Given a sequence of number below:50,60,40,70,45,55,30,80,65,35,25,75,85When creating a binary search tree, what is the height of the tree?

1/1

3

4

5

6

What are the 3 depth traversals for a tree data structure?

1/1

Pre-, In- and Post-order

Pro-, In- and Past-order

Pre-, Out- and Post-order

Pre-, In- and New-order

Which of these tree traversal methods is used to output the contents of a binary tree in ascending order?

1/1

Pre-Order

In-Order

Post-Order

Monastic Orders

 Root

1/1

data structure similar to a graph, with no loops.

an object in a graph also known as a vertex

a join of relationship between nodes - also know as an arc

the starting node in a rooted tree structure from which all other nodes branch off

A Kind of tree where every node in a tree can have at most two children.

1/1

Binary Tree

Binary Expression Tree

Tree

Binary Search Tree

Which of the following trait of a hash function is most desirable?

1/1

it should cause less collisions

it should cause more collisions

it should occupy less space

it should be easy to implement

What is the advantage of using a doubly linked list for chaining over singly linked list?

1/1

it takes less memory

it is easy to implement

it makes the process of insertion and deletion faster

it causes less collisions

What is the worst case search time of a hashing using separate chaining algorithm?

1/1

O(N log N)

O(N)

O(N^2)

O(N^3)

Which of the following is not a collision resolution technique?

1/1

Separate chaining

Linear probing

Quadratic probing

Hashing

The case in which a key other than the desired one is kept at the identified location is called?

1/1

Hashing

Collision

Chaining

Open addressing

What is the load factor?

1/1

Average array size

Average key size

Average chain length

Average hash table length

Which data structure uses hashing to store information with constant lookup time?

1/1

Hash table

1D Array

Linked List

2D Array

Stack

 Advantages of linked list representation of binary trees over arrays?\*

1/1

a) dynamic size

b) ease of insertion/deletion

c) ease in randomly accessing a node

d) both dynamic size and ease in insertion/deletion

 Disadvantages of linked list representation of binary trees over arrays?\*

0/1

a) Randomly accessing is not possible

b) Extra memory for a pointer is needed with every element in the list

c) Difficulty in deletion

d) Random access is not possible and extra memory with every element

 A linear collection of data elements where the linear node is given by means of pointer is called?\*

1/1

a) Linked list

b) Node list

c) Primitive list

d) Unordered list

The concatenation of two lists can be performed in O(1) time. Which of the following variation of the linked list can be used?\*

1/1

a) Singly linked list

b) Doubly linked list

c) Circular doubly linked list

d) Array implementation of list

 In a stack, if a user tries to remove an element from an empty stack it is called \_\_\_\_\_\_\_\_\_\*

1/1

a) Underflow

b) Empty collection

c) Overflow

d) Garbage Collection

 Entries in a stack are “ordered”. What is the meaning of this statement?\*

1/1

a) A collection of stacks is sortable

b) Stack entries may be compared with the ‘<‘ operation

c) The entries are stored in a linked list

d) There is a Sequential entry that is one by one

Which of the following is not the application of stack?\*

1/1

a) A parentheses balancing program

b) Tracking of local variables at run time

c) Compiler Syntax Analyzer

d) Data Transfer between two asynchronous process

Here is an infix expression: 4 + 3\*(6\*3-12). Suppose that we are using the usual stack algorithm to convert the expression from infix to postfix notation. The maximum number of symbols that will appear on the stack AT ONE TIME during the conversion of this expression?\*

0/1

a) 1

b) 2

c) 3

d) 4

What kind of linked list is best to answer questions like “What is the item at position n?”\*

0/1

a) Singly linked list

b) Doubly linked list

c) Circular linked list

d) Array implementation of linked list

 Linked list is considered as an example of \_\_\_\_\_\_\_\_\_\_\_ type of memory allocation.\*

1/1

a) Dynamic

b) Static

c) Compile time

d) Heap

In Linked List implementation, a node carries information regarding \_\_\_\_\_\_\_\_\_\_\_\*

1/1

a) Data

b) Link

c) Data and Link

d) Node

Linked list data structure offers considerable saving in \_\_\_\_\_\_\_\_\_\_\_\_\_\*

0/1

a) Computational Time

b) Space Utilization

c) Space Utilization and Computational Time

d) Speed Utilization

Which of the following application makes use of a circular linked list?\*

0/1

a) Undo operation in a text editor

b) Recursive function calls

c) Allocating CPU to resources

d) Implement Hash Tables

Which of the following is false about a circular linked list?\*

0/1

a) Every node has a successor

b) Time complexity of inserting a new node at the head of the list is O(1)

c) Time complexity for deleting the last node is O(n)

d) We can traverse the whole circular linked list by starting from any point

In postorder traversal of binary tree right subtree is traversed before visiting root.\*

0/1

a) True

b) False

What is the possible number of binary trees that can be created with 3 nodes, giving the sequence N, M, L when traversed in post-order.\*

1/1

a) 15

b) 3

c) 5

d) 8

 A binary search tree contains values 7, 8, 13, 26, 35, 40, 70, 75. Which one of the following is a valid post-order sequence of the tree provided the pre-order sequence as 35, 13, 7, 8, 26, 70, 40 and 75?\*

0/1

a) 7, 8, 26, 13, 75, 40, 70, 35

b) 26, 13, 7, 8, 70, 75, 40, 35

c) 7, 8, 13, 26, 35, 40, 70, 75

d) 8, 7, 26, 13, 40, 75, 70, 35

A full binary tree can be generated using \_\_\_\_\_\_\*

0/1

a) post-order and pre-order traversal

b) pre-order traversal

c) post-order traversal

d) in-order traversal

The steps for finding post-order traversal are traverse the right subtree, traverse the left subtree or visit the current node.\*

1/1

a) True

b) False

The pre-order and in-order are traversals of a binary tree are T M L N P O Q and L M N T O P Q. Which of following is post-order traversal of the tree?\*

1/1

a) L N M O Q P T

b) N M O P O L T

c) L M N O P Q T

d) O P L M N Q T

The difference between the external path length and the

internal path length of a

binary tree with n internal nodes is?

\*

0/1

1

n

n+1

2n

Suppose a binary tree is constructed with n nodes,

such that each node has exactly

either zero or two children.

The maximum height of the tree will be?

\*

0/1

a) (n+1)/2

b) (n-1)/2

c) n/2 -1

d) (n+1)/2-1

In full binary search tree every

internal node has exactly two children. If there are

100 leaf nodes in the tree,

how many internal nodes are there in the tree?

\*

1/1

25

49

99

101

which type of traversal of binary search tree outputs

the value in sorted order?

\*

1/1

a) Pre-order

b) In-order

c) Post-order

d) None

A binary search tree is formed from the sequence

6, 9, 1, 2, 7, 14, 12, 3, 8, 18. The

minimum number of nodes required to

be added in to this tree to form an extended

binary tree is?

\*

0/1

a) 3

b) 6

c) 8

d) 11

When a binary tree is converted in to an y

extended binary tree, all the nodes of a

binary tree in the external node becomes

\*

1/1

a) Internal nodes

b) External nodes

c) Root nodes

d) None

If n elements are sorted in a binary search tree.

What would be the asymptotic

complexity to search a key in the tree?

\*

0/1

a) O(1)

b) O(logn)

c) O(n)

d) O(nlogn)

The post order traversal of binary tree is DEBFCA.

Find out the pre order

traversal.

\*

1/1

A. ABFCDE

B. ADBFEC

C. ABDECF

D. ABDCEF