

Code No: 117DX

R13**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, March - 2017****INFORMATION RETRIEVAL SYSTEMS****(Common to CSE, IT)****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**(25 Marks)**

- 1.a) What is a non-binary independence model? [2]
- b) What is a term frequency and normalized term frequency? Write down their equations. [3]
- c) Give an example that improves the effectiveness of Information retrieval system. [2]
- d) What is Ward's method in clustering? Give example. [3]
- e) What are semantic networks? [2]
- f) What is comparable corpus and parallel corpus? [3]
- g) What is meant by query processing? [2]
- h) What is a signature and how to construct signature file. [3]
- i) What is high-precision search? [2]
- j) What is structured data and what is the use of XML? [3]

Part-B**(50 Marks)**

2. Explain about vector space model in detail. [10]
- OR**
- 3.a) Explain about retrieval strategies and their categories.
 - b) What is smoothing in language model? Explain. [5+5]
- 4.a) Explain how Thesaurus are used to expand a query.
 - b) Explain about the use of manually generated Thesauri. [5+5]
- OR**
5. Explain about:
a) Resultset clustering b) Hierarchical Agglomerative clustering
c) Rocchio clustering [3+4+3]
- 6.a) What are the four core questions to cross the language barrier?
 - b) Explain about document translations and query translations. [4+6]
- OR**
7. Explain the following in semantic networks
a) R-distance b) K-distance [5+5]
8. Discuss about Duplicate document detection. [10]

OR

9. Explain about fixed length and variable index compression. [10]
10. What is distributed document retrieval? Explain the theoretical model of distributed retrieval. [10]
- OR**
- 11.a) Explain briefly about advantages and disadvantages of combining systems of DBMS and Information retrieval.
- b) Explain about Relevance feedback in relational model. [5+5]

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