Assessment-1

Name the tree in which, for every node, the height of left sub tree and height of right sub tree can differ by at most one

(A) AVL tree

(B) B-tree

(C) Threaded tree

(D) Complete tree

Question: 2

Which of the following statements about a binary tree is correct?

(A) No binary tree is both complete and full

(B) Every full binary tree is also a complete binary tree

(C) Every complete binary tree is also a full binary tree

(D) Every binary tree is either complete or full

Question: 3

What is the worst-case time for binary search finding a single item in an array?

(A) Quadratic time

(B) Linear time

(C) Logarithmic time

(D) Constant time

Question: 4

If a binary tree satisfies shape and order property, it is known as

(A) Rooted tree

(B) Heap

(C) Sequential search tree

(D) Binary search tree

Question: 5

With an array-based stack, the algorithm for push is

(A) Increment top and add item to the new top location

(B) Add item to the top location and then increment top

(C) Return the top item and increment top

(D) Return the top item and decrement top

Question: 6

The average case complexity of quick sort for sorting n numbers is

(A) O(n2)

(B) O(nlog2n)

(C) O(n)

(D) O(log2n)

Ans:B

Question: 7

A dequeue operation removes an element

(A) From the front of the queue

(B) From any place in the queue

(C) From the rear of the queue

(D) None of above

Question: 8

What is the minimum number of nodes in a complete binary tree with depth 3?

(A) 4

(B) 5

(C) 6

(D) 7

Question: 9

What is the number of nodes in a full binary tree with depth 3?

(A) 5

(B) 6

(C) 7

(D) 8

Question: 10

Which of the following operation is not supported by a queue?

(A) Inserting element at rear

(B) Removing element from front

(C) Removing element from middle

(D) None of above

Question: 11

What is the worst-case time for serial search finding a single item in an array?

(A) Quadratic time

(B) Linear time

(C) Logarithmic time

(D) Constant time

Question: 12

A non-circular doubly linked list can best and most generally be defined as a \_\_\_

(A) Set of elements, each with two pointers

(B) Set of elements chained together with pointers

(C) Linear sequence of elements in sequential memory locations

(D) Linear sequence of elements chained together with pointers

Question: 13

Which of the following operations is a dictionary operation?

(A) Search

(B) Delete

(C) Insert

(D) All of above

Question: 14

To create a linked structure, each node must have one member, which is \_\_\_\_

(A) A pointer to the head of the list

(B) A pointer to NULL

(C) A pointer to the node type

(D) A reference to the element type

Question: 15

Each attribute of an entity has a defined set of values. This set of values is called a

(A) Mapping

(B) Entity set

(C) Domain

(D) Range