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**Question Paper Code : 90219**

M.C.A. DEGREE EXAMINATIONS, APRIL/MAY 2022.

Elective

MC 4005 – INFORMATION RETRIEVAL TECHNIQUES

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the features of Information Retrieval System.
2. Differentiate between Information Retrieval and Web Search.
3. List out the disadvantages of Boolean Model.
4. Define Structured text retrieval model.
5. State the Pattern matching and list out some of the application of it.
6. Define Relevance Feedback model.
7. State the advantage of using Naive Bayes classifier for text classification.
8. Define Meta Learning.
9. Define web search and web search engine.
10. What is XML retrieval?

PART B — (5 × 13 = 65 marks)

11. (a) Elaborate Basic Information Retrieval System Architecture in detail with neat sketch.

Or

- (b) Explain basic components of Search Engine.



12. (a) Describe Term frequency-inverse document frequency and explain how to compute it.

Or

- (b) Discuss the language model and its types in detail with examples.
13. (a) Discuss in detail about user Relevance feedback method and how it is used in query expansion.

Or

- (b) Describe the various index compression techniques?
14. (a) Demonstrate the working procedure of Support vector machine in detail.

Or

- (b) Enumerate Euclidean Distance Measurement and Manhattan Distance Measurement in detail.
15. (a) Describe crawling and its types in detail.

Or

- (b) Summarize the levels of link analysis with neat sketch.

PART C — (1 × 15 = 15 marks)

16. (a) Sort and rank the document in descending order according to the similarity values.  
Suppose we query an IR system for the query “gold silver truck”. The database collection consists of three documents(D = 3) with the following content

D1: “Shipment of gold damaged in a fire”

D2: “Delivery of silver arrived in a silver truck” D3: “Shipment of gold arrived in a truck”

Or

- (b) Calculate the Singular Value Decomposition for the matrix

$$A = \begin{bmatrix} 3 & 3 & 2 \\ 2 & 3 & -2 \end{bmatrix}$$