

**Started on** Tuesday, 2 July 2024, 3:44 PM**State** Finished**Completed on** Tuesday, 2 July 2024, 3:54 PM**Time taken** 10 mins 16 secs**Grade** 4 out of 10 (40%)**Question 1**

Complete

Mark 0 out of 1

In a linear search algorithm, worst case occur.

- ☐ a. If the key element is exist at first position in the list.
- ☐ b. If the key element is exist at last position in the list.
- ☒ c. If the key element does not exist in the list.
- ☐ d. If the key element either exists at last position or does not exist in the list.

**Question 2**

Complete

Mark 1 out of 1

In binary search algorithm after every iteration search space is reduced by

- ☐ a.  $n$
- ☐ b.  $n-1$
- ☒ c.  $n/2$
- ☐ d.  $2n$

**Question 3**

Complete

Mark 1 out of 1

In Which sorting algorithm elements which are at two consecutive positions get compared.

- ☐ a. Selection Sort
- ☒ b. Bubble Sort
- ☐ c. Insertion Sort
- ☐ d. None Of These

**Question 4**

Complete

Mark 0 out of 1

The postfix form of the expression  $(A + B) * (C * D - E) * F / G$  is?

- ☒ a.  $AB + CD * E - FG /**$
- ☐ b.  $AB + CD * E - F **G /$
- ☐ c.  $AB + CD * E - *F *G /$
- ☐ d.  $AB + CDE * - *F *G /$

**Question 5**

Complete

Mark 0 out of 1

What is an advantage of the heap over a stack.

- ☐ a. The heap is more flexible than the stack.
- ☒ b. Memory space for the heap can be dynamically allocated and de-allocated as needed.
- ☐ c. The memory of the heap can at times be slower when compared to that stack.
- ☐ d. A and B.

**Question 6**

Complete

Mark 0 out of 1

What is the best time complexity of bubble sort?

- ☒ a.  $O[n]^2$
- ☐ b.  $O[n] \log n$
- ☐ c.  $O[n]$
- ☐ d.  $O[n] (\log n)^2$

**Question 7**

Complete

Mark 0 out of 1

Which of the following condition is used to traverse the list till second last node SCLL?

- ☐ a.  $trav \neq NULL$
- ☒ b.  $trav \rightarrow next \neq NULL$
- ☐ c.  $trav \rightarrow next \rightarrow next \neq NULL$
- ☐ d.  $trav \rightarrow next \rightarrow next \neq head$

**Question 8**

Complete

Mark 1 out of 1

Which of the following is true about linked list implementation of queue?

- ☐ a. In push operation,if new nodes are inserted at the beginning of linked list,then in pop operation,nodes must be removed from end.
- ☐ b. In push operation, if new nodes are inserted at the end of linked list, then in pop operation, nodes must be removed from beginning.
- ☐ c. Queue data structure can be used to implement least recently used (LRU) page fault algorithm and Quick short algorithm.
- ☒ d. All of the above

**Question 9**

Complete

Mark 0 out of 1

Which of the following statement is false about singly linear linked list?

- ☐ a. In a SLLL, traversal can be done only in a forward direction.
- ☐ b. In a SLLL, add and delete node at last position operations takes  $O[N]$  time.
- ☒ c. In SLLL, add and delete node at first position operations takes  $O(1)$  time.
- ☐ d. In SLLL, previous node of any node can be accessed from it.

**Question 10**

Complete

Mark 1 out of 1

\_\_\_\_\_ form of access is used to add and remove nodes from a queue.

- ☐ a. LIFO, Last In First Out
- ☒ b. FIFO, First In First Out
- ☐ c. Both LIFO & FIFO
- ☐ d. None of these