Which of these is used to perform all input & output operations in Java?

A) classes

B) Variables

C) streams

D) Methods

What will be the output of the program given below? 1

class A

public static void main(String args[])

int g= 3;

System.out.print(++g * 8);

25

B) 24

C) 32

D) 33

Choose the output of the following program from the given options.

class C{

public static void main(String args[]) {

System.out.print(10 +20+ "Finalexams ");

System.out.println("FinalExams" + 10 +20);

A) 30FinalExams FinalExams30

B) 1020FinalExams FinalExams1020

C) 30FinalExams FinalExams1020

D) 1020FinalExams FinalExams30

How can we identity whether a compilation unit is class or interface from a

.class filc?

A) Java source file header

B) Extension of compilation unit

C) We cannot differentiate between class and interface

D) The class or interface name should be postfixcd with unit type

What is the space complexity of the iterative Java implementation of Block Swap algorithm

a. Linear

b. Constant

c. Logarithmic

D. Quadratic

What is the result of the function blockSwap(arr, k), if arr is {4, 6, 1, 8, 9, 2} and k is 6

a. 6, 1, 8, 9, 2, 4

b. 1, 8, 9, 2, 4, 6

c. 4, 6, 1, 8, 9, 2

d. 8, 9, 2, 4, 6, 1

Given an array {-1, -3, -10, 0, 60}, what would be the minimum product subarray?

a. {60}

b. {-10, 0}

c. {-1,-3,-10, 0}

d. {-1, -3, -10}

Given an array that contains both positive and negative integers, Maximum product subarray involves finding the product of the maximum product subarray. Given an array {-2, -40, 0, -2, -3}, find the subarray which makes up the maximum product subarray

a. {-2, -40}

b. {-2, -40, -3}

c. {-3, -40}

d. None of the above

Given the following 2D matrix, what is the maximum sum of hourglass.

int arr[i][j] =

[

[1, 1, 1, 0, 0, 0],

[0, 1, 0, 0, 0, 0],

[1, 1, 1, 0, 0, 0],

[0, 0, 2, 1, 1, 0],

[0, 0, 0, 2, 0, 0],

[0, 0, 1, 2, 4, 0]

]

Assume that an hour glass is made of 7 cells.

a. 6

b. 8

c. 9d. 13

In the problem of Maximum sum of hour glass in matrix, you are given a 2D matrix, and your the task is to find the maximum sum of an hourglass. Assuming that an hourglass is made up of 7 cells, how many hourglasses can a matrix with x rows and y columns can have

a. (x-1)*(y-1)

b. x*y

c. (x-2)*(y-2)

d. x*y for a square matrix, (x-2)*(y-2) otherwise

Which of the following algorithms is NOT a multiplication algorithm/theorem?

1. Booth's algorithm

2. Chinese Remainder theorem

3. Karatsuba algorithm

4. Euclid Algorithm

a. 1 and 2

b. 2,3 and 4

c. 2 and 4

d. 1 and 3

Which of the following is NOT a nibble in the context of Java?

a. Four-bit aggregation

b. Half a byte

c. Half an octet

d. Half size of an integer

It reduces the multiplication of two n-digit numbers to at most single-digit multiplications in general and exactly when n is a power of ?

a.2

b.4

c.6

d.8

The time complexity of the implementation of Karatsuba algorithm is O(n^x). What is ‘x’ here?

a. log(3) with log-base 2

b. log(3) with log-base 10

c. log(2) with log-base 3

d. log(2) with base ‘e’

Which of the following sorting algorithms provide the best time complexity in the worst-case scenario?

A. Merge Sort

B. Quick Sort

C. Bubble Sort

D. Selection Sort

Which of the following is a Divide and Conquer algorithm?

A. Bubble Sort

B. Selection Sort

C. Heap Sort

D. Merge Sort

The best solution for the maximum product subarray has the limitations of that

1. The array cannot contain negative numbers

2. The array cannot contain 0

3. The array cannot contain repeated elements

Which of the following is true

A) 1 Only

B) 1 and 2 Only

C) All of 1,2 and 3

D) 2 OnlyIS

According to

number from the larger number repeatedly to obtain the

algorithm, We keep on subtracting the smaller|

A)Euclid, LCM

B)Euler, Greatest Common Divisor

C)Euclid, Highest Common Factor

D)Manacher, Greatest Common Divisor

35 Given an string "apple", which of the following represents a subarray, a

subset string and a subsequence.

Note:

Set cannot contain duplicates

A set string is the members of the set represented as a string (in any order)

|1. apel

2. ape

|3. apple

4. pP

How is the segmented sieve better than a simple sieve

1. Has bettertime complexity 2. Has better locality of reference

A) Only 1

B) Both1 and 2

C) Only 2

D) Neither of 1 and 2

Which of the following represents the Postorder Traversal of a Binary Tree?

A. Left -> Right -> Root

B. Left -> Root -> Right

C. Right -> Left -> Root

D. Right -> Root -> Left

Which of the following is a type of polymorphism in Java Programming?

a) Multiple polymorphism

b) Compile time polymorphism

c) Multilevel polymorphism

d) Execution time polymorphism

What is the extension of compiled java classes?

A).out

B) java

C).class

D) None of the above

Which one is true about a constructor?

a) A constructor must have the same name as the class it is declared within.

b) A constructor is used to create objects.

c) A constructor may be declared private

d) All of the above

Which of these is returned by Greater Than, less than and Equal to (i.e. relational) operator?

a) Float

b) Integer

c) Boolean

d) Double

Which of these class is not related to input and output stream in terms of functions?

a) File

b) Writer

c) Input Stream

d) Reader

Which of the following are legal lines of Java code?

1. int w = (int)888.8;
2. byte x = (byte)100L;
3. long y = (byte)100;
4. byte z = (byte)100L;

a) 1 and 2

b) 2 and 3

c) 3 and 4

d) All statements are correct

Which of the following is not a valid flow control statement?

a) exit()

b) break

c) continue

d) return

Which concept of Java is a way of converting real world objects in terms of class?

a) Polymorphism

b) Encapsulation

c) Abstraction

d) Inheritance

```
def f():
        int a[n][n]
        // Finding sum of elements of a matrix that are above or on the diagonal.
        sum = 0
        for i = 1 to n:
                for j = i to n:
                        sum += a[i][j]
        print(sum)
```

Time Complexity of this program:

A. O(n)

B. O(n log n)

C. O(n2)

D. O(n3)

Which of the following loops will execute the body of loop even when condition controlling the loop is initially false?

a) do-while

b) while

c) for

d) none of the mentioned

Which one of the following numbers is NOT a prime number?

a) 41

b) 43

c) 47

d) 49

Which one of the following numbers is a prime number?

a) 0

b) 1

c) 2

d) 4

Which of the following are legal line of Java code?

long x=(byte)100;

int x=(int)88.8;

byte x=(byte)100L;

byte x=(byte)100L;

a) 1 and 2

b) 2 and 3

c) 3 and 4

d) All statements are correct.

Which of these interface is not a member of java.io package?

a) DataInput

b) ObjectInput

c) ObjectFilter

d) FileFilter

Which of these are selection statements in Java?

a) if()

b) for()

c) continue

d) break

Which of the following is used for binary multiplication?

a) Restoring Multiplication

b) Booth's Algorithm

c) Pascal's Rule

d) Digit-by-digit multiplication

If Cn is the nth cyclic graph, where n>3 and n is odd. Determine the value of X(Cn).

a) 32572

b) 16631

c) 3

d) 310

What is a receiver in a sieve analysis?

a) Round pan on top

b) First sieve

c) Last sieve

d) Round pan at base

How many ways can sieve analysis be carried out?

a) 5

b) 3

c) 6d) 4

Which of the following is not an application of Euclid’s algorithm?

a) Simplification of fractions

b) Performing divisions in modular arithmetic

c) Solving quadratic equations

d) Solving diophantine equations

In Huffman coding, data in a tree always occur?

a) roots

b) leaves

c) left sub trees

d) right sub trees

x2 + 8x + 16 is a multiplier of x+4.

a) True

b) False

Which is the container that doesn't contain title bar and MenuBars but it can have other components like button, textfield etc?

a) Window

b) Frame

c) Panel

d) Container

Which is used to store data and partial results, as well as to perform dynamic linking, return values for methods, and dispatch exceptions?

a) Window

b) Panel

c) Frame

d) Container

Which one of the following is not a Java feature?

a) Object-oriented

b) Use of pointers

c) Portable

d) Dynamic and Extensible

From the following given tree, what is the code word for the character ‘a’?

a) 011

b) 010

c) 100

d) 101

Which of the following algorithms are used to find the shortest path from a source node to all other nodes in a weighted graph?

A. BFS.

B. Djikstra’s Algorithm.

C. Prims Algorithm.

D. Kruskal’s Algorithm.

Which data structure is mainly used for implementing the recursive algorithm?

A. Queue

B. Stack

C. Array

D. List

Which of the following order is given by binary search tree if we traverse it in inorder?

A. Ascending order

B. Descending order

C. Random order

D. None of the above

Which of the following is the aim of implementing prim's and kruskal's algorithms?

A. Maximum spanning tree

B. Spanning tree

C. Minimum Spanning tree

D. None of the above

Which of the following is the process of executing a correct program on data sets and measuring the time and space it takes to compute the results?

A. Testing

B. Combining

C. Profiling

D. All of the above

Which of the following is the time complexity of converting a prefix notation to infix notation is?

A. O(n) where n is the length of the equation

b. O(n) where n is number of operands

c. O(1)

d. O(logn) where n is length of the equation

Which of the following method will choose when sub-problems share sub-problems?

A. Backtracking

B. Greedy Method

C. Divide and Conquer

D. Dynamic Programming

Which of these will form an inversion in this given array?

arr = {2,8,5,3}

A. (2,8)

B. (8,5), (8,3)

C. (2,8), (2,5), (1,3)

D. (8,5), (8,3), (5,3)

Which one of the following is not the application of the stack data structure

A. String reversal

B. Recursion

C. Backtracking

D. Asynchronous data transfer

Which of the following is the infix expression?

A. A+B*C

B. +A*BC

C. ABC+*

D. None of the above

Which of the following is the prefix form of A+B*C?

A. A+(BC*)

B. +AB*C

C. ABC+*

D. +A*BC

Which of the following is the advantage of the array data structure?

A. Elements of mixed data types can be stored.

B. Easier to access the elements in an array

C. Index of the first element starts from 1.

D. Elements of an array cannot be sorted

Which of the following methods can be used to solve the longest palindromic subsequence problem?

a) Dynamic programming

b) Recursion

c) Brute force

d) Dynamic programming, Recursion, Brute force

Which rotation degree will be using to find the strobogrammatic number?

a) 90 degree

b) 145 degree

c) 180 degree

d) None of the above

Which method is used by lexicographically first palindrome string?

a) compare()

b) compareTo()

c) compareInt()

d) compareStr()

Which of the following methods can be used to solve n-queen's problem?

a) greedy algorithm

b) divide and conquer

c) iterative improvement

d) backtracking

Which method is used to sort a Collection by natural order of its elements?

a) Sort.sort

b) Collection.sortredUtils

c) CollectionsUtils.sortCollection

d) Collections.sort

Which of the following sorting algorithms is the fastest?

a) Merge sort

b) Quick sort

c) Insertion sort

d) Shell sort

What are the lower co-prime numbers of 7.

a) 1,2,3,5,7

b) 1,2,3,4,5,6

c) 2,3,5,7,11,13

d) 0,1,2,3,4,5,6

Which of the following is the correct mathematical application of Euclid's algorithm?

a) Determination of prime numbers

b) Lagrange's four square theorem

c) Cauchy-Euler theorem

d) Residue theorem

What is the time complexity of Karatsuba algorithm?

a) O(n2)

b) O(n log n)

c) O(n1.59)

d) O(log n)

What is the output of below program?

```
public class Main
{       public static void main(String[] args) {
                int x=60;
                System.out.println((x & 0x0F) << 4);
} }
```

a) 184

b) Compiler error

c) 192

d) Syntax error

What does this code output?

String[] nums = new String[] { "1", "9", "10" };

Arrays.sort(nums);

System.out.println(Arrays.toString(nums));

a) [1, 9, 10]

b) [1, 10, 9]

c) [10, 1, 9]

d) None of the above

How m String lion [] = new String[] {"lion"};

String tiger [] = new String[1] {"tiger"};

String bear [] = new String[] {};

String cat [] = new String[0] {};any of the following are legal declarations?

a) None

b) One

c) Two

d) Three

Which method of URL class represents a URL and it has complete set of methods to manipulate URL in Java?

a) java.net.URL

b) java.net.URLConnection

c) Both A & B

d) None of the above

What is the time complexity of the following naive method used to find the maximum sub-array sum in an array containing n elements?

```
#include<stdio.h>
int main()
{
    int arr[1000]={2, -1, 3, -4, 1, -2, -1, 5, -4}, len=9;
    int cur_max, tmp_max, strt_idx, sub_arr_idx;
    cur_max = arr[0];
    for(strt_idx = 0; strt_idx < len; strt_idx++)
    {
            tmp_max=0;
            for(sub_arr_idx = strt_idx; sub_arr_idx < len; sub_arr_idx++)
            {
                tmp_max +=arr[sub_arr_idx];
                if(tmp_max > cur_max)
                    _____;
            }
    }
    printf("%d",cur_max);
    return 0;
}
```

a) O(n2)

b) O(n)

c) O(n3)

d) O(1)

Which of the following logical programming languages is not based on backtracking?

a) Icon

b) Prolog

c) Planner

d) Fortran

Which one of the following does not provides an optimal solution for 8-queens problem?

a) (5,3,8,4,7,1,6,2)

b) (1,6,3,8,3,2,4,7)

c) (4,1,5,8,6,3,7,2)

d) (6,2,7,1,4,8,5,3)

What happens when the backtracking algorithm reaches a complete solution?

a) It backtracks to the root

b) It continues searching for other possible solutions

c) It traverses from a different route

d) Recursively traverses through the same route

Find the output for below code,

Longest Sequence of 1 after flipping a bit?

```
if (~a == 0)
{
        return 8 * sizeof();
}
   // Driver code
   public static void main(String[] args)
   {
      // input 1
      System.out.println(flipBit(13));
  }
}
```

a) 4

b) 5

c) 22

d) 59

What will be the output of the following Java program?

```
1.  import java.net.*;
2.  class networking
3.  {
4.      public static void main(String[] args) throws MalformedURLException
5.      {
6.          URL obj = new URL("https://www.sanfoundry.com/javamcq");
7.          System.out.print(obj.toExternalForm());
8.   }
9.  }
```

a) www.sanfoundry.com

b) https://www.sanfoundry.com/javamcq

c) sanfoundry

d) sanfoundry.com

What will be the output of the following Java code?

```
1.  class box
2.  {
3.      int width;
4.      int height;
5.      int length;
6.  }
```

```
7.  class main
8.  {
9.      public static void main(String args[])
10.     {
11.         box obj = new box();
12.         obj.width = 10;
13.         obj.height = 2;
14.         obj.length = 10;
15.         int y = obj.width * obj.height * obj.length;
16.         System.out.print(y);
17.     }
18. }
```

a) 100

b) 400

c) 200

d) 12

What will be the output of the following Java code?

```
1.  class area {
2.      public static void main(String args[])
3.      {
4.          double r, pi, a;
5.          r = 9.8;
6.          pi = 3.14;
7.          a = pi * r * r;
8.          System.out.println(a);
```

9. }

10. }

a) 301.5656

b) 301

c) 301.56

d) 301.56560000

The problem of finding a list of integers in a given specific range that meets certain conditions is called?

a) Subset sum problem

b) Constraint satisfaction problem

c) Hamiltonian circuit problem

d) Travelling salesman problem

What is true about a break?

a) Break stops the execution of entire program

b) Break halts the execution and forces the control out of the loop

c) Break forces the control out of the loop and starts the execution of next iteration

d) Break halts the execution of the loop for certain time frame

9006 is a strobogrammatic number or not.

a) true

b) false

What is a segmented sieve?

a) Divide the range [0..n-1] in different segments and compute primes in all segments one by one.

b) Divide the range [0 TO 5] in different segments and compute to all primes numbers.

c) Divide the range in different segments and compute primes in all segments one by two.

d) Divide the range [0..n-30] in different segments and compute primes in all segments one by one.

Which of the following edges form minimum spanning tree on the graph using kruskals algorithm?

A) (B-E)(G-E)(E-F)(D-F)

B) (B-E)(G-E)(E-F)(B-G)(D-F)

C) (B-E)(G-E)(E-F)(D-E)

D) (B-E)(G-E)(E-F)(D-F)(D-G)

Which of the following is true?

A) Prim's algorithm initialises with a vertex

B) Prim's algorithm initialises with a edge

C) Prim's algorithm initialises with a vertex which has smallest edge

D) Prim's algorithm initialises with a forest

Which of the following algorithms is the best approach for solving Huffman codes?

A) exhaustive search

B) greedy algorithm

C) brute force algorithm

D) divide and conquer algorithm

Which of the following is not a backtracking algorithm?

(A)Knight tour problem

(B)N queen problem

(C)Tower of hanoi

(D)M coloring problem

Which of the following is the fastest algorithm in string matching field?

a) Boyer-Moore's algorithm

b) String matching algorithm

C) Quick search algorithm

d) Linear search algorithm

Which of the following is not a palindromic subsequence of the string “ababcdabba”?

A) abcba

B) abba

C) abbbba

D) adba

In Karatsuba multiplication of 47 * 78, which of the following is NOT a subproblem?

a. 4*7

b. (11*15) - 28 - 56

c. 7*8

d. All of the above are the subproblems of the multiplication of the numbers

In a naive (slow) multiplication of two binary strings that you studied in school, what is the time-complexity to perform the multiplication?

a. Linear

b. Logarithmic

c. Linearthmic

d. Quadratic

If ‘x’ is a binary number of 8 bits, what is the code to swap the two nibbles of the integer ‘x’?

a. &, <<,|, >>, &

b. &&, <<,>>, &&

c. &, >>,|, <<, &

d. None of the above

For a string S of length n, what is the worst case time complexity of the two-pointer solution of finding whether the string is palindrome or not?

a. O(n)

b. O(1)

c. O(n^2)

d. O(log n)

In the problem of binary palindrome, which of the following expression gives a non-zero value if a bit in the kth position (from right) is set and zero value otherwise?

a. x & (1 << (k))

b. x & (1 << (k-1))

c. x & (1 >> (k-1))

d. x & (1 >> (k))

Which of the following is an issue with the implementation of simple sieve that segmented sieve aims to solve?

a. Segmented sieve is more cache friendly

b. Segmented sieve does not crash often

c. Segmented sieve does not make use of locality of reference

d. None of the above

What will be the cost of the code if character ci is at depth di and occurs at frequency fi?

a) cifi

b) ∫cifi

c) ∑fidi

d) fidi

What is the running time of the Huffman encoding algorithm?

a) O(C)

b) O(log C)

c) O(C log C)

d) O(N log C)

Which of the following best describes the useful criterion for comparing the efficiency of algorithms?

A. Time

B. Memory

C. Both of the above

D. None of the above

Which of the below is a limitation of performing sieve analysis?

A) Time consuming

B) Costly

C) Particle shape

D) Particle size

Which of the following is a linear data structure?

A. Array

B. AVL Trees

C. Binary Trees

D. Graphs

In a naive (slow) multiplication of two binary strings that you studied in school, what is the time-complexity to perform the multiplication?

a. Linear

b. Logarithmic

c. Linearthmic

d. Quadratic

Which one of the following is an application of the backtracking algorithm?

a) Finding the shortest path

b) Finding the efficient quantity to shop

c) Ludo

d) Crossword

What is the result of the maximum product subarray, if the elements of the array are {1, -3, 0, 7, -2}

a. 21

b. 28

c. 7

d. 6

Which of the following is an NP complete problem?

a) Hamiltonian cycle

b) Travelling salesman problem

c) Calculating chromatic number of graph

d) Finding maximum element in an array

Which of the following is not a type of graph in computer science?

a) undirected graph

b) bar graph

c) directed graph

d) weighted graph

How many edges will a tree consisting of N nodes have?

a) Log(N)

b) N

c) N – 1

d) N + 1

Consider the following statements.

S1. Kruskal's algorithm might produce a non-minimal spanning tree.

S2. Kruskal's algorithm can efficiently implemented using the disjoint-set data structure.

a) S1 is true but S2 is false

b) Both S1 and S2 are false

c) Both S1 and S2 are true

d) S2 is true but S1 is false

What is the meaning of an in-place sorting algorithm?

A) It needs O(1) or O(logn) memory to create auxiliary locations

B) The input is already sorted and in-place

C) It requires additional storage

D) It requires additional space

Given a list of characters and you want to list out all the combinations of the characters. A solution for this problem can be derived from identity

A) Manacher's

B) Newton's

C) Singular

D) Pascal'

In Dynamic Programming, if a problem can be broken into subproblems which are reused several times, the problem possesses property.

A) Overlapping subproblems

B) Optimal substructure

C) Memoization

D) Greedy

What is the condition for the worst case scenario of Quicksort?

A) When the sum of differences between consecutive array elements is thel

|largest

B) When the choosen pivot is in the middle

C) When the pivot is largest or the smallest

D) None of the above

1. What is the size of float and double in java _____
2. Find the output of the following code _____
3. When an array is passed to a method, what does the method receive _____

4. Find the output of the following code _____

```
if(1 + 1 + 1 + 1 + 1 == 5){
System.out.print("TRUE");
}
else{
System.out.print("FALSE");
}
```

5. What does the operator >>>> do _____

6. What is the output of the following code snippet _____

```
void solve() {
stack<int> s;
s.push(1);
s.push(2);
s.push(3);
for(int i = 1; i <= 3; i++) {
cout << s.top() << " ";
s.pop();
}
}
int Integer = 24;
char String = 'I';
System.out.print(Integer);
System.out.print(String);
```

7. Find the time complexity for below program _____

```
int a = 0, b = 0;
for (i = 0; i < N; i++) {
a = a + rand();
}
for (j = 0; j < M; j++) {
b = b + rand();
}
```

8. Find the output of the following program _____

```
public class Solution{
public static void main(String[] args){
byte x = 127;
```

```
x++;
x++;
System.out.print(x);
}
}
```

9. How many minimum number of spanning trees, one can have from a given connected graph with N nodes with different weights for the edges? _____
10. What does it mean when we say that an algorithm X is asymptotically more efficient than Y _____
11. On the basis of given array arr = {45,77,89,90,94,99,100} and key = 100; What are the mid values(corresponding array elements) generated in the first and second iterations _____
12. Difference of two distinct prime numbers is _____
13. If 4 is the GCD of 16 and 12, What is the GCD of 12 and 4 _____
14. What is the total running time of Euclid's algorithm _____
15. Euclid's algorithm is used for finding _____
16. What is the time complexity of the Sieve of Eratosthenes to check if a number is prime? _____.
17. The complexity of Binary search algorithm is _____
18. If a specific number x = a is substituted for the variable x in a polynomial, so that the value is zero, then x = a is said to be _____
19. Backtracking algorithm is implemented by constructing a tree of choice s called as
20. In general, backtracking can be used to solve problems.
21. The type of encoding where no character code is the prefix of another character code is called
22. A non-planar graph can have _____ graph.
23. URL is an acronym for

24. What is the remainder theorem formula_____

25. The result of >> of 11001 by 3-bits will be _____

26. Booth's Algorithm is applied on _____

27. If Booth's Multiplication is performed on the numbers 22*3, then what is 3 referred to as _____

28. One extra bit is added on the left of a binary number, in case of Binary Multiplication using Booth's Algorithm _____

29. In a graph of n nodes and n edges, how many cycles will be present _____

30. If 4 is the GCD of 16 and 12, What is the GCD of 12 and 4 _____

31. For solving the N-Queens problem, which of the algorithm need to use _____

32. Quick sort algorithm is an example of _____

33. How many minimum number of spanning trees, one can have from a given connected graph with N nodes with different weights for the edges? _____

34. What is the time complexity of the following code snippet in C++ _____

```
void solve() {
string s = "scaler";
int n = s.size();
for(int i = 0; i < n; i++) {
s = s + s[i];
}
cout << s << endl;
}
```

35. One extra bit is added on the left of a binary number, in case of Binary Multiplication using Booth's Algorithm _____

36. What is an in-place sorting algorithm?

37. Java uses ___ type of memory to implement Recursion.

38. Uses are Recursion in Java are___.

39. Two co-prime numbers has common factor is _____.
40. tool is used in Wi-fi hacking?
41. class is used to create servers that listen for either local client or remote client programs?
42. A mechanism used to encrypt and decrypt data is called

43. Cipher in cryptography is

44. techniques are used to hide information inside a picture.

45. is the Debian-based OS which has 2 virtual machines and focuses on preserving users' data.
46. is the maximum sub-array sum for the given elements.

{2, -1, 3, -4, 1, -2, -1, 5, -4}

47. To end a recursive method a RETURN statement is usually kept inside ___.
48. What is time complexity of large integer multiplication algorithm _____
49. How many multiplication operations are performed in Karatsuba method _____
50. How many nibbles are in a byte _____
51. What is the Time Complexity of Block Swap Algorithm _____
52. Block swap works depend on the _____.

53. max product subarray works with _____
54. is the oldest phone hacking technique used by hackers to make free calls.
55. is the term which denotes that only authorized users are capable of accessing the information
56. The Euler's phai value of 10 is
57. Right Shift Circular and Right Shift Arithmetic are methods of algorithm

58. The iterative and recursive solutions of block swap algorithms have a _____ time complexity

59. One of the efficient solutions to the maximum product subarray derives its solution from _____ algorithm
60. The Karatsuba algorithm is a fast multiplication algorithm that uses_____ to multiply two numbers
61. is the result of the nibble-swap operation for the input of 35?
62. Euler's theorem Φ(n) involves checking GCD of n with the integers which are _____
63. The number of combination of n distinct objects taken r at a time be x is denoted by
64. In Greedy Approach, the value of P(n, n – 1) is _____
65. The problem of placing n queens in a chessboard such that no two queens attack each other is called as
66. Kruskal's algorithm is used to _____
67. Minimum number of colors required for proper edge coloring of a graph is called as
68. In Huffman coding, data in a tree always occur in

69. How many edges will a tree consisting of N nodes_____ have.
70. If given integer n=27. We can flip exactly one bit,then is the length of the longest sequence of 1s you could create.
71. is used for binary multiplication.

72. In Booth's algorithm, in registers the multiplicand and multipliers be stored respectively
73. is the value of n in multiplication of 110* 1000, n denotes the number of bits that has the higher binary number, when multiplication is performed.
74. According to _____ algorithm, We keep on subtracting the smaller number from the larger number repeatedly to obtain the one until they become equal.
75. bit is reserved as a parity bit in an ASCII set?
76. If GCD of two numbers is 1, then the two numbers are said to be _____
77. is the correct formula which represents the idea behind Euclid's multiplication algorithm
78. In Booth's algorithm, in registers the results of the multiplication operation be stored respectively
79. is the auxiliary space occupied by binary palindrome problem.

80. is the value of Φ(3) in Euler's phi algorithm.

81. The algorithm of segmented sieve has many steps. In the first step, the simple sieve is used to find all primes upto _____

82. maximum product subarray is similar to_____

83. is the count of hour glass formation of 3*3 matrix.

84. are the leaders in this array {9,5,4,0,-1}

85. is the remainder if we divide 6x3 + x2 – 2x + 4 by x-2

86. If Booth's Multiplication is performed on the numbers 22*3, then 3 is referred to as _____

87. What will the output of the following code snippet be _____

```
void solve() {
vector<int> a = {1, 2, 3, 4, 5};
sort(a.begin(), a.end(), [&](const int &x, const int &y) {
return x % 2 < y % 2;
});
for(int x: a) {
cout << x << " ";
}
cout << endl;
}
```

88. The number of edges in a complete graph of n vertices is _____

89. Finding the location of a given item in a collection of items is called _____

90. The operation of processing each element in the list is known as _____

91. The space factor when determining the efficiency of algorithm is measured by _____

92. The post order traversal of a binary tree is DEBFCA. Find out the pre order traversal _____

93. Three standards ways of traversing a binary tree T with root R _____

94. What is byte code in Java _____

95. What is garbage collection in the context of Java _____

96. What is the range of short data type in Java _____

97. Division operator has ____ precedence over multiplication operator

98. The complexity of linear search algorithm is _____

99. The worst case complexity of quick sort is _____

100. On the basis of given input arr = {2,5,7,99,899}; key = 899; What is the level of recursion _____