CBCS SCHEME

USN | | | | | | | | | | |

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)**

* * * * *