## Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

Sixth Semester B.E. Degree Examination, June/July 2023 **File Structures** 

Time: 3 hrs

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

- What are file structures? Explain the following: 1
  - Opening file. (i)
  - Reading and writing file (ii)
  - Seeking file (iii)
  - (10 Marks) Closing file. (iv)
- Explain briefly the different ways to organize the data on a magnetic disc. (10 Marks)
- What are the various ways of adding structures to a file to maintain the identity of records 2 (10 Marks) and fields? Explain each with an example.
  - When sequential search is good? Design an algorithm for sequential search. (10 Marks) b.
- Explain how space can be reclaimed in files. (10 Marks) 3
  - Explain key-sorting method with relevant example. Mention the limitations of key sorting (10 Marks) method.
- Explain object oriented model for implementing co-sequential processes. (10 Marks)
  - (10 Marks) Explain with an example the K-way merge.

- What are the B-tree? Give formal definition of B-tree properties. Calculate worst case search 5 (10 Marks) depth with step and explanation.
  - b. Write brief notes on:
    - B\* trees.
    - Virtual B-trees.

(10 Marks)

- Explain simple prefix B+ trees? Further explain the issues involved in maintenance of such (10 Marks) (10 Marks)
  - Explain with an example Adding a simple index to the sequence set.

- What is Hashing? Explain the different hashing functions with an example. (10 Marks) 7
  - How collision resolution is done by progressive overflow? Explain. (10 Marks)
- Explain the working of extendible hashing. 8 a.

(10 Marks)

- Write short notes on:
  - Classes to manipulate Buffers (i)
  - Magnatic tape. (ii)

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(10 Marks)