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**Started on** Friday, 7 June 2024, 9:55 PM

**State** Finished

**Completed on** Friday, 7 June 2024, 10:21 PM

**Time taken** 25 mins 38 secs

**Grade** 9.00 out of 15.00 (60%)

Question **1**

Incorrect

Mark 0.00 out of 1.00

What is mean by stable [sorting](#) algorithm?

- ☐ a. A [sorting](#) algorithm is stable if it doesn't preserve the order of duplicate keys
- ☒ b. A [sorting](#) algorithm is stable if it preserves the order of non-duplicate keys ✖
- ☐ c. A [sorting](#) algorithm is stable if it preserves the order of duplicate keys
- ☐ d. A [sorting](#) algorithm is stable if it preserves the order of all keys

Your answer is incorrect.

The correct answer is:

A [sorting](#) algorithm is stable if it preserves the order of duplicate keys

Question **2**

Correct

Mark 1.00 out of 1.00

Algorithm design technique used in merge sort algorithm is

- ☐ a. Greedy method
- ☐ b. Backtracking
- ☐ c. Dynamic programming
- ☒ d. Divide and conquer ✔

Your answer is correct.

The correct answer is:

Divide and conquer

Question **3**

Correct

Mark 1.00 out of 1.00

Finding the location of a given item in a collection of items is called

- ☐ a. Discovering
- ☐ b. Finding
- ☒ c. [Searching](#) ✓
- ☐ d. Mining

Your answer is correct.

The correct answer is:

[Searching](#)

Question **4**

Correct

Mark 1.00 out of 1.00

Which of the following is not the required condition for a binary search algorithm?

- ☐ a. The [list](#) must be sorted
- ☐ b. Number values should only be present  
Number values should only be present
- ☐ c. There should be direct access to the middle element in any sublist
- ☒ d. There must be a mechanism to delete and/or insert elements in the [list](#) ✓

Your answer is correct.

The correct answer is:

There must be a mechanism to delete and/or insert elements in the [list](#)

Question **5**

Correct

Mark 1.00 out of 1.00

Which of the following is not a limitation of binary search algorithm?

- ☐ a. There must be a mechanism to access middle element directly
- ☐ b. Must use a sorted array
- ☒ c. Binary search algorithm is not efficient when the data elements more than 1500 ✓
- ☐ d. Requirement of sorted array is expensive when a lot of insertion and deletions are needed

Your answer is correct.

The correct answer is:

Binary search algorithm is not efficient when the data elements more than 1500

Question **6**

Incorrect

Mark 0.00 out of 1.00

Very slow way of [sorting](#) is \_\_\_\_\_

- ☐ a. Bubble sort
- ☐ b. Quick sort
- ☐ c. Insertion sort
- ☒ d. Heap sort ✗

Your answer is incorrect.

The correct answer is:

Insertion sort

Question **7**

Incorrect

Mark 0.00 out of 1.00

Which of the following is not an in-place [sorting](#) algorithm?

- ☐ a. Selection sort
- ☒ b. Heap sort ✗
- ☐ c. Merge sort
- ☐ d. Quick sort

Your answer is incorrect.

The correct answer is:

Merge sort

Question 8

Correct

Mark 1.00 out of 1.00

\_\_\_\_\_ sort is the simplest [sorting](#) algorithm that works by repeatedly swapping the adjacent elements in case they are unordered in n-1 passes.

- ☒ a. Bubble ✓
- ☐ b. Complexity
- ☐ c. Insertion
- ☐ d. Selection

Your answer is correct.

The correct answer is: Bubble

Question 9

Incorrect

Mark 0.00 out of 1.00

\_\_\_\_\_ is putting an element in the appropriate place in a sorted [list](#) yields a larger sorted order [list](#).

- ☐ a. Extraction
- ☐ b. Insertion
- ☒ c. Selection ✗
- ☐ d. Distribution

Your answer is incorrect.

The correct answer is:

Insertion

Question **10**

Correct

Mark 1.00 out of 1.00

Given an array arr = {45,77,89,90,94,99,100} and key = 99; what are the mid values(corresponding array elements) in the first and second levels of recursion?

- ☐ a. 89 and 99
- ☐ b. 90 and 94
- ☐ c. 89 and 94
- ☒ d. 90 and 99 ✓

Your answer is correct.

The correct answer is:  
90 and 99

Question **11**

Incorrect

Mark 0.00 out of 1.00

The average case occurs in the linear search algorithm

- ☐ a. Item is the last element in the array or item is not there at all
- ☐ b. When the item is somewhere in the middle of the array
- ☐ c. When the item is not the array at all
- ☒ d. When the item is the last element in the array ✗

Your answer is incorrect.

The correct answer is:  
When the item is somewhere in the middle of the array

Question **12**

Correct

Mark 1.00 out of 1.00

\_\_\_\_\_ search takes a sorted/ordered [list](#) and divides it in the middle.

- ☐ a. Both (1) & (3)
- ☐ b. Hash
- ☐ c. Linear
- ☒ d. Binary ✓

Your answer is correct.

The correct answer is:  
Binary

Question **13**

Incorrect

Mark 0.00 out of 1.00

Given an array arr = {45,77,89,90,94,99,100} and key = 100; What are the mid values(corresponding array elements) generated in the first and second iterations?

- ☐ a. 89 and 94
- ☐ b. 94 and 99
- ☐ c. 90 and 99
- ☒ d. 90 and 100 ✖

Your answer is incorrect.

The correct answer is:

90 and 99

Question **14**

Correct

Mark 1.00 out of 1.00

In \_\_\_\_\_ checks the elements of a [list](#), one at a time, without skipping any element.

- ☐ a. Binary search
- ☐ b. Both (1) & (3)
- ☒ c. Linear search ✔
- ☐ d. Hash search

Your answer is correct.

The correct answer is:

Linear search

Question **15**

Correct

Mark 1.00 out of 1.00

Two-way merge sort algorithm is used to sort the following elements in ascending order.  
200,470,150,80,90,40,400,300,120,70

What is the order of these elements after second pass of the merge sort algorithm?

- ☒ a. 80,150,200,470,40,90,300,400,70,120 ✓
- ☐ b. 40,70,80,90,120,150,200,300,400,470
- ☐ c. 200,470,80,150,40,90,300,400,70,120
- ☐ d. 40,80,90,150,200,300,400,470,70,120

Your answer is correct.

The correct answer is:

80,150,200,470,40,90,300,400,70,120

[◀ Searching](#)

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