

OOCL Java Boot camp weekly Java Test Paper.

Time: 1hour

Full marks: 100

Name: _____ Score: _____

1. What will be printed out if you attempt to compile and run the following code?

```
int i=1;
for (int j=0; j<5;j=j+2)
{
    i= (i*i) +j
}
switch (i)
{
    case 3:
        System.out.println ("zero");
        break;
    case 13:
        System.out.println ("one");
    case 175:
        System.out.println ("two");
    default:
        System.out.println ("default");
}
```

2. What will be printed by the following code segment if the user enters 5 when prompted?

```
int n;
int F_0=1,F_1=1;
int F_n=0;
System.out.println ("Enter the number");
n=Keyboard.readInt ();
for (int i=1; i<n; i++)
{
    F_n=F_0+F_1;
    F_0=F_1;
    F_1=F_n;
}
System.out.println (F_n);
```

3. Rewrite the following for loop using while statement, and find the value of the variable result after the code is run.

```
int inner=2, outer=2;
int result=0;

for (int i=0; i<outer; i++)
{
    for (int j=0; j<inner; j++)
    {
        result = (result*result)+1;
    }
}
```

4. How many times will the following program print "Hello"?

```
x = 3;
y = 10;
while (x < y)
{System.out.println ("Hello");
  x = x + 1;
  y = y - 1;
}
```

5. Which of the following is a statement of Java language?

- (a) a==0
- (b) int i,j;
- (c) {i=i+1; j=j-1 ;}
- (d) static int i;
- (e) none of the above

6. Write a Java method that prompts the user for a positive integer n, then prints a table of all sums of the form $i/n + j/n$, where i and j are integers in the range [1 .. n]. For example, if the value provided by the user is 4, then the output will be

```
0.5 0.75 1.0 1.25
0.75 1.0 1.25 1.5
1.0 1.25 1.5 1.75
1.25 1.5 1.75 2.0
```

7. Show the output from the following Java method, assuming that it is called with the line: compute value (60).

```
public static int compute_value(int integer_value) {  
    // Declare Local Variables  
    boolean done = false;  
    int count = 1;  
    int current = integer_value + 2;  
    while (! done) {  
        current = current / count;  
        if (current % 3 == 0)  
            done = true;  
        else if (current < 1)  
            done = true;  
        else  
            count += 1;  
        System.out.println(current);  
    }  
    System.out.println (count);  
    return count;  
} // method compute_value
```

8. Find and correct error(s) in the following code segments:

a)

```
int x = 1;  
while(x <= 10);  
    ++x;
```

b)

```
int k;  
for(k == 1, k <= 10, ++k)  
    System.out.println(k);
```

c)

```
int h = 2;  
if(h = 2)  
    ++h;
```

d)

The following code should print the even numbers from 2 to 100:

```
int counter = 2;  
Do{  
    if(counter % 2 = 0)
```

```
        System.out.println(counter);

        counter += 2;
    } While(counter < 100)
```

9. Write the equivalent logical expressions of the following statements.

a) $!(x < 5) \ \&\&\ (y \geq 7)$

b) $!(a == b) \ ||\ (g != 5)$

c) $!((i > 4) \ ||\ (j \leq 6))$

10. What will the following pieces of code print?

10 a)

```
class sinav1
{
    public static void main(String[] args)
    {
        double count;
        int limit;
        count = 9.0;
        limit = 43/4;
        for (; count <= limit; count = count + 0.5)
        {
            System.out.println ("in for:" + count);
        }
        System.out.println ("after for" + count);
    }
}
```

10 b)

```
class sinav2
{
    static int value = 10;
    public static void main(String[] args)
    {
        System.out.println("Main before p1: " + value);
        value = p1(value);
        System.out.println("Main before p2: " + value);
        value = p2(value);
    }
}
```

```

        System.out.println("Main at the end: " + value);
        System.out.println("-----");
        int value = 30;
        System.out.println("Main before p1: " + value);
        value = p1(value);
        System.out.println("Main before p2: " + value);
        value = p2(value);
        System.out.println("Main at the end: " + value);
    }
    static int p1(int input)
    {
        value = input * value;
        System.out.println("In p1: " + value);
        return value;
    }
    static int p2(int input)
    {
        int value = 5;
        value = input / value;
        System.out.println("In p2: " + value);
        return value;
    }
}

```

10 c)

```

class sinav3
{
    public static void main(String[] args)
    {
        int value = 5;
        int value2 = 1;
        while (value2 < 4)
        {
            for (;value >= value2; value--)
            {
                System.out.println("*");
            }
            value2++;
        }
    }
}

```

10 d)

```
class sinav4
{
    static boolean a,b,c;
    public static void main(String[] args)
    {
        a = true;
        b = false;
        c = false;
        System.out.println (a + " , " + b + " , " + c);
        do
        {
            if (b == c)
                b = a;
            else if (a == c)
                b = c;
            else
                a = c;
            System.out.println(a + " , " + b + " , " + c);
        }
        while ( a || b || c);
    }
}
```

10 e)

```
class sinav5
{
    public static void main(String[] args)
    {
        int one = /* type a value here */;
        int two = /* type a value here */;
        int three = /* type a value here */;

        do
        {
            one++;
            System.out.print("cart");
        }
        while ( one < 3);
        for (int i = 0; i < two; i++)
        {
            System.out.print("o");
        }
    }
}
```

```
    }  
    while (true)  
    {  
        three++;  
        if (three == 5)  
        {  
            break;  
        }  
        System.out.print("n");  
    }  
}  
}
```