1.The size() method returns the number of top elements in a Stack

Select one:

True

False

2.In a singly linked list, a node comprises of

Select one:

element and previous pointer

element and next pointer

element, next and previous pointer

element only

3.Suppose I have two algorithms A and B for a problem. The running time of algorithm A is O(log n) and the running time of algorithm B is O(n). Which of the following statement is true.

Select one:

Algorithm A and B will take same time to run

We cannot comment on the running time of the algorithms

Algorithm A runs faster than algorithm B

Algorithm A runs slower than algorithm B

4.A doubly linked list can be traversed in only one direction

Select one:

True

False

5.If r = a mod N, then the value of r can be in the range

Select one:

1 to N

0 to N

0 to N-1

1 to N-1

6.The nodes of a list must be stored in consecutive memory locations.

Select one:

True

False

7.Select the correct options for a recursive procedure

Select one or more:

Has a base case that can be solved without recursion

Has a base case that can be solved by recursion

Calls another function

Calls itself on smaller subproblems

8.The Big-oh notation gives us the upper bound on the running time of algorithms

Select one:

True

False

9.Pseudocode is a high level programming language used to describe algorithms

Select one:

True

False

10.The maximum number of elements that can be stored in the queue in the wrapped around configuration where initially f=r=0 and f==r denotes an empty queue is

Select one:

N+2

N+1

N-2

N-1

11.Deleting an element from a stack is called as

Select one:

Enqueue

Push

Pop

Dequeue

12.The number of primitive operations in the pseudocode statement *a*≥*b* is

Select one:

2

-1

1

0

13. Lists can be used to implement queues

Select one:

True

False

14. Factors that affect the running time of algorithms are

Select one:

Initialization

Input size, Hardware environment, and Software environment

break

Termination

15. In a queue with front pointer f, rear pointer r, and maximum size N, the empty queue is depicted by

Select one:

f==r

r ==N-1

f==N-1

f==N

16. If a = 14 and N = 10 what is the result of a mod N

Select one:

10

14

4

1

17. The running time of a recursive algorithm can be represented using a recurrence equation

Select one:

True

False

18. Which of the following is not a linear data structure?

Select one:

Stacks

Queues

Lists

Trees

19.4n + 5 is O(n)

Select one:

True

False

20. Recurrence equations cannot be solved by Iterative substitution method

Select one:

True

False

21. A stack is a non-linear data structure.

Select one:

True

False

22. Which of the following is not an application of stack?

Select one:

Used in expression evaluation

used in the conversion from infix to postfix form

CPU scheduling

Used in the matching of parentheses

23. A linear data structure organizes elements in a hierarchical fashion

Select one:

True

False

24. The initial value of top(t) in a stack is

Select one:

t= -1

t= 0

t=-2

t= 1

25. Inserting an element into a queue is called as

Select one:

Push

Pop

Enqueue

Dequeue