

Question - 1

SCORE: 10 points

Java

Easy

Static Methods

What is the result of compiling and running the following program?

```
class test {
    public static void main(String args[]) {
        int[] arr = {1,2,3,4};
        call_array(arr[0], arr);
        System.out.println(arr[0] + "," +
arr[1]);
    }
    static void call_array(int i, int arr[]) {
        arr[i] = 6;
        i = 5;
    }
}
```

- ☐ 1,2
- ☐ 5,2
- ☒ 1,6
- ☐ 5,6

Question - 2

SCORE: 10 points

Java

Easy

Iteration

What gets printed when the following program is compiled and run?

```
class test {
    public static void main(String args[]) {
        int i;
        do {
            i++;
        }
        while(i < 0);
        System.out.println(i);
    }
}
```

- ☒ The program does not compile as i is not initialized.
- ☐ The program compiles but does not run.
- ☐ The program compiles and runs but does not print anything.
- ☐ The program prints 0.

☐ The program prints 1.

Question - 3

SCORE: 10 points

Java: String Array

Application Development

Java

Arrays

Core CS

Language-Specific

Which of the following Java declaration of the String array is correct?

- ☐ String temp [] = new String {"a" "z"};
- ☐ String temp [] = { "j" " " b" "c"};
- ☐ String temp = {"a", "b", "c"};
- ☒ String temp [] = {"a", "b", "c"};

Question - 4

SCORE: 10 points

Examine the following code:

```
ArrayList<String> list = new ArrayList<String>()  
;  
  
list.add( "Apple" );  
list.add( "Berry" );  
list.add( "Chip" );  
list.add( "Donut" );  
list.add( "Egg" );
```

Which of the following will change the list so that it looks like:

```
Apple  
Berry  
Chip  
Donut
```

- ☐ list.remove(list.size());
- ☒ list.remove(list.size()-1);
- ☐ list.remove(5);
- ☐ list.clear("Elmo");

Question - 5

SCORE: 10 points

What is the output of the following code fragment:

```
int[] num = { 2, 4, 6, 8, 10, 1, 3, 5, 7, 9  
};  
  
for ( int index= 0 ; index < num.length ;  
index = index + 2 )  
    System.out.print( num[ index ] + " " );
```

- ☐ 2 4 6 8 10 13 5 7 9
- ☐ 4 8 1 5 9
- ☒ 2 6 10 3 7
- ☐ 2 6 10 3 7 0

Question - 6

SCORE: 10 points

What is the output of the following code:

```
int[] array = { 1, 4, 3, 6, 8, 2, 5};
int what = array[0];

for ( int index=0; index < array.length;
index++ )
{
    if ( array[ index ] > what )
        what = array[ index ];
}
System.out.println( what );
```

- ☐ 1
- ☐ 5
- ☐ 1 4 3 6 8 2 5
- ☒ 8

Question - 7

SCORE: 10 points

Fill in the blanks of the following code fragment so that the elements of the array are printed *in reverse order*, starting with the last element.

```
int[] num = { 2, 4, 6, 8, 10, 1, 3, 5, 7, 9
};

for ( int _____ ; _____ ;
_____ )
    System.out.print( num[ index ] + " " );
```

- ☐ index = 0; index < num.length; index--
- ☐ index = length; index < 0; index--
- ☐ index = length-1; index > 0; index--
- ☒ index = num.length-1; index >= 0; index--

Question - 8

SCORE: 10 points

What will be the output of the following program?

```
public class Highlight {
    public static void main(String[] args) {
        int[] numbers = {10, 20, 30, 40, 50, 60, 70, 80, 90};
        for (int x : numbers) {
            if (x == 30 || x == 60 || x == 90 || x == 120) {
                continue;
            }
            System.out.print(x + " ");
            continue;
        }
    }
}
```

- ☐ 10 20 30 40 50 60 70 80 90 120
- ☐ 10 20 30 40 50 60 70 80 90
- ☒ 10 20 40 50 70 80
- ☐ Compilation Error
- ☐ Runtime Error

Question - 9

SCORE: 10 points

What will be the output of the following program?

```
public class Demo {
    int a;
    int b;

    public Demo(){
        System.out.println("Zero argument
constructor called");
    }

    public Demo(int a, int b) {
        this();
        System.out.println("Two argument
constructor called");
        a = a;
        this.b = b;
    }

    public static void main(String []args) {
        Demo d = new Demo(10, 20);
        System.out.println("a = "+ d.a +", b = "+
d.b);
    }
}
```

- ☒ Zero argument constructor called Two argument constructor called a = 0, b = 20
- ☐ Zero argument constructor called Two argument constructor called a = 10, b = 20
- ☐ Two argument constructor called a = 0, b = 20
- ☐ Two argument constructor called a = 10, b = 20



Question - 10

SCORE: 10 points

What is the correct order for system design?



Problem Definition --> Design --> Specification --> Implementation



Problem Definition --> Design --> Implementation --> Specification



Problem Definition --> Specification --> Design --> Implementation



Specification --> Problem Definition --> Design --> Implementation