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10IS63



Time: 3 hrs.

**Sixth Semester B.E. Degree Examination, July/August 2021**  
**File Structures**

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. Define File Structure. Explain the fundamental operations of file system. (10 Marks)  
b. Explain the cost of a Disk Access. (06 Marks)  
c. What are the techniques for managing buffers to improve performance? (04 Marks)
  
- 2 a. Explain the most common methods of adding structure of files to maintain the identify of fields. (06 Marks)  
b. Explain Buffer class hierarchy. (08 Marks)  
c. Write a note on Direct Access. (06 Marks)
  
- 3 a. Define Data compression. What are the Techniques of data compression and explain any two techniques. (10 Marks)  
b. Explain Algorithm for key sort and write the limitations. (06 Marks)  
c. Explain Bending. Write the advantages and Disadvantages of Bonding. (04 Marks)
  
- 4 a. Explain object oriented Model for Implementing consequential process. (10 Marks)  
b. Describe the K-way Merge Algorithm with example. (10 Marks)
  
- 5 a. Define B-tree. Explain the creation of a B-tree with example. (10 Marks)  
b. With reference to B-trees, explain the following : (10 Marks)  
i) Worst case search depth  
ii) Deletion from a B-tree  
iii) Redistribution during Insertion.
  
- 6 a. Explain how to add a simple Index to sequence set. (10 Marks)  
b. Compare B-Trees, B<sup>+</sup> trees and simple protein B<sup>+</sup> Trees. (10 Marks)
  
- 7 a. Define Hashing. Explain a simple hashing Algorithm with example. (10 Marks)  
b. What is collision? Explain different collision resolution techniques. (10 Marks)
  
- 8 a. Explain the working of extendible hashing. (10 Marks)  
b. Explain Dynamic Hashing and Linier Hashing. (10 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.

