Logic test 3:

Prn:046

Set 1:

Q1)

```
import java.util.*;
public class Main
{

  static  int[] positiveNeg(int arr[]){
     int n=arr.length;
     int left=0,right=n-1;
     int result[]=new int[n];
     for(int i=0;i<n;i++){
        if(arr[i]<0){
           result[left++]=arr[i];

        }else{
           result[right--]=arr[i];
        }

     }
     return result;

   }
          public static void main(String[] args) {
                    Scanner sc=new Scanner(System.in);
                    System.out.println("enter the total no of elements u want to insert in
array");
```

```
            int  n=sc.nextInt();
            int arr[]=new int[n];
           System.out.println("enter the numbers");
            for(int i=0;i<n;i++){
               arr[i]=sc.nextInt();
            }

int res[]=        positiveNeg(arr);
Arrays.sort(res);
for(int num:res){
   System.out.print(num+" ");
}



          }
}
```

Q2)

```
import java.util.*;
public class Main
{
   static boolean linearSearch(int arr[],int key){
      int n=arr.length;
      for(int i=0;i<n;i++){
         if(arr[i]==key){
            return true;
         }

      }
```

```
    return false;
  }

        public static void main(String[] args) {
                Scanner sc=new Scanner(System.in);
                System.out.println("enter the no of elements:n=");
                int n=sc.nextInt();
                int arr[]=new int[n];
                for(int i=0;i<n;i++){
                  arr[i]=sc.nextInt();
                }
                System.out.println("enter key to search in the array:");
                int key=sc.nextInt();

                boolean result=linearSearch(arr,key);
                if(result){
                  System.out.println("key is found in an array");
                }else{
                  System.out.println("key is not found");
                }


        }
}
```

Set 2:

Q1)

```
import java.util.*;
public class Main
{

 static  void EvenOdd(int arr[]){
    int n=arr.length;
    int left=0,right=n-1;
    int result[]=new int[n];
    for(int i=0;i<n;i++){
       if(arr[i]%2==0){
          result[left++]=arr[i];

       }else{
          result[right--]=arr[i];
       }

    }
    System.out.println("result");
    for(int res:result){
       System.out.print(res+" ");
    }

  }
        public static void main(String[] args) {
                Scanner sc=new Scanner(System.in);
                System.out.println("enter the total no of elements u want to insert in
array");
```

```
            int  n=sc.nextInt();
            int arr[]=new int[n];
           System.out.println("enter the numbers");
            for(int i=0;i<n;i++){
               arr[i]=sc.nextInt();
            }

            EvenOdd(arr);



           }
}
```

Q2)

```
import java.util.*;
public class Main
{
   static boolean BinarySearch(int arr[],int key){
      int n=arr.length;
      int left=0;
      int right=n-1;
      while(left<=right){
         int mid=(left+right)/2;
         if(arr[mid]==key){

            return true;

         }else if(arr[mid]<key){
            left=mid+1;
```

```
    }else{
      right=mid-1;
    }
  }

  return false;
}

      public static void main(String[] args) {
            Scanner sc=new Scanner(System.in);
            System.out.println("enter the no of elements:n=");
            int n=sc.nextInt();
            int arr[]=new int[n];
            for(int i=0;i<n;i++){
              arr[i]=sc.nextInt();
            }
            System.out.println("enter key to search in the array:");
            int key=sc.nextInt();

            boolean result=BinarySearch(arr,key);
            if(result){
              System.out.println("key is found in an array");
            }else{
              System.out.println("key is not found");
            }
```

```
        }
    }
```