CBCS SCHEME

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18AI824

Eighth Semester B.E. Degree Examination, June/July 2024
Modern Information Retrieval

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. With respect to the set theoretic models, explain the extended Boolean model. **(10 Marks)**

b. Compare and contrast Traditional Boolean model and Extended Boolean model in information retrieval systems. **(10 Marks)**

OR

2 a. Explain vector space model in algebraic models. **(10 Marks)**

b. Compare and contrast latent semantic indexing and probabilistic latent semantic analysis. **(10 Marks)**

Module-2

3 a. What are the characteristics of a document collection within the scope of reference collections? **(10 Marks)**

b. What are the key features and significance of CACM collections within the realm of modern information retrieval? **(10 Marks)**

OR

4 a. List and briefly describe the eight secondary tasks commonly conducted at TREC conferences. **(10 Marks)**

b. Explain the evaluation measures used at TREC conferences to assess the performance of information retrieval system in the conducted tasks. **(10 Marks)**

Module-3

5 a. Explain the concept of fixed structure within the context of structural queries, detailing its significance and application in information retrieval. **(10 Marks)**

b. Explain hierarchical structure in web directories. **(10 Marks)**

OR

6 a. Explain the significance of important protocols in query languages for facilitating efficient data retrieval and manipulation. **(10 Marks)**

b. Discuss the advantages and challenges of using natural language processing techniques in keyword based querying. **(10 Marks)**

Module-4

7 a. Explain elimination of stopwords and stemming. **(10 Marks)**

b. With an example code for integers, explain the inverted file compression. **(10 Marks)**

OR

8 a. List three general steps in the search algorithm and explain building an inverted index for the Sample Text. **(10 Marks)**

b. Explain the dynamic programming and automation for string matching allowing errors in pattern matching. **(10 Marks)**

Module-5

9 a. List and explain main challenges posed by the web. (10 Marks)

b. Discuss the significance of measuring the web in modern information retrieval. (10 Marks)

OR

10 a. Describe the key characteristics of web modeling and methodologies used to develop effective web models. (10 Marks)

b. With a neat diagram, explain the centralized architecture of typical Crawler-Indexer Architecture. (10 Marks)

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