|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | 13CS2105 | - | FILE STRUCTURES | | | | | | | | |
|  |  | |  | | | | |
| Hours / Week | : | 4 | |  | Sessional Marks | : | 40 |
| Credits | : | 4 | |  | End Examination Marks | : | 60 |

|  |
| --- |
| **UNIT – I** |
| **File Structure Concepts**: Introduction, Files and Record Organization, Record Access, File Access and File Organization, Record structures, Portability and Standardization. |
|  |
| **UNIT – II** |
| **Organizing Files For Performance**: Data Compression, Reclaiming Space in Files, Internal Sorting and Key Sorting.  **Indexing**: Index, Index for Entry-Sequenced Files, Selective Indexes, Binding, Retrieval using combinations of secondary keys. |
|  |
| **UNIT – III** |
| **B-Trees**: B-Tree properties, operations, indexing with Binary Search Trees, Multilevel Indexing, B\* Trees, Virtual B-Trees.  **Indexed Sequential File Access**: Introduction, maintaining a sequence set, adding a simple index to the sequence set, separating instead of keys, prefix B+ Trees, B+ Trees. |
|  |
| **UNIT – IV** |
| **Hashing**: introduction, hashing functions, Record distributions, collision resolution techniques (progressive overflow, double hashing, chained progressive overflow, chaining a separate overflow area, scatter tables) and buckets.  **Extendible Hashing**: introduction, tries, performance, dynamic hashing, linear hashing. |
|  |
| **UNIT – V** |
| File related header files in c and c++, File handling functions in c and c++, Reading and writing files in c and c++, File handling related classes in java (File, FileInputStream, FileOutputStream, RandomAccessFile). |
|  |
|  |
| TEXT BOOKS |
| 1. File Structures Michael J.Folk. 2. The Complete Reference Java2, Herbert Schildt. |
|  |
|  |
|  |