

Code: CS4T3

**II B.Tech - II Semester – Regular/Supplementary Examinations –
April 2017**

**FILE STRUCTURES
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22

1.

- a) Describe the relation between the physical file and the logical file.
- b) Explain briefly the comparisons of different types of storage in terms of access time, capacity and cost.
- c) Describe buffering strategy.
- d) Explain the class hierarchy for record buffer objects.
- e) Write brief notes on Performance of sequential search.
- f) Define B-Tree. Explain with example.
- g) Importance of delimiters.
- h) Compare and contrast the organization of B + tree and simple prefix B+ trees.
- i) Define Sequence set.
- j) Define hashing. Explain with example.
- k) Explain double hashing briefly.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) With neat sketch, explain Unix directory structure. 8 M
- b) Derive the equation for estimating the tape length requirement. 8 M
3. a) Explain in detail what is meant by record access and record structures? 8 M
- b) What are self-describing files? How it is supported in fixed length record structures, explain with an example? 8 M
4. a) Explain B-Tree methods for search() and insert() with C or C++ code. 8 M
- b) Describe in detail indexed sequential access. 8 M
5. a) Explain simple prefix B+ tree. Explain the issues involved in maintenance of such trees. 8 M
- b) Explain the block splitting and merging due to insertion and deletion in the sequence set, with examples. 8 M

6. a) Explain the double hashing and chained progressive overflow collision resolution Techniques. 8 M
- b) Describe in detail patterns of the record access. 8 M