King Saud University College of Computer and Information Sciences Computer Science Department	
CSC 111 Introduction to Programming with Java	First Semester 1440-1441

Tutorial # 10

Q1: What is the output of the following java programs:

A.

```
public class A{
public static void main(String[] args){
char ch='A';
System.out.println("ch before calling chMethod1: "+ ch);
chMethod1(ch);
System.out.println("ch after calling chMethod1: "+ ch);
ch= chMethod2 (ch);
System.out.println("ch after calling chMethod2: "+ ch);}
public static void chMethod1(char ch){
ch=(char)(ch+1);}
public static char chMethod2(char ch{
ch=(char)(ch+1);
return ch;
}}
```

Output:

```
ch before calling chMethod1: A
ch after calling chMethod1: A
ch after calling chMethod2: B
```

B.

```
public class B{
public static void main (String[] args){
System.out.println(calc(10));
System.out.println(calc(10,4,5));
System.out.println(calc(4,6));
}
public static int calc (int x){
System.out.println("received one parameter");
return x+x;
}
public static int calc (int x, int y){
System.out.println("received two parameters");
return x+y;
}
public static double calc (int x, int y, int z){
System.out.println("received three parameters");
return x+y+z;
}}
```

Output:

```
received one parameter
20
received three parameters
19.0
received two parameters
10
```

Q2. Match each method head with a method call , use line number to specify.

```
Methods heads:
Line 1 public static int count (int x, int y)
Line 2 public static int count (int x, int y, int z)
Line 3 public static void count (int x)
Line 4 public static double count (double x, double y)
int num1=1, answer1;
double num2=1.0, answer2;
   a- answer1=count(4,5,num1);
   b- answer1=count(num1,10);
   c- answer2=count(num2,11.9);
   d- count(num1);
   e- count (num1, num2);
```

Method head	Method call
Line 1	b
Line 2	a
Line 3	d
Line 4	C,e

Q3: Find the error in the following code:

```
import java.util.*;
public class q3{
static Scanner console = new Scanner(System.in);
   static int k = 0;
   public static void main (String[] args){
      int x=console.nextInt();
      if (x%2==0){
      boolean x=true; //cannot redeclare an identifier
      }        b
      for (int i=0;i<x;i++){
       if (i==5)
          break;
      System.out.print (i);}// i exists in the loop only
} //end of main
public static void m1 (int[] x){
    int i;
    for (i=0; i<x.length; i++)
       x[i] = console.nextInt(); //console not read
} //end of m1
public static void m2 (int[] y, int index){
           System.out.printf ("%d", y[index]);
          } // m2 is nested within m1
public static int m3 (int[] y){ //cannot have two methods with the same signature
int sum=0; int
for (int i=0; i<y.length; i++) //i was not declared
      sum+=y[i]++;
if (sum >100)
  return sum-100; //didn't cover all the cases to return a value
} //end of m3
} //end of class
```