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|  | Continuous Assessment Test- I [CAT - I] | |
| Year | : IV |
| Semester | : 08 |
| Branch | : B.E. - CSE |
| Sub. Code | : CS8080 |
| Subject Name | : Information Retrieval Techniques |
| Class & Section | : IV CSE –A |

*[Regulations 2017]*

**Date: 23.02.2024 Time: 120 Min Marks: 60**

**Answer ALL Questions**

**Part A [2 x 2 = 4 Marks]**

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| Q.NO | **QUESTION** | **BT LEVEL** | **CO** |
| 1.1 | Define visualization in the context of search interfaces. | A2 | **CO1** |
| 1.2 | Discuss one practical issue commonly encountered on the web in the context of information retrieval. | B2 | **CO1** |

**Part B [2x13=26 Marks]**

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| --- | --- | --- | --- | --- |
| 1.3 | a | Explain the key components of the software architecture in an Information Retrieval (IR) system. How do these components work together to facilitate efficient information retrieval? | A2 | **CO1** |
|  | **[OR]** | |  |  |
|  | b | Discuss on the retrieval and ranking processes in an Information Retrieval system, emphasizing their role in delivering relevant results. | A2 | **CO1** |
| 1.4 | a | Compare and contrast traditional search interfaces with modern ones, considering design aspects and challenges. | B2 | **CO1** |
|  | **[OR]** | |  |  |
|  | b | Evaluate the role of visualization techniques in enhancing the user experience of search interfaces. Provide examples of how effective visualization contributes to better information retrieval and user satisfaction. | B2 | **CO1** |

**Answer ALL Questions**

**Part A [2 x 2 = 4 Marks]**

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| 2.1 | What does TF-IDF (Term Frequency/Inverse Document Frequency) weighting measure in the context of information retrieval? | A1 | **CO2** |
| 2.2 | Discuss the key principles of Latent Semantic Indexing (LSI) Model and its application in information retrieval. | B1 | **CO2** |

**Part B [2x13=26 Marks]**

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| 2.3 | a | Compare and contrast the Vector Model and the Probabilistic Model in Information Retrieval. Highlight the distinctive features and applications of each. | A2 | **CO2** |
|  | **[OR]** | |  |  |
|  | b | Discuss the advancements and challenges in the application of Neural Network Models in Information Retrieval. How do they contribute to the evolving landscape of search technologies? | A2 | **CO2** |
| 2.4 | a | Explore the principles and challenges associated with Relevance Feedback and Query Expansion. How do these techniques enhance the precision of search results? | B1 | **CO2** |
|  | **[OR]** | |  |  |
|  | b | **Examine the factors influencing Precision and Recall in the context of Information Retrieval. Discuss how the interplay between these metrics affects the overall effectiveness of a retrieval system. Provide examples to illustrate the trade-offs and challenges associated with optimizing Precision and Recall simultaneously.** | B1 | **CO2** |

**Course Faculty Course Coordinator Course Expert HOD**