

Code No: 825AD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**MCA V Semester Examinations, December - 2019****INFORMATION RETRIEVAL SYSTEMS****Time: 3 Hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 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**5 × 5 Marks = 25**

- 1.a) Define Information Retrieval. Explain how Information Retrieval is different from DBMS. [5]
- b) Explain briefly the system issues in Information Retrieval. [5]
- c) Write a short note on the challenges faced in XML Retrieval. [5]
- d) What is Matrix Decomposition? State the two theorems associated with Matrix Decomposition. [5]
- e) Write a short note on Connectivity Servers. [5]

PART - B**5 × 10 Marks = 50**

2. Explain in detail about:
 - a) Single-Pass-in Memory Indexing.
 - b) Distributed Indexing. [5+5]
- OR**
- 3.a) Write a short note on Wildcard Queries.
- b) Explain in detail about Stemming and Lemmatization. [5+5]
4. Explain in detail about components of Information Retrieval System. [10]
- OR**
5. Explain in detail variant *tf-idf* functions used for assigning weight to terms in a document for Retrieval. [10]
- 6.a) Explain in detail various types of Language Models.
- b) Write a short note on Language Models versus Other Approaches in IR. [5+5]
- OR**
7. Explain in detail about Naïve Bayes Text Classification. [10]
8. Explain in detail about Hierarchical Agglomerative Clustering. [10]
- OR**
- 9.a) Write a short note on machine learning methods in ad-hoc information retrieval.
- b) Explain in detail about Soft Margin Classification. [5+5]
- 10.a) Explain in detail about DNS Resolution.
- b) Write a detailed note on URL Frontier. [5+5]
- OR**
11. What is PageRank? Explain in detail about Markov Chains. [10]