

CBCS Scheme



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15IS62

Sixth Semester B.E. Degree Examination, June/July 2018 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. Differentiate Filestructures ad Datastructures. Briefly discuss the evaluation of file structures. (08 Marks)
- b. Calculate the space required on tape, if we want to store 1 million 100 bytes records on 7250 bpi tape that has an internal block gap of 0.2 inches and with a blocking factor of 60. Hence calculate the space required. (08 Marks)

OR

- 2 a. Describe the different record structures used in the organization of the file. (08 Marks)
- b. Write brief notes on :
- i) Performance of sequential search
 - ii) Performance of Direct access
 - iii) RRN
- (08 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. Apply K-way Merge technique for merging large number of lists. Demonstrate with an example. (08 Marks)
- b. Using Co-sequential match based on a single loop, demonstrate intersection of two lists. (08 Marks)

OR

- 6 a. Explain the following with respect to B-tree
- i) Worst case search depth
 - ii) Properties of B-tree.
- (10 Marks)
- b. Construct B-tree for the following set of keys : (order H) show every steps clearly
C G J X N S U O A E B H I F K L Q R T V
(06 Marks)

Module-4

- 7 a. Explain the following :
- i) Use of Blocks
 - ii) Choice of Block size.
- (08 Marks)
- b. Explain how to add simple index to the sequence set. (08 Marks)

OR

- 8 a. With a neat sketch, discuss simple prefix B+ tree and its maintenance. (10 Marks)
b. Explain about A variable Order B -- tree. (06 Marks)

Module-5

- 9 a. What is hashing? Write an hashing algorithm and explain with an example. (10 Marks)
b. What are the limitations of chained progressive overflow? Explain with an example. (06 Marks)

OR

- 10 a. Explain how extendible hashing works. (10 Marks)
b. Write short notes on the following :
i) Double hashing
ii) Extendable hashing performances. (06 Marks)

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