

chool Number:

06.06.2013

ame-Surname:

File Organization Final Exam

1) What are the selected dividers for the Quicksort process of an array of 24, 15, 26, 25, 36, 10, 13, 35, and 50?

- a) 24, 10, 35 b) 24, 25, 35 c) 24, 35, 50 d) 24, 13, 36

2) Which is not required by the general linear hashing technique?

- a) Bit sequence table b) NEXT pointer c) Primary pages d) H_0 function

> Answer the questions between 3-5 according to the following information:

The numbers being placed in a binary tree are: 6-7-4-12-7dup-2-2dup-5-7dup-11.

3) What is the postOrder traversal of the tree?

- a) 6-7-2-4-5-12-11 b) 2-5-4-11-12-7-6 c) 6-4-2-5-7-11-12 d) 2-4-5-6-7-11-12

4) What is the preOrder traversal of the tree?

- a) 2-5-4-11-12-7-6 b) 6-4-2-5-7-12-11 c) 6-7-2-4-5-12-11 d) 2-4-5-6-7-11-12

5) What is the inOrder traversal of the tree?

- a) 2-5-4-11-12-7-6 b) 6-4-2-5-7-12-11 c) 6-7-2-4-5-12-11 d) 2-4-5-6-7-11-12

6) What is the main purpose of chained progressive overflow?

- a) To eliminate the usage of synonyms. b) To give different two hash functions.
c) To reduce the search length for records within clusters. d) To change the home addresses of the records.

7) Which type of file organization includes both of the sequential and random access methods?

- a) Indexed Sequential b) Random c) Sorted Sequential d) Unordered Sequential

8) What is the number of key values that can be contained in a full node for the given information about the (Information: Pointer size=5 bytes, key size: 10 bytes, index node size: 300 bytes.)

- a) 20 b) 30 c) 50 d) 60

9) What is the duration (time) to read 20 sequential blocks on a disk with average seek time: 5 ms, average rotational latency: 2.75 ms, and block transfer time: 0.75 ms?

- a) 170 ms b) 22.75 ms c) 15 ms d) 8.5 ms

10) Which one is not true for primary index?

- a) It is defined on an ordered data file. b) It is a type of multi-level indexes.
c) It includes one index entry for each block in the data file. d) The data file is ordered on a key field.

11) Which is not true for Indexed Sequential Access Method (ISAM)?

- a) It covers multilevel indexing. b) It is a kind of static tree structure. ✓
c) Leaf pages contain index entries. d) It can support both equality and range queries.

Which one is not a property of B+ trees? (X: Tree's order, H: Tree's height.)

- a) The root has at least X keys and at most 2X keys. b) All leaves are on the same level.
c) An internal node with k keys has k+1 children. d) It is necessary to read H+1 pages to find a record.

What is the first step in bulk loading B+ tree index?

Roll Number: [REDACTED]
Date: [REDACTED]

46.06.2013

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1) When are the selected divisors for the Quicksort process of an array of 24, 15, 36, 25, 18, 10, 11, 30, and 50?
a) 24, 10, 33 b) 24, 25, 33 c) 24, 33, 30 d) 24, 13, 30

2) Which is not required by the general linear hashing technique?
a) Bit sequence table b) NEXT pointer c) Primary pages d) H₂ function

3) Answer the questions between 3-5 according to the following information:
The numbers being placed in a binary tree are: 6-7-4-12-5dup-2-3dup-5-7dup-11

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13) What is the first step in bulk loading B+ tree index?
a) Deletion b) Merging c) Insertion d) Sorting

14) How many buffers are required in 2-way sorting?
a) 2 b) 3 c) 4 d) 5

15) Which file command does not include "sizeof (struct StructName)" in its related examples?
a) fseek b) fread c) fprintf d) fwrite

16) Which file mode opens or creates a file for update in binary mode; writing is done at the end of the file?
a) a+ b) ab+ c) w+ d) wb+