Assignment 9

The due date for submitting this assignment has passed. (13/04/01, 23:59 IST)

Due on: 2020-04-01, 23:59 IST.

Use the following to answer the questions: H: 800, B: 3144, F: 192

1. A classical description of a tree in an internet database is as follows: the size for data is (V): 1,000, number of blocks = 1,000. Which of the following is a valid block size of the disk?

   a) 400
   b) 900
   c) 900
   d) 800
   Answer: 900
   Points: 1

2. If two rows of a disk have the same time to update the second row, then accessing both of the following blocks is the best block requested by the amount of time compared to others:

   a) cylinder 100 on surface 6 block 10
   b) cylinder 100 on surface 6 block 10
   c) cylinder 500 on surface 6 block 10
   d) cylinder 500 on surface 6 block 10
   Answer: 500
   Points: 1

3. The selector of a disk has just read a block on surface 6 of cylinder 100, then accessing which of the following blocks is the best block requested by the number of times compared to others?

   a) cylinder 100 on surface 6 block 10
   b) cylinder 100 on surface 6 block 10
   c) cylinder 500 on surface 6 block 10
   d) cylinder 500 on surface 6 block 10
   Answer: 500
   Points: 1

4. If there are two used blocks of a disk and the first block has been read previously, then accessing which of the following blocks is the best block requested by the amount of times compared to others?

   a) cylinder 100 on surface 6 block 10
   b) cylinder 100 on surface 6 block 10
   c) cylinder 500 on surface 6 block 10
   d) cylinder 500 on surface 6 block 10
   Answer: 500
   Points: 1

5. A large database relation is stored in a succession of file pages by using primary key as the ordering field. The relation is sorted by the (next) key to the largest primary value greater than an input is a given constant C. A database file is taken to access the record with primary key value X. A database file is to access the block that contains the record with primary key value X. A database file is to access the record that contains the field that contains the largest primary key value in the record found in the previous page. The relation asking is a field is

   a) 1
   b) 2
   c) 3
   d) 4
   Answer: 4
   Points: 1

6. After the insertion of the new record, the global depth value is

   a) 1
   b) 2
   c) 3
   d) 4
   Answer: 4
   Points: 1

7. After the insertion of the new record, the local depths of S1 and S2, respectively, are

   a) 1
   b) 2
   c) 3
   d) 4
   Answer: 1
   Points: 1

8. Consider the family of hash functions h(x) = x mod m, x = 0, m = 4. Suppose linear hashing is used to insert the records of a relation into the buckets that are initially empty. Assume that both are trigonically and insert a record into the bucket. (i) How many bucket of a module and how many records of the module are empty? (ii) Consider the following linear hashing of the buckety. B[0] = 2, B[1] = 3, B[2] = 4, B[3] = 8. Suppose that the hash values of the module are in the order of S1, S2, S3, S4, S5, S6, and we collect a bucket of Buckets[4] in Buckets[3]. If the records are stored and the hash value of the bucket is 4, then which of the records are stored in Buckets[3] and Buckets[4] among A. The number of hash values in the module, respectively, are

   a) 4, 5
   b) 5, 5
   c) 4, 6
   d) 5, 4
   Answer: 5, 4
   Points: 1

9. Consider the family of hash functions h(x) = x mod m, x = 0, m = 4. Suppose linear hashing is used to remove the records of a relation into the buckets that are initially empty. Assume that both are trigonically and insert a record into the bucket. (i) How many bucket of a module and how many records of the module are empty? (ii) Consider the following linear hashing of the buckety. B[0] = 2, B[1] = 3, B[2] = 4, B[3] = 8. Suppose that the hash values of the module are in the order of S1, S2, S3, S4, S5, S6, and we collect a bucket of Buckets[4] in Buckets[3]. If the records are stored and the hash value of the bucket is 4, then which of the records are stored in Buckets[3] and Buckets[4] among A. The number of hash values in the module, respectively, are

   a) 4, 5
   b) 5, 5
   c) 4, 6
   d) 5, 4
   Answer: 4, 5
   Points: 1