Started on	Friday, 16 July 2021, 3:05 PM
State	Finished
Completed on	Friday, 16 July 2021, 4:00 PM
Time taken	55 mins 1 sec

Question **1**

Complete

Marked out of 2.50

Let us assume that one Stack (S) is implemented using two Queues Q1 and Q2 (as per the method discussed in the class). Then, to PUSH 7 elements to S, the total number of enque operations performed in both Q1 and Q2 (combinedly) is

49 .

Question **2**

Complete

Marked out of 2.50

A doubly linked list is declared as follows.

```
struct node
{
   struct node * prev;
   int val;
   struct node * next;
};
```

Which one of the following segment of code snippet counts the number of elements present in the doubly linked list? Here, ptr is pointing to the Last element of the list and count is the variable which stores the number of elements in the list.

- for(count=1; ptr!=NULL; count++) ptr=ptr->prev;
- for(count=1; ptr->next!=NULL; count++) ptr=ptr->next;
- None of the other options are correct
- for(count=1; ptr->prev!=NULL; count++) ptr=ptr->prev;
- for(count=1; ptr!=NULL; count++) ptr=ptr->next;

Question **3**

Complete

Marked out of 1.00

In linked list implementation of stack using C-programming, underflow occurs when TOP == SIZE - 1.

Select one:

- True
- False

Question **4**

Complete

Marked out of 1.00

Queue data structure is used to check whether an arithmetic expression has balanced parenthesis or not.

Select one:

- True
- False

Question **5**

Complete

Marked out of 1.00

If the elements “A”, “B”, “C” and “D” are placed in a queue and are deleted one at a time, in what order will they be removed?

- DCBA
- None of the other options are correct
- ABDC
- DCAB
- ABCD

Question **6**

Complete

Marked out of 2.50

Let us assume that one Queue (Q) is implemented using two Stacks S1 and S2 (as per the method discussed in the class). Then, to insert 6 elements in Q, the total number of PUSH operations performed in both S1 and S2 (combinedly) is

36 .

Question **7**

Complete

Marked out of 3.00

Consider a multidimensional array, Y(3:10, 1:15, 10:20, -7:7) and each element of the array occupies 2 memory locations. Given Base(Y) = 1000 and Y is stored in row-major order. Then, the address of the element Y[5, 10, 15, 0] is

12715 .

Question **8**

Complete

Marked out of 2.00

The postfix expression **2 15 18 6 / 4 + + 2 / +** with single/double-digit operands is evaluated using a stack. The value at the top of the stack after the evaluation of the second / operation is 15 .

Question **9**

Complete

Marked out of 2.50

Let us assume that, two queues (Queue1 & Queue2) are implemented using a single array arr[MAX]. Here, the only condition is that sum of total number of elements in Queue1 and total number of elements in Queue2 should not exceed MAX. Queue1 will grow from index 0 towards MAX and Queue2 will grow from index MAX-1 towards 0. Here, there are two FRONT variables (Front1 and Front2) and two REAR variables (Rear1 and Rear2) corresponding to two queues. Then, which one of the following is the condition for overflow for Queue2?

- Front1 == -1
- None of the other options are correct.
- Rear1 == Rear2-1
- Front2 == MAX
- Rear2 == Rear1-1

Question **10**

Complete

Marked out of 2.50

A doubly linked list is declared as follows.

```
struct node
{
   struct node * prev;
   int val;
   struct node * next;
};
```

Which one of the following segment of code snippet deletes the element pointed by ptr. Here, ptr is pointing to the First element of the list and start pointer is pointing to the beginning of the list.

- start = ptr-> next; ptr->next = NULL;
- start = ptr-> next; start->prev = NULL;
- ptr->prev=ptr->prev; ptr->next=ptr->next;
- start->prev = NULL; start = ptr-> next;
- None of the other options are correct
- ptr->prev->next = ptr->next; ptr->next->prev = ptr->prev;

Question **11**

Complete

Marked out of 0.50

A node in a single linked list can point to only one node at a time.

Select one:

- True
- False

Question **12**

Complete

Marked out of 1.00

Which one of the following operation does not depend on the length of the single linked list?

- addition of an element before the 1st element of the list
- None of the other options are correct
- addition of an element after the node having value 20 in the list
- search for a particular element in the list
- delete the last element of the list

Question **13**

Complete

Marked out of 1.00

Consider the following operations performed on a stack of size 7.
Push(5);
Pop();
Push(4);
Push(3);
Pop();
Push(2);
Pop();
Pop();
Push(1);

After the completion of all the above mentioned operations, the number of element present on stack is/are _____.

- 1
- None of the other options are correct
- 3
- 4
- 5
- 2

Question **14**

Complete

Marked out of 2.00

Which one of the following is the equivalent postfix expressions of **((A*2)+1)/(B+C)** .

- A 2 * 1 + B C + /
- A 2 * 1 + / B C +
- None of the other options are correct
- + * A 2 1 / + B C
- / + * A 2 1 + B C

◄ Lecture-28

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