1. Process of inserting an element in stack is called _____

a) Create

**b) Push**

c) Evaluation

d) Pop

2. Process of removing an element from stack is called _____

a) Create

b) Push

c) Evaluation

**d) Pop**

3. In a stack, if a user tries to remove an element from an empty stack it is called _____

**a) Underflow**

b) Empty collection

c) Overflow

d) Garbage Collection

4. Pushing an element into stack already having five elements and stack size of 5, then stack becomes _____

a) Overflow

b) Crash

**c) Underflow**

d) User flow

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

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**

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6. Which of the following is not the application of stack?

a) A parentheses balancing program

b) Tracking of local variables at run time

c) Compiler Syntax Analyzer

**d) Data Transfer between two asynchronous process**

7. Consider the usual algorithm for determining whether a sequence of parentheses is balanced. The maximum number of parentheses that appear on the stack AT ANY ONE TIME when the algorithm analyzes: (()(())(())))?

a) 1

b) 2

**c) 3**

d) 4 or more

8. Consider the usual algorithm for determining whether a sequence of parentheses is balanced. Suppose that you run the algorithm on a sequence that contains 2 left parentheses and 3 right parentheses (in some order). The maximum number of parentheses that appear on the stack AT ANY ONE TIME during the computation?

a) 1

**b) 2**

c) 3

d) 4 or more

9. What is the value of the postfix expression 6 3 2 4 + – *?

a) 1

b) 40

c) 74

**d) -18**

is (6*(3-(2+4))) which results -18 as output.

10. 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?

a) 1

b) 2

c) 3

**d) 4**

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1. The postfix form of the expression (A+ B)*(C*D- E)*F / G is?

a) AB+ CD*E – FG /**

b) AB + CD* E – F **G /

c) AB + CD* E – *F *G /

d) AB + CDE * – * F *G /

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

**a) Stack**

b) Queue

c) Array

d) Tree

3. What data structure would you most likely see in non recursive implementation of a recursive algorithm?

a) Linked List

**b) Stack**

c) Queue

d) Tree

View Answer

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4. 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**

View Answer

5. The postfix form of A*B+C/D is?

a) *AB/CD+

**b) AB*CD/+**

c) A*BC+/D

d) ABCD+/*

Answer: b

Explanation: Infix expression is (A*B)+(C/D)

AB*+(C/D)

AB*CD/+. Thus postfix expression is AB*CD/+.

6. Which data structure is needed to convert infix notation to postfix notation?

a) Branch

b) Tree

c) Queue

**d) Stack**

7. The prefix form of A-B/ (C * D ^ E) is?

a) -/*^ACBDE

b) -ABCD*^DE

**c) -A/B*C^DE**

d) -A/BC*^DE

View Answer c

Explanation: Infix Expression is (A-B)/(C*D^E)

(-A/B)(C*D^E)

-A/B*C^DE. Thus prefix expression is -A/B*C^DE.

8. What is the result of the following operation?

Top (Push (S, X))

**a) X**

b) X+S

c) S

d) XS

9. The prefix form of an infix expression (p + q) – (r * t) is?

a) + pq – *rt

b) – +pqr * t

**c) – +pq * rt**

d) – + * pqrt

View Answer: c

Explanation: Given Infix Expression is ((p+q)-(r*t))

(+pq)-(r*t)

(-+pq)(r*t)

-+pq*rt. Thus prefix expression is -+pq*rt.

10. Which data structure is used for implementing recursion?

a) Queue

**b) Stack**

c) Array

d) List

11. Which of the following statement(s) about stack data structure is/are NOT correct?

a) Linked List are used for implementing Stacks

b) Top of the Stack always contain the new node

**c) Stack is the FIFO data structure**

d) Null link is present in the last node at the bottom of the stack

11. Consider the following operation performed on a stack of size 5.

Push(1);

Pop();

Push(2);

Push(3);

Pop();

Push(4);

Pop();

Pop();

Push(5);

After the completion of all operation, the number of elements present in stack is?

**a) 1**

b) 2

c) 3

d) 4

Explanation: Number of elements present in stack is equal to the difference between number of push operations and number of pop operations. Number of elements is 5-4=1.

12. Which of the following is not an inherent application of stack?

a) Reversing a string

b) Evaluation of postfix expression

c) Implementation of recursion

***d) Job scheduling***

*13.*The type of expression in which operator succeeds its operands is?

a) Infix Expression

b) Prefix Expression

**c) Postfix Expression**

d) Both Prefix and Postfix Expressions

14. If the elements “A”, “B”, “C” and “D” are placed in a stack and are deleted one at a time, what is the order of removal?

a) ABCD

**b) DCBA**

c) DCAB

d) ABDC