8]
b) Write brief notes on digital libraries and data warehouse. [7]
- 2 a) What is a Browse capability? Explain about various browse capabilities. [9]
b) What portions of an item should be indexed? Explain. [6]
- 3 a) Explain in detail about "Inverted File Structure". [8]
b) What are the conclusions given by Frakes on stemming? [7]
- 4 a) Discuss about Pre-coordination and Linkages in the Indexing Process. [8]
b) Explain the concept of automatic indexing and describe various indexing processes. [7]
- 5 a) Discuss the techniques to create a thesaurus cluster. [8]
b) Explain about automatic term clustering. [7]
- 6 a) What is ranking? Explain about the relevance score. [7]
b) Why does the numerator remain basically the same in all of the similarity measures? Discuss other possible approaches and their impact on the formulas. [8]
- 7 a) Describe briefly the terms Cognition and Perception. [8]
b) Write about information visualization techniques that are available to access the Internet. [7]
- 8 a) Explain the Aho-Corasick search algorithm with an example. [8]
b) What is TREC result and how it can be used in information system evaluation? [7]

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Set No. 4

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2016

INFORMATION RETRIEVAL SYSTEMS

(Computer Science and Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any FIVE Questions
All Questions carry equal marks**

- 1 a) What are the objectives of information retrieval systems? [8]
b) Explain the differences between Information Retrieval Systems and DBMS. [7]
- 2 a) Explain the weighting process of index terms. [9]
b) Write a brief note on Information Retrieval System capabilities. [6]
- 3 a) Which stemming technique is used by INQUERY system? Explain. [8]
b) Describe briefly Hypertext data structure. [7]
- 4 a) What information is available in a natural language based indexing that is not available in normal statistical systems? What effect does this have on the search process? [8]
b) Describe the Concept Indexing with an example. [7]
- 5 a) Discuss how clustering effects the precision and recall. [6]
b) Explain how to determine the clusters using Clique and Single Link techniques with an example. [9]
- 6 a) Explain the use of neural networks for the learning function. [7]
b) Why is relevance feedback required in User Search Techniques? Explain. [8]
- 7 a) Explain the *Cone Tree* information visualization technology. [8]
b) What are the set of rules postulated by Gestalt psychologists for visualization? [7]
- 8 a) Write the criteria used for GESCAN and Fast Data Finder hardware text search machines? Why was this approach used over others? [10]
b) What are the two types of retrieval examined at TREC? [5]