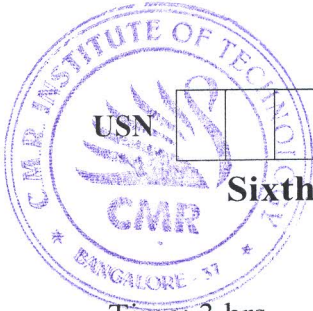


CBCS SCHEME



15IS62

Sixth Semester B.E. Degree Examination, Dec.2023/Jan.2024

File Structures

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Explain the functions of OPEN, READ and WRITE with parameters. (06 Marks)
- b. What are various ways of organizing records in a file? Explain. (06 Marks)
- c. Explain the concept of inheritance, using the IO buffer class hierarchy. (04 Marks)

OR

- 2 a. Briefly explain the different basic ways to organize the data on a disk. (08 Marks)
- b. Define physical file and logical file. (04 Marks)
- c. In C++ language, how do you perform the following: i) Open a file ii) Seek file. (04 Marks)

Module-2

- 3 a. Briefly explain with example how spaces can be reclaimed dynamically in fixed length records file. (08 Marks)
- b. What is Data compression? Explain any two Data Compression algorithms with example. (08 Marks)

OR

- 4 a. Illustrate the steps or operations Required to maintain an Indexed file. (08 Marks)
- b. How do you improve Secondary Index Structure using Inverted Lists.. (08 Marks)

Module-3

- 5 a. What is co-sequential processing? Explain matching and merging. (08 Marks)
- b. Explain sorting large files on disk. (08 Marks)

OR

- 6 a. What is B-tree? Explain worst case search depth. (08 Marks)
- b. With example, explain deletion, merging and redistribution in B-trees. (08 Marks)

Module-4

- 7 a. Give the structure of indexed sequential access. (04 Marks)
- b. With a neat sketch, discuss simple prefix B⁺ tree and its maintenance. (06 Marks)
- c. Compare the strengths and weakness of B+ trees and B-trees. (06 Marks)

OR

- 8 a. Explain a B-tree, the creation with examples. (08 Marks)
- b. Explain the internal structure of index set blocks. (08 Marks)

Module-5

- 9 a. What is hashing? Explain different hashing methods. (08 Marks)
- b. What is collision? Explain collision resolution by progressive overflow. (08 Marks)

OR

- 10 a. Explain the working of extendible hashing. (08 Marks)
- b. Briefly explain linear hashing. (08 Marks)

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

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