Code No: 127DX

| R15 |

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, May/June - 2019
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? [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. [5+5]

6.a) What are the four core questions to cross the language barrier? Explain.
  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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