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) Result set 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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