1.
How many stacks are needed to implement a queue. Consider the situation where no other data structure like arrays, linked list is available to you.

A. 1
B. 2
C. 3
D. 4

Answer: B

2.
If user push one element on stack then pops one element after that push 2 elements remove one element push one after that remove two elements again and add one element. At the end of last operation, total number of elements present in the stack are _____.

A. 2
B. 1
C. 3
D. 4
Answer: B

3.
A Priority Queue is implemented as a Max-Heap. Initially, it has 5 elements. The level-order traversal of the heap is given below: 10, 8, 5, 3, 2. Two new elements 1 and 7 are inserted in the heap in that order. The level-order traversal of the heap after the insertion of the elements will be:

A. 10, 8, 7, 5, 3, 2, 1
B. 10, 8, 7, 2, 3, 1, 5
C. 10, 8, 7, 1, 2, 3, 5
D. 10, 8, 7, 3, 2, 1, 5

Answer: D

4.

What of the following is not application of stack?

A. Back/Forward stacks on browsers.
B. String Reverse
C. Undo/Redo stacks in Excel or Word.
D. None of the above

Answer: D

5.

The data structure required to check whether an expression contains balanced parenthesis is?

A. Stack
B. Queue
C. Array
D. Tree

Answer: A

6.

How many queues are needed to implement a stack. Consider the situation where no other data structure like arrays, linked list is available to you.

A. 1
B. 2
C. 3
D. 4

Answer: B

7.

What data structure would you mostly likely see in a non recursive implementation of a recursive algorithm?

A. LinkList
B. Stack

C. Queue
D. Tree

Answer: B

8.
The Infix expression (A+B^C)*D+E^5 when converted to prefix expression the result would evaluate to_____.

A. +*+A^BCD^E5
B. *++A^BCD^E%
C. +*+A^BC^DE5
D. *+A+^BDC^E

Answer: A

9.
Which of the following is not advantage of using postfix?

A. Need not worry about the rules of precedence.
B. Need not worry about the rules for right to left associativity.
C. Need not need parenthesis to override the above rules.
D. Need expressions to be always using association rule from right to left.

Answer: D

10.
Expression in which Operator is written after Operand is called as _____.
A. Infix Expression
B. Prefix Expression
C. Postfix Expression
D. None of the above

Answer: C

11.
A Priority Queue can be efficiently implemented using which of the following data structures?

A. Array
B. Heap Data Structures like Binary Heap, Fibonacci Heap
C. Linked list
D. None of the above

Answer: B

12.
Convert given infix to postfix expression given below:
A + B * (C + D)/ F + D * E

A. ABCD+*F/+DE*+
B. AB+CD*F/+D*E
C. ABCD+*/F+DE*
D. AB+CD*F/+DE*

Answer:A

13.
The process of accessing data stored in a serial access memory is similar to manipulating data on a _____?

A. Heap
B. Binary Tree
C. Array
D. Stack

Answer: D

14.
User push 1 element in the stack having already five elements and having stack size as 5 then stack becomes _____.

A. Overflow
B. Crash

C. Userflow
D. Underflow

Answer: A

15.

Suppose a stack implementation supports an operation REVERSE, which reverses the order of elements on the stack, in addition to the PUSH and POP operations. Which one of the following statements is TRUE with respect to this modified stack?

A. A queue cannot be implemented using this stack.
B. A queue can be implemented where ENQUEUE will be implemented using a single operation and DEQUEUE will require two stack operations.
C. A queue can be implemented where ENQUEUE will be a combination of 3 stack operations and DEQUEUE will require a single operation.
D. A queue can be implemented where both ENQUEUE and DEQUEUE will require a single stack operation.

Answer: C