

[07 – 3114]

III/IV B.Tech. DEGREE EXAMINATION.

First Semester

Computer Science and Engineering

Elective I — FILE STRUCTURES

(Common with Information Technology and Dual Degree Program in SE and IT)

(Effective from the admitted batch of 2006–2007)

Time : Three hours

Maximum : 70 marks

Question No. 1 is compulsory.

Answer any FOUR from the remaining.

All questions carry equal marks.

Answer to all parts of any question at one place.

1. (a) Explain seeking in C.
- (b) Explain storage hierarchy.
- (c) Define data compression and its uses.
- (d) Write the properties of B⁺ Tree.

- (e) List out the limitations of indexing.
 - (f) List out the possible situations for record updating.
 - (g) List out different collision resolution techniques.
2. (a) Explain the organization of disks (magnetic) with neat sketch. (10)
- (b) Explain the concept of disk bottlenecks. (4)
3. (a) Explain the procedure involved in transmitting a byte from data area to file. (7)
- (b) What happens when a program writes a byte to file on a disk? (7)
4. Explain how can you reclaim space dynamically when deleting fixed length and variable length records. (14)
5. (a) Explain how can you retrieve records by keys. (4)
- (b) What is inverted list? Explain the conceptual view of the primary key reference fields as a series of lists. (10)

6. Illustrate B⁺ Tree Operations (insertion, deletion, search) by example. (14)
7. How open hashing and closed hashing is done? Explain with example. (14)
8. Explain the concept of extendable hashing in detail. (14)