

## CSE1322 Test 3 Practice Test

Test 3 will cover modules 1-9 (it is cumulative). The questions in the test will present multiple choice answers. You can make up your own possible answers below:

### Question 1:

What is the output of the following code:

```
int i=2;
int y=10;
while(i<15) {
    i+=2;
    y+=i;
}
Println(y);
}
```

**Question 2:**

What is the output of the following code?

//Java:

```
boolean happy=true;
int z=7;

for(int i=0;i<5;i++) {
    if(i%2==0) {
        happy=!happy;
    }
    z+=1;
}

if((z>13) && (happy)) {
    System.out.println("Yes!");
}
else {
    System.out.println("No!");
}
}
```

//C#:

```
bool happy=true;
int z=7;

for(int i=0;i<5;i++) {
    if(i%2==0) {
        happy=!happy;
    }
    z+=1;
}

if((z>13) && (happy)) {
    Console.WriteLine("Yes!");
}
else {
    Console.WriteLine("No!");
}
}
```



**Question 6:**

What is the output of this code:

```
class JustNumber {
    public char x='c';
}

class Main {
    public static void changeX(char x) {
        x++;
    }

    public static void changeJustNum(JustNumber x) {
        x.x++;
    }

    public static void main(String[] args) {
        char x='a';
        changeX(x);
        Println("X is "+x);

        JustNumber a=new JustNumber();
        changeJustNum(a);
        Println("Other x is "+a.x);
    }
}
```

**Question 7:**

What is the output of the following code:

Java	C#
<pre>class Main {     public static int a(int x) {         return 2;     }      public static int a(char x) {         if(x=='a') {             return 8;         }         else {             return 9;         }     }      public static void main(String[] args) {         int answer=a(3)+a('b');         System.out.println(answer);     } }</pre>	<pre>using System;  class Program {     public static int a(int x) {         return 2;     }      public static int a(char x) {         if(x=='a') {             return 8;         }         else {             return 9;         }     }      public static void Main (string[] args) {         int answer=a(3)+a('b');         Console.WriteLine(answer);     } }</pre>

**Question 8:**

Given the following code:

```
class X {  
    private int a=7;  
  
    protected int getA() {  
        return a;  
    }  
}
```

**Question 9:**

What is the name of the parent class for class X?

```
class X {  
    private int a=7;  
  
    public void setA(int a) {  
        this.a=a;  
    }  
}
```

**Question 10:**

Is the following valid?

```
abstract class X {  
    public int methodA() {  
        return 3;  
    }  
  
    public abstract int methodB() {};  
}
```

**Question 11:**

What is the difference between an overloaded method and an overridden method?

**Question 12:**

What does the following code output:

```
class oneClass {
    public int x;

    public oneClass() {
        x=5;
    }

    public char x() {
        return 'A';
    }
}

class Main {
    public static void main(String[] args) {
        int x=2;
        OneClass y = new OneClass();

        print(x);
        print(y.x);
        print(y.x());
    }
}
```



**Question 13:**

What is the output of the following code?

Java

```
class X {  
    private int a;  
  
    public X(int b) {  
        a=b;  
    }  
}
```

```
X(10)  
public i
```

C#

**Question 14:**

What is the output of the following code?

Java	C#
<pre>class Main {     public static int a(int myNum){         if (myNum &lt; 1) {             return 4;         }         else {             return myNum + a(myNum-3);         }     }      public static void main(String[] args) {         System.out.println(a(5));     } }</pre>	<pre>using System;  class Program {     public static int a(int myNum){         if (myNum &lt; 1) {             return 4;         }         else {             return myNum + a(myNum-3);         }     }      public static void Main (string[] args) {         Console.WriteLine(a(5));     } }</pre>

**Question 15:**

What line is missing from this code to make a recursive method that prints out every 5th number up to a max number passed in?

```
public static void printNumbers(int max) {
    if(max>0) {
        //What line is missing here?
        Println(max);
    }
}
```

**Question 16:**

What is the output of the following code?

Java	C#
<pre>class Main {     public static void do_stuff() {         int[] myNums = new int[10];         for(int i=0;i&lt;=10;i++) {             myNums[i]=i;         }     }      public static void main(String[] args) {         try {             do_stuff();             System.out.println("A");         }         catch(Exception e) {             System.out.println("B");         }     } }</pre>	<pre>using System;  class Program {     public static void do_stuff() {         int[] myNums = new int[10];         for(int i=0;i&lt;=10;i++) {             myNums[i]=i;         }     }      public static void Main (string[] args) {         try {             do_stuff();             Console.WriteLine("A");         }         catch(Exception e) {             Console.WriteLine("B");         }     } }</pre>

**Question 17:**

Given the following code:

Java	C#
<pre>class Main {     public static void do_stuff(int x) throws     Exception {         int[] myArray=new int[10];         if(x&lt;0) {             throw new Exception("X&lt;0");         }         else {             for(int i=0;i&lt;=x;i++) {                 myArray[i]=i+x;             }         }         System.out.println(myArray[x]);     }      public static void main(String[] args) {         try {             do_stuff(-1); //Line 1             do_stuff(9); //Line 2             do_stuff(10); //Line 3         }         catch(IndexOutOfBoundsException e) {             System.out.println("Error 1");         }         catch(Exception e) {             System.out.println("Error 2");         }     } }</pre>	<pre>using System;  class Program {     public static void do_stuff(int x) {         int[] myArray=new int[10];         if(x&lt;0) {             throw new Exception("X&lt;0");         }         else {             for(int i=0;i&lt;=x;i++) {                 myArray[i]=i+x;             }         }         Console.WriteLine(myArray[x]);     }      public static void Main (string[] args) {         try {             do_stuff(-1); //Line 1             do_stuff(9); //Line 2             do_stuff(10); //Line 3         }         catch(IndexOutOfRangeException e) {             Console.WriteLine("Error 1");         }         catch(Exception e) {             Console.WriteLine("Error 2");         }     } }</pre>

What is the output of the code?

**Question 18:**

If you comment out Line 1 in the previous code, then what is the output of that code?

**Question 19:**

What is the content of a.txt after the following code executes?

Java	C#
<pre>import java.io.*;  class Main {     public static void write_file(String filename, String line, int x) {         try {             File myFile=new File(filename);             PrintWriter theFile = new PrintWriter(myFile);             for(int i=0;i&lt;x;i++) {                 for(int j=0;j&lt;x;j++) {                     theFile.print(line+" ");                 }                 theFile.println();             }             theFile.close();         }         catch(IOException e) {             System.out.println("Error writing file: "+e.getMessage());         }     }      public static void main(String[] args) {         write_file("A.txt","Test",4);     } }</pre>	<pre>using System; using System.IO;  class Program {     public static void write_file(String filename, String line, int x) {         try {             StreamWriter theFile = new StreamWriter(filename);             for(int i=0;i&lt;x;i++) {                 for(int j=0;j&lt;x;j++) {                     theFile.Write(line+" ");                 }                 theFile.WriteLine();             }             theFile.Close();         }         catch(IOException e) {             Console.WriteLine("Error writing file: "+e.Message);         }     }      public static void Main (string[] args) {         write_file("A.txt","Test",4);     } }</pre>

**Question 20:**

What line is missing below, if this code is to read a file A.txt and print it to the screen?

Java

C#

**Question 21:**

Java	C#
<pre> class DoStuff implements Runnable {     public void run() {         System.out.println("Running");     } }  class Main {     public static void main(String[] args) {         DoStuff myStuff=new DoStuff();         Thread x = new Thread(myStuff);         //What's missing here?     } } </pre>	<pre> using System; using System.Threading;  class DoStuff {     public void run() {         Console.WriteLine("Running");     } }  class Program {     public static void Main (string[] args) {         DoStuff myStuff=new DoStuff();         ThreadStart myTS=new ThreadStart(myStuff.run);         Thread x=new Thread(myTS);         //What's missing here?     } } </pre>

How do you correctly start the thread x?

**Question 22:**

What is the difference between an interface and an abstract class?

**Question 23:**

What does this return:

```

class Main {
    public static void main(String[] args) {
        float y=54.2f;
        char x = (char)y;

        Print(x);

    }
}

```

**Question 24:**

Where is 0,0 in a graphical window?

**Question 25:**

What color is represented by 0000FF?

**Question 26:**

When does an event happen in a GUI?

**Question 27:**

What is the advantage of a linked list over an ArrayList/List?

**Question 28a:**

True/False:

It will take the same amount of time to find a random item in an array, as it will a linked list?

**Question 28b:**

What if both the array and linked list are sorted. Does that change the answer?

**Question 28c:**

Is it faster to get an item out of a BST or a sorted array?

**Question 28d:**

Which is faster to insert into:

- a) Unsorted Array
- b) Sorted Array
- c) Unsorted Linked List
- d) Sorted Linked List
- e) BST

**Question 29:**

Given the following linked list:



What is the value of head.next.next.data?