Quiz 3

(solutions)

1. What is the output of this code segment

```
int[] data = new int[10];
int k = 0;
try
{
   while(true)
   {
      data[k] = k++;
   }
}
catch (ArrayIndexOutOfBoundsException e)
{
   data[5]++;
}
catch (IndexOutOfBoundsException e)
{
   data[5]++;
}
catch (NullPointerException e)
{
   data[5]++;
}
finally
{
   data[5]++;
}

System.out.print(data[5]);
```

a) 5

b) 6

c) 7

d) none of the above

2. Examine the following code segment

```
public class Demo {
   public static void main(String[] args) {
      FooBar obj1 = new FooBar();

      FooBar.number = 4;

      FooBar obj2 = new FooBar();

      obj1.number++;

      System.out.println(obj2.get());

   }
}
public class FooBar {
   private int x = 0;

   public static int number = 1;

   public FooBar () {number++;}

   public int get() {x = number; return x;}

}
```

What is the output if this code is compiled?

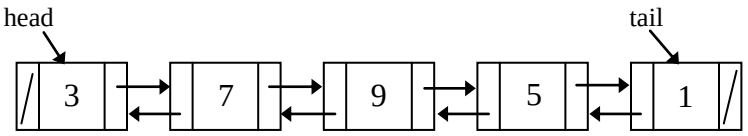
a) 1

b) 2

c) 6

d) 5

3. Given a doubly linked list where each node has two references (**`prev`** and **`next`**): one that points to a previous node and another that points to a next node. Assume the linked list below

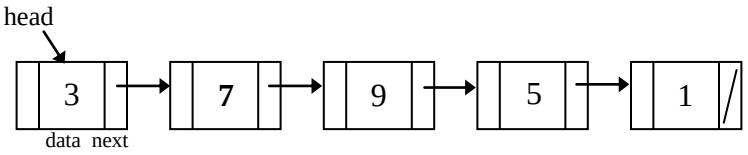


and provide the output for the following code fragments. The list is restored to its initial state before each line executes:

a) __7___ head.next.next.next.prev.prev.data

b) __9___ tail.prev.prev.prev.prev.next.next.data;

4. Assume the linked list below



Write the statements to insert a new node

```
tmp = new Node(10, null);
```

between the node with the 5 and the node with the 1. Do not write the whole method, but just a few statements to make the connection.

```
Node aux = head.next.next.next;
tmp.next = aux.next;
aux.next = tmp;
```