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Sr. No 311508

December 2023

BCA- V SEMESTER

Web Technology and Information Retrieval

(GEC-4)

Time: 3 Hours

Max. Marks:75

- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
 2. Answer any four questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.

PART -A

- Q1 (a) Explain Secure HTTP. (1.5)
- (b) Differentiate between Application Server and Web Server. (1.5)
- (c) What is Query processing? (1.5)
- (d) Why is Positional Indexing important ? (1.5)
- (e) What is Link Analysis ? (1.5)
- (f) What is TF-IDF ? (1.5)
- (g) What do you mean by inverted index ? (1.5)
- (h) What is Web Graph ? (1.5)
- (i) What is Stemming? Is it different from Lemmitization? (1.5)
- (j) Explain the term Zipfs Law ? (1.5)

PART -B

- Q2 (a) What do you mean by Informatin Retrieval and expalin its component ? Explain its type. (10)
- (b) List various Limitation of term document incident matrix. (5)
- Q3 (a) Draw the inverted index that would be built for the following document collection: (5)
- Doc 1** breakthrough drug for schizophrenia.
Doc 2 new schizophrenia drug .
Doc 3 new approach for treatment of schizophrenia.
Doc 4 new hopes for schizophrenia patients .
- (b) Differentiate between Blocked sort-based indexing and Single-pass in-memory indexing. (10)
- Q4 Discuss the basic functioning of Web Crawler? Briefly explain types of Web Crawlers. (15)
- Q5 (a) How do Search Engines work technically? Discuss the general architecture of Search Engine with the detailed working of following components: (10)
- a)Indexer Module.

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b) Ranking Module.

(b) Explain the terms : Recall, Precision. (5)

Q6 (a) How distributed Index is created? Explain in detail the working of map and reduce phase with suitable example. (10)

(b) Explain with suitable example how skip pointers can help in reducing the number of comparisons ? (5)

Q7 Write short note (Any three) (15)

a) Lossless vs Lossy Compression.

b) URL Frontier.

c) Posting List Compression.

d) IIS.

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