



Sixth Semester B.E. Degree Examination, June/July 2024 File Structures

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define file structures. Explain the history of file structure design. (08 Marks)
b. Explain the following fundamental file operations : (08 Marks)
i) read() ii) write() with syntax
c. Define : (04 Marks)
i) Physical file
ii) Logical file.

OR

- 2 a. Define File. Explain many ways of adding structures to files to maintain the identify of fields. (08 Marks)
b. Define record. Explain the methods for organizing the records for a file. (08 Marks)
c. List and explain strength and weakness of CD ROM. (04 Marks)

Module-2

- 3 a. What is data compression? Explain different data compression techniques with examples. (10 Marks)
b. Illustrate deleting fixed-length records for reclaiming space dynamically using linked lists and stack. (10 Marks)

OR

- 4 a. Write a short notes on : (12 Marks)
i) Storage fragmentation
ii) Placement strategies.
b. Explain how to improve the secondary index structure with example. (08 Marks)

Module-3

- 5 a. Explain co-sequential processing for matching names in two lists with example. (08 Marks)
b. Explain sorting large file on disks. (08 Marks)
c. Discuss the limitations of keysorting. (04 Marks)

OR

- 6 a. Define B-Tree, Construct B-tree for the following set of keys : (order 4). (12 Marks)
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b. Explain: (08 Marks)
i) Properties of B-Trees
ii) Worst care search depth.

Module-4

- 7 a. Illustrate the internal structure of index set block. (08 Marks)
b. Explain simple prefix B+ tree and its maintenance. (12 Marks)

OR

- 8 a. Write a short notes on
i) Use of Blocks
ii) Choice of block size. (10 Marks)
- b. Discuss the sequence of loading a simple prefix B+ tree. (10 Marks)

Module-5

- 9 a. Discuss the Collision resolution by progressive overflow method with an example. (10 Marks)
- b. Define hashing. Explain simple hashing algorithm with all the steps. (10 Marks)

OR

- 10 a. With diagrams, explain :
i) Dynamic hashing
ii) Linear hashing (10 Marks)
- b. Explain how extendible hashing works. (10 Marks)
