

Q. What is the time complexity to add node into the singly linear linked list at last position?

- A. $O(n)$
- B. $O(n^2)$
- C. $O(1)$
- D. $O(\log n)$

Answer: A.

Q. 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.

Answer: D

Q. Which of the following statement is false in a Linked List

- A. Linked List is a dynamic data structure.
- B. Addition and Deletion operations are efficient and convenient in a Linked List than in an array.
- C. Linked List elements can be accessed efficiently than array elements.
- D. Linked List takes more space to store n elements than array.

Answer: C

Q. Which of the following operations in a SCLL takes $O(1)$ time?

- A. Add node at last position
- B. Add node at first position
- C. Delete node at last position
- D. Delete node at first position
- E. None of the above

Answer: E

Q. Which of the following statement is false?

- A. Linked List elements gets stored into the heap section.
- B. Add element into a linked list at specific position takes $O(1)$ time.
- C. Searching operations is efficient on array than linked list.
- D. None of the above

Answer: B

Q. Which of the following statement is false about DLLL?

- A. This type of linked list can be traverse in forward as well backward direction.
- B. Element can be added into this list at last position in $O(1)$ time.
- C. Element can be deleted from this list which is first position takes $O(1)$ time.
- D. Previous node of any node can be accessed.

Answer: B

Q. Which of the following is false about DCLL?

- A. Traversal can be start from either first node or last node.
- B. Addition and Deletion operations can be performed in $O(1)$ time.
- C. Searching can be done in $O(\log n)$ time.
- D. List can be traverse in both forward and backward direction.

Answer: C

Q. Which of the following data structure is used to implement depth first traversal algorithm?

- A. Array
- B. Linked List
- C. Stack
- D. Queue

Answer: C

Q. Which of the following is not a valid operation on stack?

- A. Push
- B. Peek
- C. Pop
- D. Top
- E. None of the above

Answer: D

Q. Stack data structure works in _____ manner.

- A. First In First Out
- B. First In Last Out
- C. Last In First Out
- D. Both A & C
- E. Both B & C

Answer: E

Q. Stack can be implemented by using

- A. Linked List
- B. Array
- C. Both A & B
- D. None of the above

Answer: C

Q. What is the condition to check stack is full or not in a dynamic stack?

- A. `top == SIZE`
- B. `top == SIZE-1`
- C. `top == NULL`
- D. None of the above

Answer: D

Q. Which of the following functions can be used to implement dynamic stack functionalities `push()` & `pop()`?

- A. `add_last()` & `delete_first()`
- B. `delete_first()` & `add_last()`
- C. `add_last()` & `delete_last()`
- D. None of the above

Answer: C

Q. Convert given infix expression into its equivalent postfix expression: **Infix expression is: $(A*B)*(C/D)+E*F-G*H$**

- A. $AB*CD/EF**+GH*-$
- B. $AB*CD/*EF*+GH*-$
- C. $ABCD*/*EF*+GH*-$
- D. $AB*CD/*EF*GH+*-$

Answer: B

Q. Convert given prefix expression into its equivalent postfix:

$- + * / * a b c d / e f * hg$

- A. $ab*c/d*ef/+h*g-$
- B. $ab*c/d*ef/+hg*-$
- C. $abc*/d*ef/+hg*-$
- D. $ab*cd/*ef/+hg*-$

Answer: B