

MAY 2025

Total No. of Questions : 8]

SEAT No. :

PD4584

[6404]-89

[Total No. of Pages : 2

(B)

B.E. (Computer Engineering) INFORMATION RETRIEVAL

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

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Question No. 1 or 2 and 3 or 4 and 5 or 6 and 7 or 8.
- 2) Neat diagram must be drawn whenever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data, if necessary.

- Q1) a) Describe a Huffman coding. [6]
- b) If you want to reduce total size of index what you would focus on justify your answer. [6]
- c) How to measure performance and what are the ways for Index Compression for High Query Performance. [6]

OR

- Q2) a) Explain the Arithmetic coding with suitable example. [6]
- b) Explain Dynamic Inverted Indices with suitable example. [6]
- c) Differentiate between Contiguous Inverted Lists and Non-contiguous Inverted. [6]

- Q3) a) Illustrate Generalized Linear Models. [7]
- b) What is Language Modelling explain Related Methods. [5]
- c) When estimating the probabilities in language modelling what are the problems observed and how to resolve it? [5]

OR

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SPPU-BE-COMP-CONTENT – KSKA Git

- Q4)** a) Explain The Binary Independence Model in detail.
b) Why BM25 is better than TF-IDF?
c) Explain the smoothing probability estimates.

- Q5)** a) What is precision and recall?
b) What are the Characteristics of TREC collection.
c) Write the types of performance measure optimization.

OR

- Q6)** a) What are the challenges with online evaluation?
b) What are the Efficiency measures in information retrieval?
c) Differentiate between Redis and Memcached.

- Q7)** a) Examine various ways of making information retrieval systems scale very large text collections such as the Web.
b) Write Basic PageRank algorithm.
c) Draw and explain Components of a Web crawler.

OR

- Q8)** a) Explain Map reduce basic framework.
b) How to evaluate a web search.
c) Differentiate between Python Scrapy and BeautifulSoup.