CBCS Scheme

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

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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