CIN: 
Name: 

1) Answer the following: (2 mark)
   a) Math.abs(Math.max(-2.1, -5.1)) returns ___________
   b) Math.floor(7.9) returns __________
   c) Math.ceil(Math.min(0.6, -8.6)) returns __________
   d) Math.round(-5.50) returns __________.

2) Write the escape sequence for the following: (2 mark)
   a) Backspace: __________
   b) Backslash: __________
   c) Tab: __________
   d) Double Quote: __________

3) What does the following statement do? (1 mark)

   ```java
   for( ; ; )
   {
       System.out.println("Quiz-3");
   }
   ```
   a) Quiz-3 will be printed exactly once
   b) Quiz-3 will not be printed at all
   c) Quiz-3 will be printed infinitely
   d) Shows syntax error

4) How many times will “JAVA” be printed? (1 mark)

   ```java
   for(int i = 0; i < 4; i++)
   {
       for(int j = 0; j < i; j++)
       {
           System.out.println("JAVA");
       }
   }
   ```

5) Will this code show any error? If so what is the error? If not what is the output? (2 mark)

   ```java
   for(int i = 0, j = 0; i + j < 5; i++, j++)
   System.out.println("Loop");
   ```

6) Write a program that displays all the numbers from 100 to 200, ten per line, that are divisible by 5 or 6, but not both. Numbers are separated by exactly one space. (5 marks)
7) What is the keyword break for? Will the following code work? If so give the output, else give the error.  

```java
int balance = 10;
while(true)
{
    if(balance < 9)
        break;
    balance -= 9;
}
System.out.println(balance);
```

(2 + 2 marks)

8) What is the keyword continue for? Will the following code work? If so give the output, else give the error.

```java
int sum = 0;
for (int i = 0; i < 5; ++i)
{
    if(i % 3 == 0) continue;
    sum += i;
}
System.out.println(sum);
```

(2 + 2 marks)

9) If the Greatest Common Divisor of the 2 integers 16 and 24 is 8, then write a java program to find the GCD for 232 and 432.  

(5 marks)

10) Display the following patterns in 4 separate programs using loops.  

```
<table>
<thead>
<tr>
<th>Pattern A</th>
<th>Pattern B</th>
<th>Pattern C</th>
<th>Pattern D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 2 3 4 5 6</td>
<td>1</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>1 2</td>
<td>1 2 3 4 5</td>
<td>2</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>1 2 3</td>
<td>1 2 3 4</td>
<td>3 2 1</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>1 2 3 4</td>
<td>1 2 3</td>
<td>4 3 2 1</td>
<td>1 2 3</td>
</tr>
<tr>
<td>1 2 3 4 5</td>
<td>1 2</td>
<td>5 4 3 2 1</td>
<td>1 2</td>
</tr>
<tr>
<td>1 2 3 4 5 6</td>
<td>1</td>
<td>6 5 4 3 2 1</td>
<td>1</td>
</tr>
</tbody>
</table>
```

(5 + 5 + 5 + 5 marks)

11) Write the syntax for while and do while loop. State any 2 difference between the while and do while loop?  

(2 + 2 marks)