

Total No. of Questions : 8]

SEAT No. :

PE-2200

[Total No. of Pages : 2

[6584]-99

**B.E. (Computer Engineering)
INFORMATION RETRIEVAL**

(2019 Pattern) (Semester - VII) (410245 A) (Elective - IV)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) *Solve Q1 or Q2 and Q3 or Q4 and Q5 or Q6 and Q7 or Q8.*
- 2) *Figures to the right indicates full marks.*
- 3) *Neat diagram must be drawn whenever necessary.*
- 4) *Assume suitable data if necessary.*

- Q1)** a) Explain General purpose Data Compression for High Query Performance in detail. [6]
- b) List out various Huffman Coding Techniques and explain Length Limited Huffman code technique in detail. [6]
- c) Explain Parametric Gap Compression in detail. [5]

OR

- Q2)** a) Explain different possible classes of symbol wise compression in detail. [6]
- b) Which are the different Context-Aware Compression Methods, explain any Context-Aware Compression Method in detail. [6]
- c) Differentiate between Huffman coding versus arithmetic coding. [5]

- Q3)** a) Explain the concept of term frequency in detail. [6]
- b) Give in detail the concept of Language Models and Smoothing. [6]
- c) Enlist various simple document features and explain any one features in detail. [6]

OR

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SPPU-BE-COMP-CONTENT – KSKA Git

- ✓ Q4) a) Explain Document Length: BM25 retrieval system in detail. [6]
b) Illustrate the process of Relevance Feedback in detail with suitable example. [6]
c) Explain the various problems of categorization and filtering. [6]

- ✓ Q5) a) List and explain different aspects of IR evaluation. [6]
b) Explain Throughput and Latency used while evaluating performance of a search engine strategies in detail. [6]
c) What is the role of Minimizing Adjudication Effort to produce a set of judgments for IR evaluation. [5]

OR

- Q6) a) Differentiate between Arithmetic Mean Versus Geometric Mean in detail. [6]
b) Which are the different methods are used for Selecting the Documents for Adjudication. [6]
c) Elaborate the use of Statistical analysis to estimate a system's performance. [5]

- ✓ Q7) a) Which are the different ways used by search engine to process the queries faster, explain with suitable example. [6]
b) Explain the concept Term Partitioning in detail with suitable example. [6]
c) Explain the term Dynamic Ranking in detail. [6]

OR

- Q8) a) Explain the concept of Extended PageRank in detail. [6]
b) Elaborate the Various categories of user needs in web queries for query analysis. [6]
c) Brief in detail the structure of Web. [6]

