USN ☐☐☐☐☐☐☐☐☐☐

Sixth Semester B.E. Degree Examination, Dec.2019/Jan.2020
File Structures

Time: 3 hrs.   Max. Marks:100

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

PART – A

1 a. Describe the relation between the physical file and the logical file.   (04 Marks)
   b. Briefly explain the different basic ways to organize the data on a disk.   (10 Marks)
   c. What is seeking? How it is supported in 'C' streams and 'C++' streams.   (06 Marks)

2 a. What is a record? Explain different methods for organizing records of a file. (12 Marks)
   b. What is the advantage of using inheritance for record buffer classes? Explain. (08 Marks)

3 a. Define data compression. Explain irreversible compression techniques.   (06 Marks)
   b. Explain the key-sorting technique and their limitations.   (06 Marks)
   c. What is inverted list? Discuss it with an example.   (08 Marks)

4 a. Explain the object – oriented model for implementing co-sequential process. (10 Marks)
   b. Briefly explain the different methods used to sort files on a tape.   (10 Marks)

PART – B

5 a. Explain B-tree methods for search ( ) and insert ( ) with necessary C++ code. (08 Marks)
   b. Explain deletion, merging and redistribution of elements in B-tree.   (12 Marks)

6 a. Explain the simple – prefix B + tree.   (05 Marks)
   b. Compare the strengths and weakness of B + trees and B – tree.   (05 Marks)
   c. Explain the block splitting and merging due to insertion and deletion in the sequence set, with examples. (10 Marks)

7 a. What is Hashing? Explain the simple hashing algorithm.   (10 Marks)
   b. Explain the double hashing and chained progressive overflow collision resolution techniques. (10 Marks)

8 a. Explain the working procedure of extendible hashing.   (10 Marks)
   b. Explain briefly linear hashing and dynamic hashing method.   (10 Marks)

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