

# Midterm2 post-tests

R.A.M. is

a.

Random Access Memory

b.

Relayed Asynchronous Memory

c.

Rapid Access Memory

d.

Rapid Advanced Memory

The correct answer is: Random Access Memory

When I store 1, 2, 3, 4 in this order in a Queue I would retrieve in order

a.

1, 4, 2, then 4.

b.

1, 2, 3, then 4.

c.

4, 3, 2, then 1.

d.

A Queue is a set, therefore there is no ordering in a Queue.

The correct answer is: 1, 2, 3, then 4.

To use a linked list and traverse it I need

a.

know where None (or Null) is pointed at.

b.

a simple index.

c.

access to the head of the list.

d.

knowledge about the number of elements in the list (size).

The correct answer is: access to the head of the list.

Which statement is False?

a.

A Queue is called First-in First-out.

b.

A Queue can store more elements than a Stack.

c.

A Queue is a linear data structure.

d.

A Queue remembers the elements in the order we stored them in.

The correct answer is: A Queue can store more elements than a Stack.

We know we are at the end of a linked list

a.

if the reference in the current node references None.

b.

if the number of elements we counted reaches the limit.

c.

because the last element is indicated by a marker.

d.

because the last node is empty.

The correct answer is: if the reference in the current node references None.

The reference in a first node of a list

a.

references a random node or Null.

b.

references the head of the list.

c.

references the element values stored in the next node.

d.

references the next node, if it exists somewhere in memory.

The correct answer is: references the next node, if it exists somewhere in memory.

Whitch statement is true?

a.

A linked list can physically grow as long as there is memory, but doesn't really shrink as the released nodes remain available for the list.

b.

The maximum number of nodes that a linked list can contain is specified when that linked list is first created.

c.

A linked list can contain in its nodes any kind of elements because instead of the element, the node has a reference to the element somewhere else.

d.

A linked list can only have integers in its nodes.

The correct answer is: A linked list can contain in its nodes any kind of elements because instead of the element, the node has a reference to the element somewhere

else.

The storage in main memory of an integer number in the order of 20 million, requires the equivalent of

- a.  
6 characters
- b.  
3 characters
- c.  
4 characters
- d.  
2 characters

The correct answer is: 4 characters

Removing an element from a Queue is

- a.  
dequeuing.
- b.  
popping.
- c.  
retrieving.
- d.  
enqueueing.

The correct answer is: dequeuing.

If we allocate space for an array of 10 integers, we can't store the 11th integer because

- a.  
once we allocate memory, we can't allocate memory again.

b.

we can't request more than 10 elements at a time.

c.

we are out of memory.

d.

memory after the 10th element could be used by other variables.

The correct answer is: memory after the 10th element could be used by other variables.

The garbage collector will reclaim a node

a.

when the node references None.

b.

when the node is not referenced.

c.

when the node is not the Head or Tail.

d.

when the node is referenced by None.

The correct answer is: when the node is not referenced.

which method is in the interface for the doubly-linked-list-node?

a.

getNextDirection()

b.

setBefore()

c.

setDirection()

d.

getPrevious()

The correct answer is: `getPrevious()`

In a doubly linked list

- a.  
a reference is bidirectional.
- b.  
there are two references: one for each direction of the sequence of nodes.
- c.  
when head equals tail, the list is empty.
- d.  
the references to the head and to the tail are the same.

The correct answer is: there are two references: one for each direction of the sequence of nodes.

Assuming we already have elements in a doubly-linked list, to append a new node to the end of the list this sequence of operations needs to be done in order:

- a.  
1- previous of new node assigned to tail; 2- next of new node assigned to None; 3- new node becomes tail; 4- next of tail assigned to new node.
- b.  
1- new node becomes tail; 2- next of tail assigned to new node; 3- next of new node assigned to None; 4- previous of new node assigned to tail.
- c.  
1- next of tail assigned to new node; 2- new node becomes tail; 3- next of new node assigned to None; 4- previous of new node assigned to tail.
- d.  
1- next of new node assigned to None; 2- previous of new node assigned to tail; 3- next of tail assigned to new node; 4- new node becomes tail.

The correct answer is: 1- next of new node assigned to None; 2- previous of new node assigned to tail; 3- next of tail assigned to new node; 4- new node becomes tail.

Which statement is correct?

a.

In a doubly-linked list we can traverse the list only in backward manner.

b.

In a doubly-linked list we can traverse the list in a circular manner.

c.

In a doubly-linked list we can traverse the list in both directions.

d.

In a doubly-linked list we can traverse the list only in forward manner.

The correct answer is: In a doubly-linked list we can traverse the list in both directions.