Q 1

Ans

```
import java.util.*;
public class SumOfNumUsingRecursion {
   //function definition
   public static int findSum(int n){
      int result=0;
      if(n==0){
         return 0;
      }
      else{
         result=(n%10)+findSum(n/10);
      }
      return result;
   }
   public static void main (String []args){
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter the number to find sum : ");
      int num = sc.nextInt();

      //function call
      int result = findSum(num);
      System.out.println("The sum of digits of number is "+result);
   }
}
```

Q 2

Ans

```
import java.util.*;
public class Ques2 {
   public static int findResult(int n){
      int sum=0;
      if(n<=0){
         return 0;
      }
      if(n%2==0){
         sum=findResult(n-1)-n;
      }
      else{
            sum=findResult(n-1)+n;
      }
      return sum;
   }
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter the number");
      int n =sc.nextInt();

      int result = findResult(n);
      System.out.println(result);
   }
}
```

Q 3

Ans

```
public class MaxNumArray {
   public static int findHighNum(int[] arr, int n, int i) {
      int max = 0;
      if (i == n - 1) {
         return arr[n - 1];
      } else {
         int maxofIndices = findHighNum(arr, n, i + 1);
         max = Math.max(arr[i], maxofIndices);
      }
      return max;
   }
   public static void main(String[] args) {
      int[] arr = { 13, 1, -3, 22, 5 };
      int n = arr.length;
      int maxValueNum = findHighNum(arr, n, 0);
      System.out.println("Maximum value number is " + maxValueNum);
   }
}
```

Q 4

Ans

```
import java.util.Scanner;


public class SumOfArray {
   public static int sumArray(int []arr,int n,int i){
      int sum =0;
      if(i==n-1){
         return arr[n-1];
      }
      else{
         sum=arr[i]+sumArray(arr, n, i+1);
      }
      return sum;
   }
   public static void main(String[] args) {
      int []arr={92,23,15,-20,10};
      int n=arr.length;
      int sum = sumArray(arr,n,0);
      System.out.println("Sum of elements of array is "+sum);
   }
}
```

Q 5

Ans

```
import java.util.Scanner;
public class ArmStrongNum {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter number");
```

```
        int n = sc.nextInt();
        int digit = 0;
        int temp = n;
        while (temp > 0) {
            digit++;
            temp /= 10;
        }
        if (n == isArmStrong(n, digit)) {
            System.out.println("yes");
        } else {
            System.out.println("No");
        }
    }
    public static int power(int a, int b) {
        if (b == 0) {
            return 1;
        } else {
            if (b % 2 == 0) {
                return power(a, b / 2) * power(a, b / 2);
            } else {
                return a * power(a, b / 2) * power(a, b / 2);
            }
        }
    }
    public static int isArmStrong(int n, int digit) {
        if (n == 0) {return 0;}
        else{
            return power(n%10,digit)+isArmStrong(n/10, digit);
        }
    }
}
```