Code No.: CS624PE | R20 | H.T.No. | | | 8 | R | | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–II–Semester End Examinations (Regular) - June- 2024
INFORMATION RETRIEVAL SYSTEM
(CSE)

[Time: 3 Hours] [Max. Marks: 70]

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A (20 Marks)

1. a) What is the purpose of query expansion in an Information Retrieval System? [2M]
   b) What role do Data Warehouses play in the context of Information Retrieval? [2M]
   c) What is automatic indexing? [2M]
   d) Define N-Gram data structures. [2M]
   e) Define the concept indexing. [2M]
   f) What are the different clustering algorithms? [2M]
   g) What is relevance feedback? [2M]
   h) Discuss two commonly used information visualization technologies. [2M]
   i) Demonstrate the working principle of the KMP algorithm for string matching. [2M]
   j) Discuss graph retrieval and its applications in multimedia information retrieval. [2M]

PART-B (50 Marks)

2. a). Compare and contrast an Information Retrieval System with a Database Management System, [5M]
   b). Explain the item normalization process. [5M]

OR

3. Explain search capabilities of Information Retrieval Systems, elucidating how each capability augments the search process through relevant examples. [10M]

4. Explain the concept of data structure and its significance in computer science. Provide examples of any two types of data structures. [10M]

OR

5. Explain the following:
   a) Porter Stemming Algorithm [5M]
   b) Dictionary Look-up Stemmers. [5M]

6. a) Explain the significance of Automatic indexing. [5M]
   b) Explain hierarchical clustering approach for document clustering. [5M]

OR

7. Describe the primary differences between Indexing by Term and Indexing by Concept. Explain which method provides better results for "Natural Language Queries" and justify your answer. . [10M]

8. Explain the concept of "Similarity Measures and Ranking" in information retrieval. [10M]

OR

9. Explain in detail about Information Visualization technologies. [10M]

10. Apply and demonstrate the techniques involved in software text search algorithms. [10M]

OR

11. Evaluate and summarize Hardware Text Search system. [10M]

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