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10IS63

Sixth Semester B.E. Degree Examination, June/July 2014
File Structures

Time: 3 hrs. Max. Marks:100

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

PART – A

1 a. With a neat sketch, explain UNIX directory structure. **(05 Marks)**

b. Differentiate between the physical file and the logical file. **(05 Marks)**

c. Explain the following functions:
i) Open a file ii) Close a file **(10 Marks)**

2 a. What is a record? Explain different methods for organizing records of a file with example. **(11 Marks)**

b. Explain briefly how to manipulate buffers using classes. **(09 Marks)**

3 a. What are the limitations of binary search and internal sorting? **(08 Marks)**

b. Explain the different operations required to maintain indexed file. **(12 Marks)**

4 a. Explain how co-sequential processing is implemented in a general ledger program. **(10 Marks)**

b. Explain how much time a merge sort takes to sort a given file. **(10 Marks)**

PART – B

5 a. What is B-tree? Explain deletion, merging and redistribution of elements on B-trees. **(10 Marks)**

b. Write a note on problem associated with paged binary trees. **(06 Marks)**

c. List the four properties of B* trees. **(04 Marks)**

6 a. With an example, explain adding a simple index to the sequence set. **(10 Marks)**

b. Explain how to load a simple prefix B+ tree. **(10 Marks)**

7 a. What is Hashing? Explain the three different steps used in a simple hashing algorithm. **(10 Marks)**

b. Briefly explain the different collision resolution techniques by progressive overflow. **(10 Marks)**

8 Write short notes on:

a. Extendible hashing

b. Pinned records

c. CD-ROM strengths and weaknesses

d. K-way Merge **(20 Marks)**

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