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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