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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Sixth Semester, B.E. - Information Science and Engineering

Semester End Examination; May/June - 2018

Modern Information Retrieval

Time: 3 hrs

Max. Marks: 100

Note: Answer *FIVE* full questions, selecting *ONE* full question from each unit.

UNIT - I

- 1 a. Explain the need of information retrieval system. 5
- b. With a neat diagram, explain the importance of logical view of documents. 10
- c. State the purpose of information retrieval in the library, web and digital libraries. 5
- 2 a. State the purpose of Information Retrieval Model. Explain in detail Vector model. 12
- b. Explain how fuzzy sets are useful in IR, with an example. 8

UNIT - II

- 3 a. What is the need of measures? Explain any four measures with relevant formulas. 10
- b. State the importance of reference collection. 3
- c. List out and illustrate the importance of query protocols in detail. 7
- 4 a. Explain query expansion through global context analysis. 10
- b. Explain the characteristics of a document. 6
- c. Differentiate between SGML and HTML. 4

UNIT - III

- 5 a. Illustrate the importance of each step in document preprocessing with example. 10
- b. Construct Huffman tree for the given sentence:
for each rose, a rose is a rose. And also write down the compressed text. 5
- c. Explain any two compression methods for compressing Inverted File. 5
- 6 a. Consider a sample text sentence and explain how do you construct an inverted index for the same sentence? 5
- b. Differentiate between suffix trie and suffix array. 5
- c. List out and explain the approaches used for approximate string matching. 10

UNIT - IV

- 7 a. Explain parallel information retrieval system. 5
- b. Explain Term partitioning. 5
- c. Define distributed IR. Explain query processing in a distributed IR system. 10
- 8 a. State the purpose of Multimedia IR system. 5
- b. List out and explain query predicates for expressing conditions on multimedia objects. 7
- c. Explain GEMINI algorithm with an example. 8

UNIT - V

- 9 a. List and explain at least five recent trends and research issues related to web. 12
- b. With a neat diagram, explain Harvest architecture of retrieval system. 8
- 10a. Explain the different tools used for browsing and searching. 10
- b. Explain the following :
 - i) Characterizing the Web 10
 - ii) Searching using hyperlinks

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