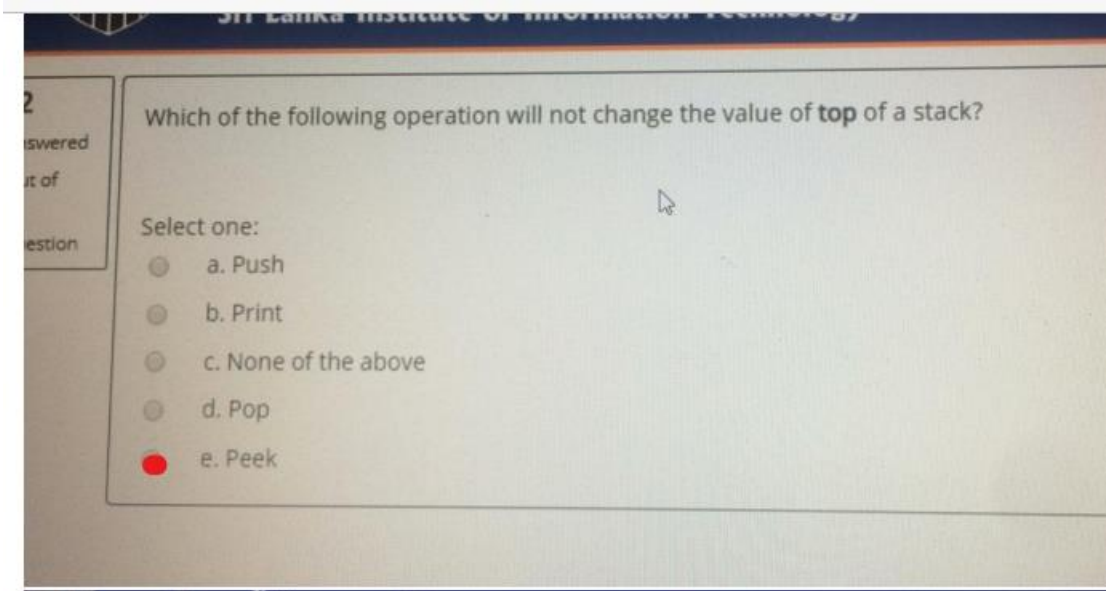
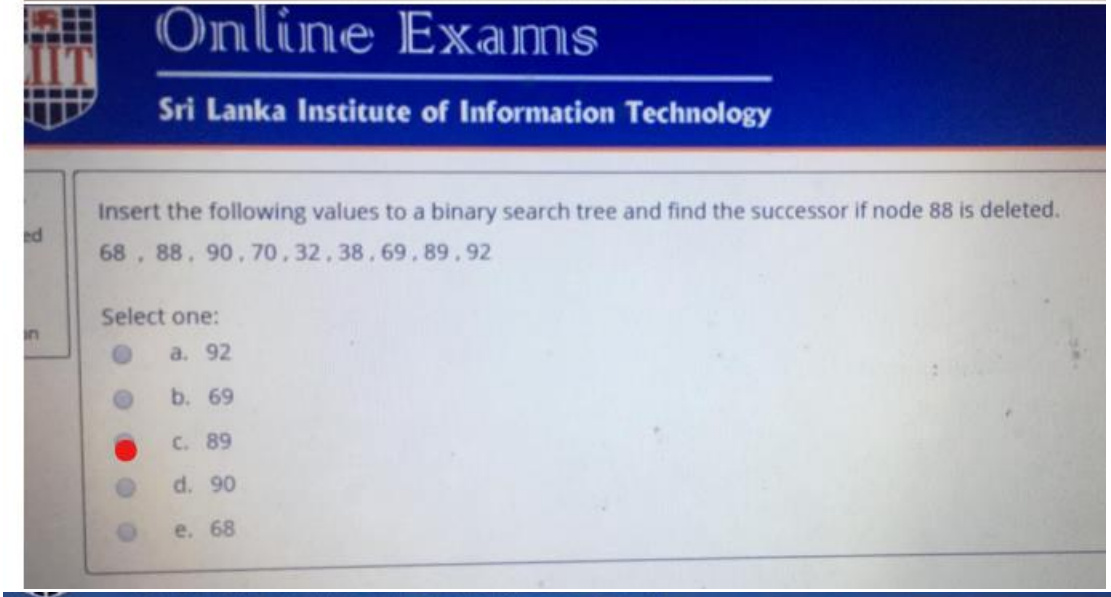

Which of the following operation will not change the value of top of a stack?
Select one:
a. Push
b. Print
c. None of the above
d. Pop
e. Peek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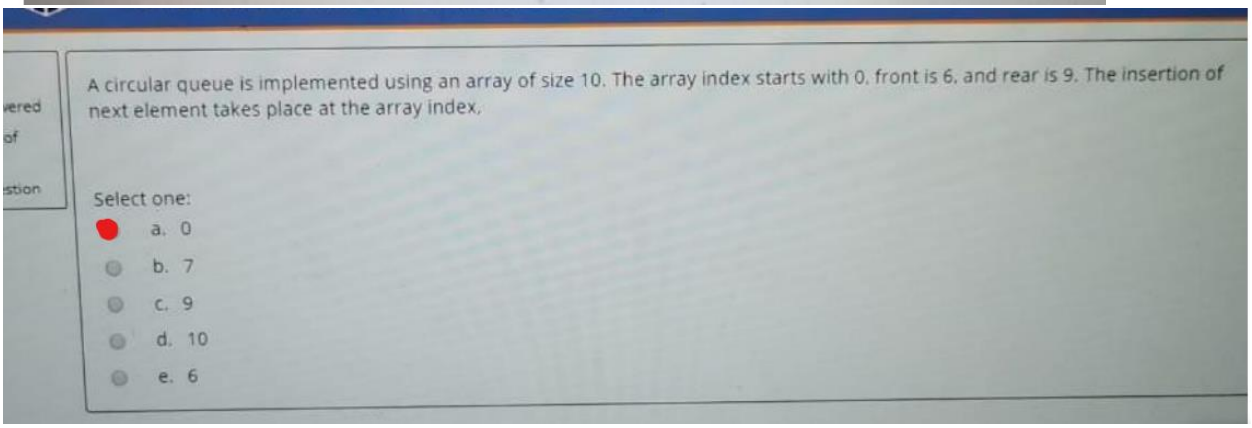
Insert the following values to a binary search tree and find the successor if node 88 is deleted.
68 , 88 , 90 , 70 , 32 , 38 , 69 , 89 , 92
Select one:
a. 92
b. 69
c. 89
d. 90
e. 68

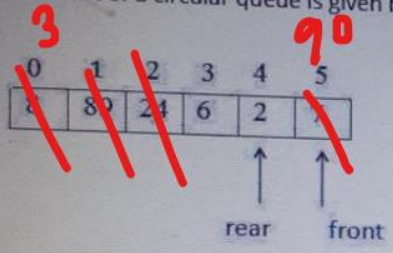

A circular queue is implemented using an array of size 10. The array index starts with 0. front is 6. and rear is 9. The insertion of next element takes place at the array index.
Select one:
a. 0
b. 7
c. 9
d. 10
e. 6

In linked lists there are no NULL links in

Select one:

- a. single linked lists
- b. doubly linked lists
- c. double ended lists
- d. circular linked lists
- e. none of the mentioned

A frameset of a circular queue is given below. After you apply the instructions given below, rear will be pointing to?




remove();
remove ();
insert(90);
remove();
insert(3);
remove();

Select one:

- a. index 3
- b. index 4
- c. index 2
- d. index 0
- e. index 1

Which of the following can be used to implement a queue data structure.

A. Arrays

B. Double ended list

C. Single linked list

Select one:

a. A and B only

b. A and C only

c. All of the above

d. A only

e. B and C only

In a given link list, "first.next = null" . Which one of the following statement is correct?

Select one:

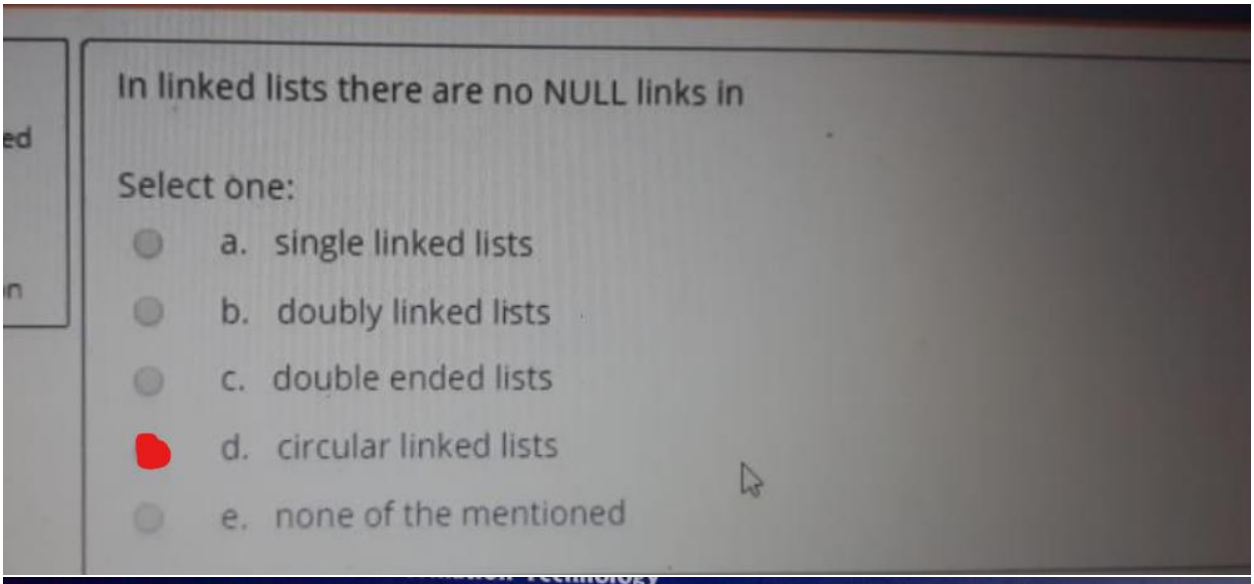
a. Link list is empty

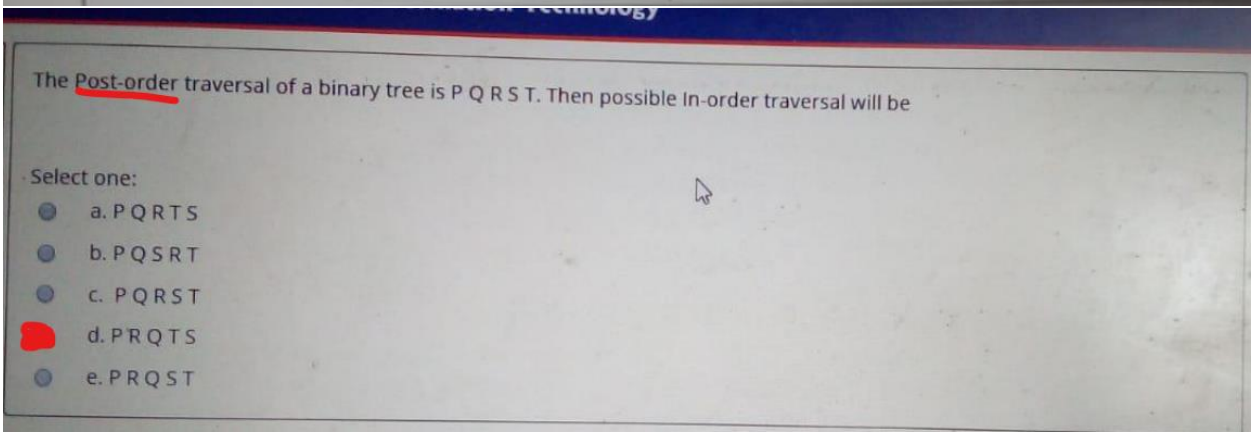
b. Link list has only one link

c. This is a circular link list

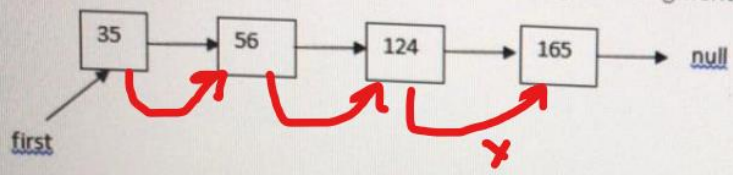
d. Link list has two links

e. None of the mentioned


In linked lists there are no NULL links in
Select one:
a. single linked lists
b. doubly linked lists
c. double ended lists
d. circular linked lists
e. none of the mentioned


The Post-order traversal of a binary tree is P Q R S T. Then possible In-order traversal will be
Select one:
a. P Q R T S
b. P Q S R T
c. P Q R S T
d. P R Q T S
e. P R Q S T

Consider the below link list and execute the following code segment. What is the output?




```
Link cur = first;
while( cur.next != null)
{
        cur.displayLink();
        cur = cur.next;
}
```

Select one:

- a. 35 56 124 165
- b. 165
- c. 35 56 124
- d. 56 124 165
- e. 35

Institute of Information Technology

If a full binary tree has the 31 nodes then find the height of the full binary tree?

Select one:

- a. 10
- b. 3
- c. 4
- d. 5
- e. 15

Question 5

Not yet answered

Marked out of 1.00

Flag question

If a full binary tree has the 31 nodes then find the height of the full binary tree?

Select one:

- a. 15
- b. 3
- c. 10
- d. 5
- e. 4

Moodle

NetExam

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Question 24

Not yet answered

Marked out of 1.00

Flag question

Consider the following linear queue.

| 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| | | 34 | 56 | 12 | 29 |

Front

rear

Select the **incorrect** statement about the above queue.

Select one:

- a. The queue can store only 6 items
- b. None of the above
- c. Can insert two more data items
- d. The next item remove from the queue is 34
- e. Queue is full

NetExam

Sri Lanka Institute of Information Technology

Which of the following is not correct in regarding the link list?

Select one:

- a. Link list can be used to implement a sequential access system easily.
- b. Double ended link list has the pointer to the last node of the link list.
- c. Double link list has both next ad previous pointers in each node.
- d. Link list is very good data structure to implement random access system.
- e. Link list takes more time in searching an element.

Consider the function f(n), which is defined below. n is a non-negative integer.

$$f(n) = \begin{cases} 5n & \text{if } n \text{ is even} \\ f(n-1) & \text{if } n \text{ is odd} \end{cases}$$

5x10

11

f = 10

Use the above equation to manually compute f(11).

Select one:

- a. 55
- b. 11
- c. 50
- d. 5
- e. 1

Which of the following is/are TRUE:

A: Recursive algorithm always have a recurrence equation for running time. ✓

B: Recursive algorithm always has only one initial condition (Base condition).

C: Recursive tree can be used to guess the solution for recurrence equation. ✓

Select one:

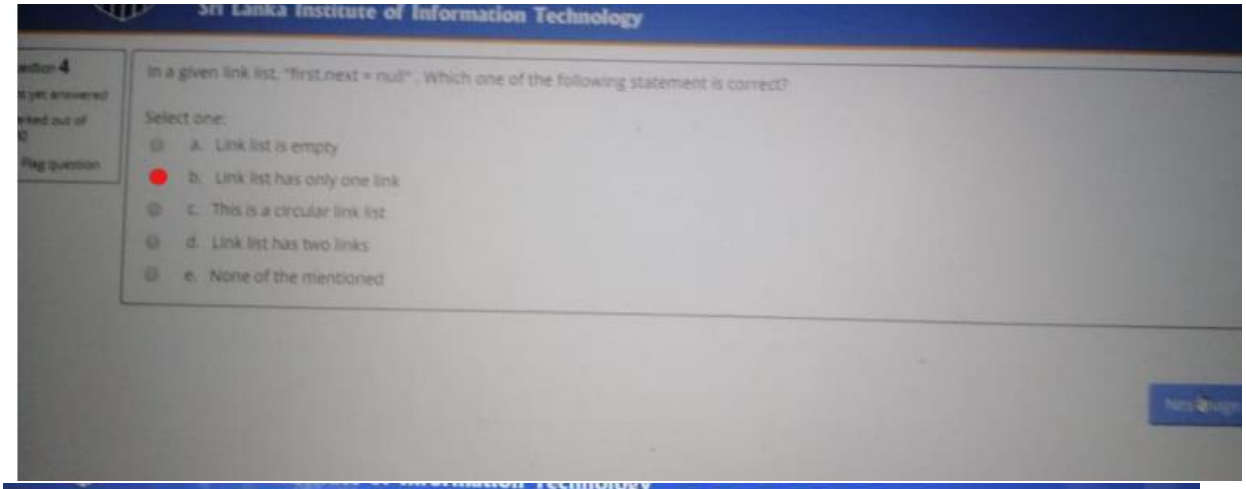
- a. Only A
- b. Only B
- c. Only C
- d. Only A and C
- e. Only B and C

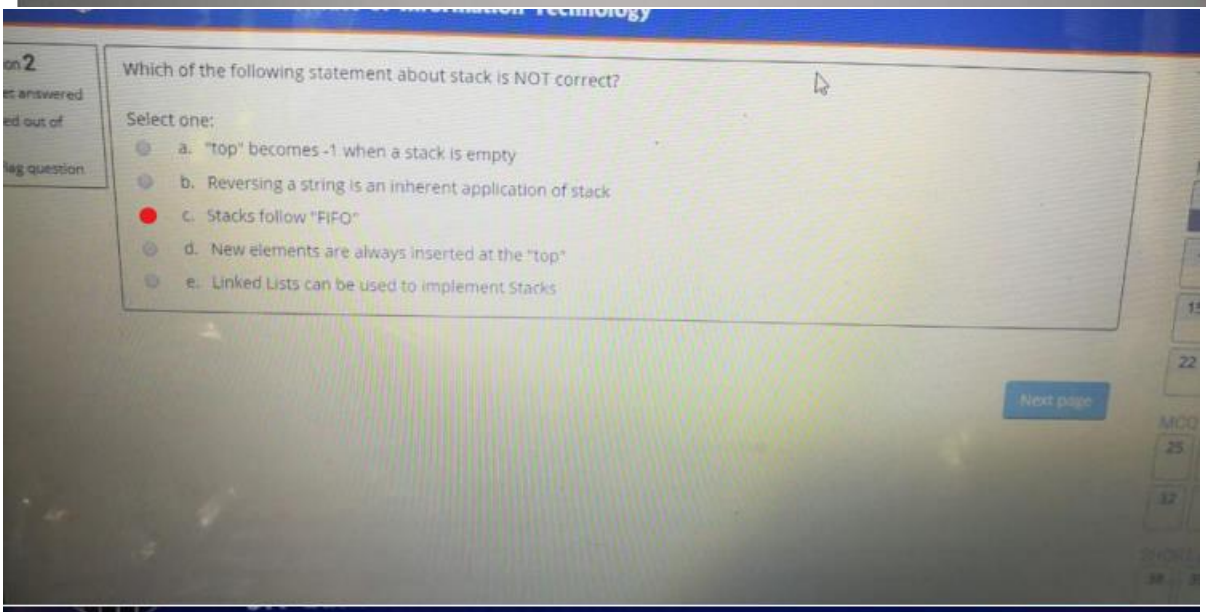
Sri Lanka Institute of Information Technology

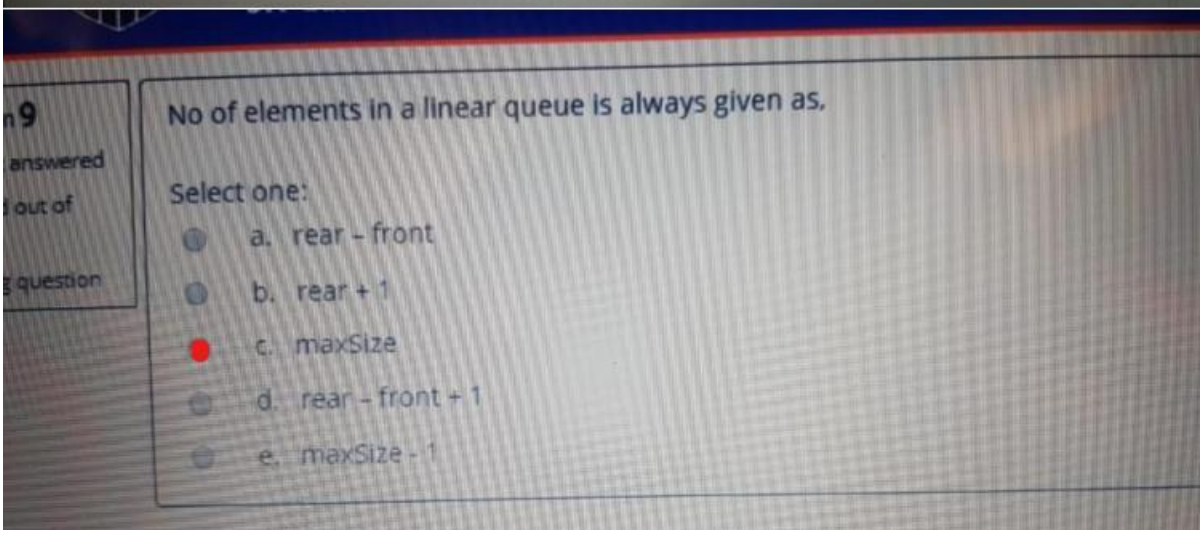
If a complete binary tree has the height of 3 then which is not a possible number of nodes in the complete binary tree?

Select one:

- a. 14
- b. 8
- c. 10
- d. 16
- e. 15


Sri Lanka Institute of Information Technology
In a given link list, "first.next = null" . Which one of the following statement is correct?
Select one:
a. Link list is empty
b. Link list has only one link
c. This is a circular link list
d. Link list has two links
e. None of the mentioned


Which of the following statement about stack is NOT correct?
Select one:
a. "top" becomes -1 when a stack is empty
b. Reversing a string is an inherent application of stack
c. Stacks follow "FIFO"
d. New elements are always inserted at the "top"
e. Linked Lists can be used to implement Stacks
Next page


No of elements in a linear queue is always given as,
Select one:
a. rear - front
b. rear + 1
c. maxSize
d. rear - front + 1
e. maxSize - 1

Which of the following statement about stack is NOT correct?

Select one:

- a. "top" becomes -1 when a stack is empty
- b. New elements are always inserted at the "top"
- c. Reversing a string is an inherent application of stack
- d. Stacks follow "FIFO"
- e. Linked Lists can be used to implement Stacks

Consider the below method of a linear queue data structure. What can be the method "XX"?

```
public int XX() {
    if (nItems == 0) {
        System.out.println("Queue is empty");
        return -99;
    }
    else {
        nItems--;
        return queArray[front++];
    }
}
```

Select one:

- a. delete()
- b. remove()
- c. insert()
- d. peekFront()
- e. push()

Consider the following code segment.

```
StackX s1 = new StackX(10);
StackX s2 = new StackX(10);
for(int i=0; i<10; i++)
    s1.push(i);
for(int i=0; i<5; i++)
    s2.push(s1.pop()+ s1.pop());
```

{10}

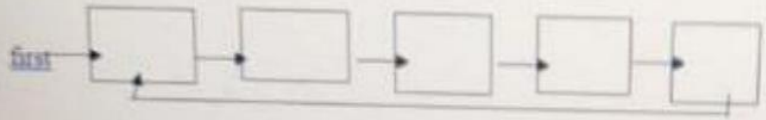
S2


Which of the following statement is correct after performing the above code segment?

Select one:

- a. s1 and s2 stacks contain the same numbers ✗
- b. s2 is empty and s1 is not full ✗
- c. s2 is empty and s1 is full
- d. s1 is empty and s2 is full
- e. s1 is empty and s2 is not full ●

Given below is a circular link list. Following method has been written to display all the links. Fill in the blank with correct condition.




```
Link cur = first;
if (cur == NULL)
    return;
```

[ ]

Select one:

- a. while (cur.next != first){ cur.displayLink(); cur = cur.next; } ✗
- b. ✗
- c.

Null

⊛ while (cur != first) {
    cur.displayLink();
    cur = cur.next;
}

Consider the below method of a linear queue data structure. What can be the method "XX"?

```
public int XX() {
    if (nItems == 0) {
      System.out.println("Queue is empty");
      return -99;
    }
    else {
      nItems--;
      return queArray[front++];
    }
}
```

Select one:

- a. peekFront()
- b. insert()
- c. push()
- d. remove()
- e. delete()

Insert the following values to a binary search tree and find the successor if node 88 is deleted.

68 , 88 , 90 , 70 , 32 , 38 , 69 , 89 , 92

Select one:

- a. 89
- b. 68
- c. 92
- d. 69
- e. 90

Consider the below link lists given in diagram A and diagram B. Find the code segment to convert diagram A to diagram B.


Diagram A

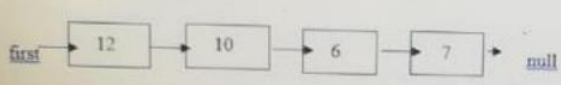



Diagram B

Link nLink = new Link(6);
first.next = nLink;
nLink.next = first.next + next;

Select one:

a.
Link nLink = new Link(6);
first.next.next = nLink;
nLink.next = first.next.next;

b. First.next.next = newLink;

c.
Link nLink = new Link(6);
nLink.next = first.next.next;
first.next.next = nLink;

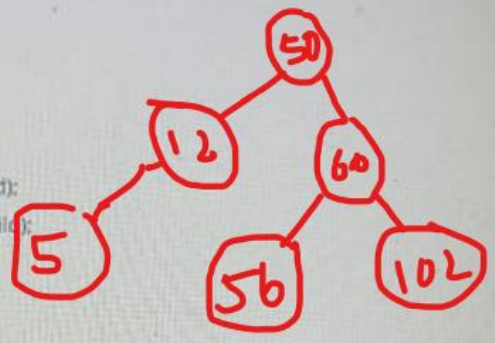
d.
first.next = newLink;
newLink.next = first.next;

Following values are inserted to a binary search tree.

50 60 12 56 102 5

What is the result you get if you display all the values using the following method.

```
private void display(Node lRoot)
{
        if (lRoot != null)
        {
                lRoot.displayNode();
                display(lRoot.leftChild);
                display(lRoot.rightChild);
        }
}
```




Select one:

- a. 102 60 56 50 12 5
- b. 5 12 50 56 60 102
- c. 50 12 5 60 56 102
- d. 50 12 60 5 56 102
- e. 5 12 56 102 60 50

Which type of traversal of binary search tree outputs the value in sorted order?

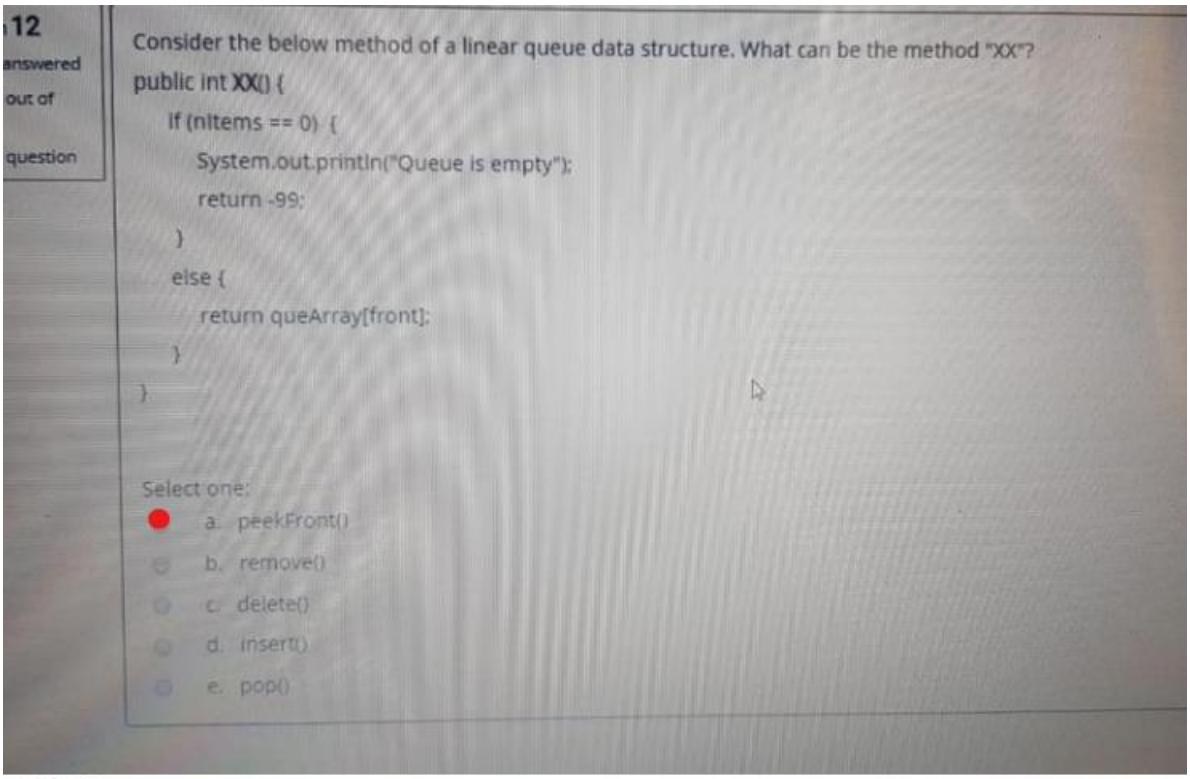
Select one:

- a. Pre order
- b. In order
- c. Post order
- d. Reverse order
- e. None of the mentioned

No of elements in a linear queue is always given as,

Select one:

- a. maxSize - 1
- b. maxSize
- c. rear – front + 1
- d. rear – front
- e. rear + 1


12
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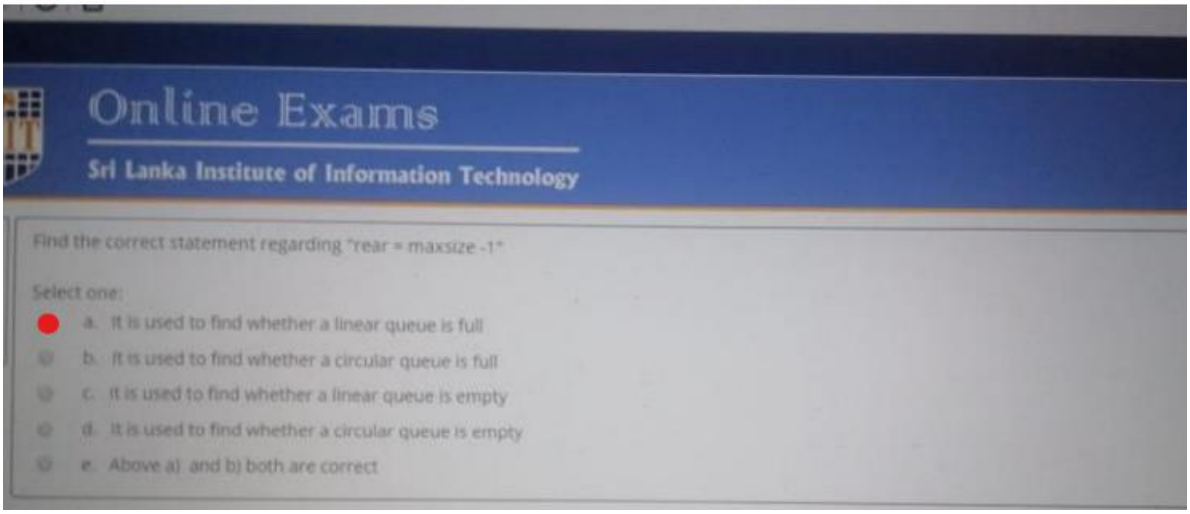
question
Consider the below method of a linear queue data structure. What can be the method "XX"?
public int XX() {
if (nItems == 0) {
System.out.println("Queue is empty");
return -99;
}
else {
return queArray[front];
}
}
Select one:
a. peekFront()
b. remove()
c. delete()
d. insert()
e. pop()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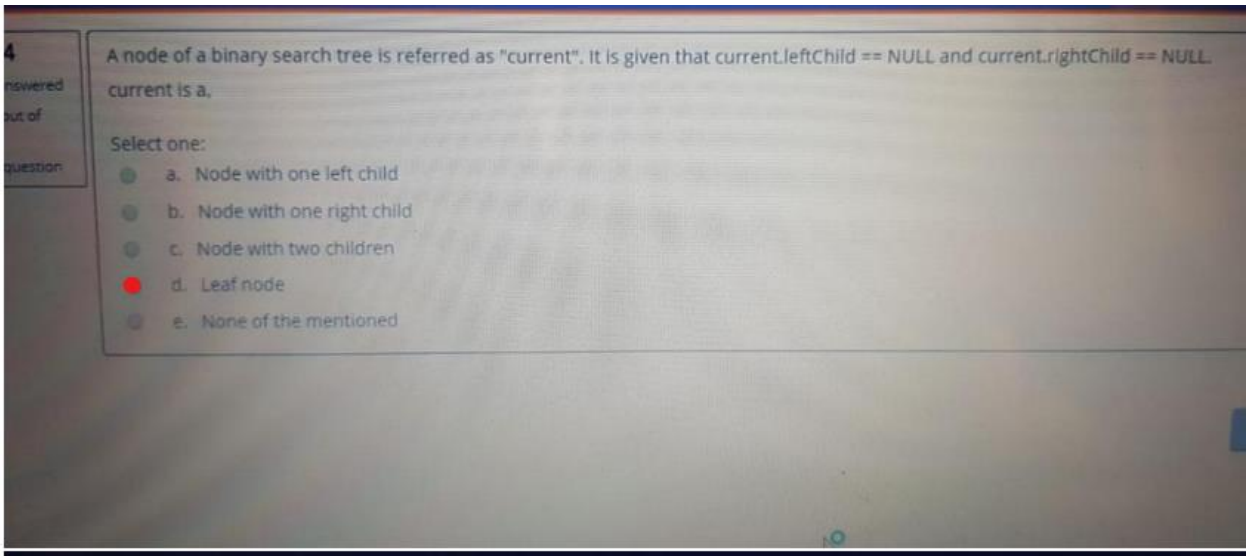
Find the correct statement regarding "rear = maxsize -1"
Select one:
a. It is used to find whether a linear queue is full
b. It is used to find whether a circular queue is full
c. It is used to find whether a linear queue is empty
d. It is used to find whether a circular queue is empty
e. Above a) and b) both are correct


4
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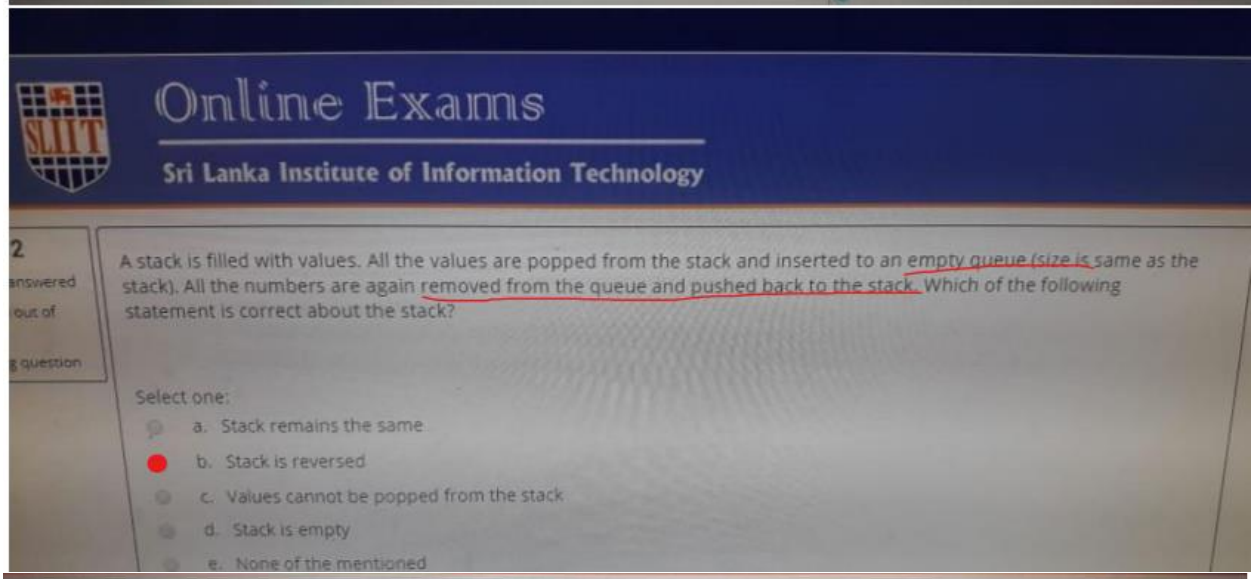
question
A node of a binary search tree is referred as "current". It is given that current.leftChild == NULL and current.rightChild == NULL. current is a,
Select one:
a. Node with one left child
b. Node with one right child
c. Node with two children
d. Leaf node
e. None of the mentioned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2
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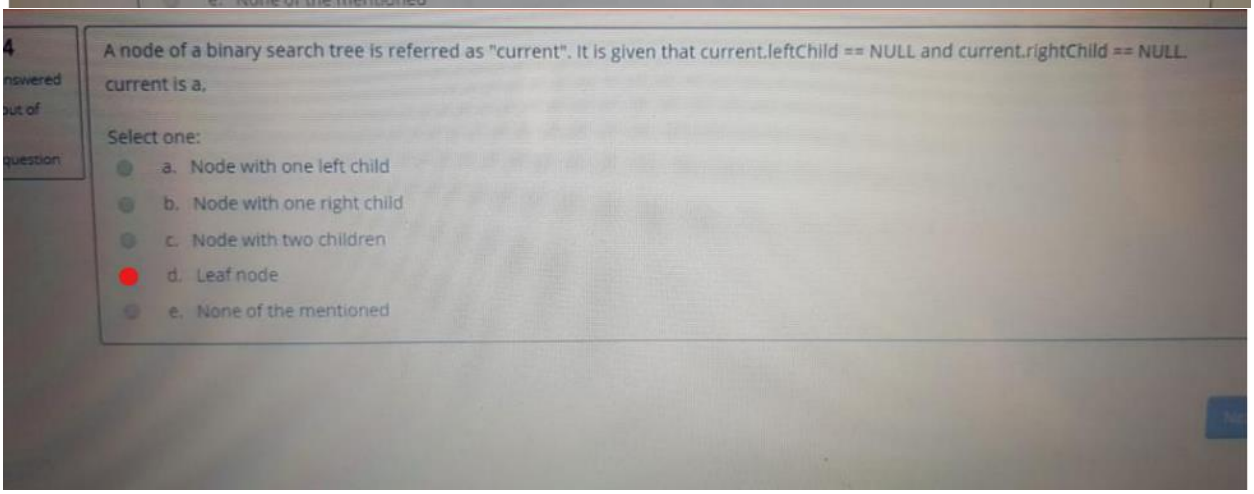
question
A stack is filled with values. All the values are popped from the stack and inserted to an empty queue (size is same as the stack). All the numbers are again removed from the queue and pushed back to the stack. Which of the following statement is correct about the stack?
Select one:
a. Stack remains the same
b. Stack is reversed
c. Values cannot be popped from the stack
d. Stack is empty
e. None of the mentioned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question
A node of a binary search tree is referred as "current". It is given that current.leftChild == NULL and current.rightChild == NULL. current is a,
Select one:
a. Node with one left child
b. Node with one right child
c. Node with two children
d. Leaf node
e. None of the mentioned