IDESQAS01

– What is the worst-case time for linear search finding a single item in an array?

Select one:

- Logarithmic time.
- Linear time.
- Constant time.
- Quadratic time.

IDESQAS03

– What is the worst-case time for finding a key in a hash table (assume that there is no collision)?

Select one:

- Constant time.
- Linear time.
- Quadratic time.
- Logarithmic time.

IDESQAS04

– What additional requirement is placed on an array, so that binary search may be used to search for a key?

Select one:

- The array elements must form a heap.
- The array must be sorted.
- The array must have at least 2 entries.
- The array's size must be a power of two.

IDESQAS05

– What is the best definition of a collision in a hash table?

Select one:

- Two entries with different keys have the same exact hash value.
- Two entries are identical except for their keys.
- Two entries with the exact same key have different hash values.

Two entries with different data have the exact same key.

IDESQAS06

– A separate chaining hash table has an array size of 512. What is the maximum number of entries that can be placed in the table?

Select one:

There is no maximum.

256.

1024.

512.

511.

IDESQAS10

– Consider a hash table of size seven, with starting index zero, and a hash function h(k)=(3k+4) mod 7. What is the address of the key k=10?

Select one:

3.

0.

7.

6.

IDESQAS11

– Complete the code below to search for key in an array using linear seach algorithm?

Select one:

-1.

true.

a[i].

i.

IDESQAS12

– In a hash table of the size N using linear probing, what is the probing hash function hi(k)?

Select one:

hi(k)=(h(k)+i) mod N.

- hi(k)=i mod N.
- hi(k)=h(k) mod N.
- hi(k)=i + k.

IDESQAS13

– Given the following input (4322, 1334, 1471, 9679, 1989, 6171, 6173, 4199) and the hash function: h(k)=k mod 10. Which of the following statements are true?

Select one:

- All elements hash to the same value.
- 1471 and 6171 has to different value.
- Each element hashes to a different value.
- 4199 and 9679 hash to the same value.

IDESQAS14

– In the context of seach algorithms, which of the following statements are true?

Select one:

- Binary search is the fastest search algorithm.
- Linear search is faster than binary search.
- Hash data structure is used to support sorting.
- Binary search is faster than linear search, but it requires a sorted array.

IDESQAS15

– Which of the following statements is used in binary search algorithm to halve the array?

Select one:

- middle=middle/2
- middle=(right-left)/2
- middle=(left + right)/2
- middle=midlle*2