**Theory:**

1. What are Arrays in Java?
2. What is ArrayOutOfBoundsException wrt to Arrays?
3. What are 1d and 2d arrays in Java?
4. Which index do array elements start from?
5. What is OOPs concept in Java?
6. What is a Class and Object in Java?
7. What is Abstraction in Java? Can you give an example?
8. What is Encapsulation in Java? Can you give an example?
9. What is Inheritance in Java? Can you give an example?
10. How to create an object in Java?
11. What is a Constructor in Java?
12. What is a parameterized constructor in Java?
13. What is “this” keyword in Java?
14. How do we create a method in Java?
15. What is recursion in Java?
16. What are final variables in Java?
17. What do we mean by class composition? Can you give a real world example?
18. Is multiple inheritance allowed in Java? Justify
19. What is difference between call by value and call by reference in Java?
20. What are Inner classes in Java?

**Code Snippets**

1. Output of following  
   class A{

public static void main(String[] args){

int[] rollNumber = { 23, 17, 20, 29, 30 };

for (int temp : rollNumber)

System.out.print(temp+" ");

}

} }

1. Length of the array ?

What is the length of the following array: byte[] data = { 12, 34, 9, 0, -62, 88 };

1. Output of following  
   class Demo1{

public static void main(String args[])

{

int i[] = new int[10];

System.out.println(i[10]);

}

}

1. For the array:

int stats[3];

What is the range of the index?

1. int [] nums = {2, 3, 5, 8, 9, 11};

How would you access the fourth element in nums?

1. O/p of following:  
   class Test{

public static void main (String[] args) {

int [] arr1= {1, 2, 3};

int [] arr2 = {1, 2, 3};

if(arr1[0] == arr2[0])

System.out.println("Same");

else

System.out.println("Not same");

}}

1. How many constructors are there in the class:  
   class Test{

int i;

int j;

Test(){

}

Test(int i, int j){

}

void m1(){

}

Test(int i){

}

}

1. What will be result when this code snippet is run?

int intArray1[]; // 1

intArray1 = int[2]; // 2

intArray1[0] = 22; // 3

intArray1[1] = 44; // 4

System.out.println(intArray1[0]); // 5

1. Which of following will compile?

int intArray1[][]; // A

int[][] intArray2; // B

int[] intArray3[]; // C

1. O/p of following

class T {

int t = 20;

}

class Main {

public static void main(String args[]) {

T t1 = new T();

System.out.println(t1.t);

}

}

1. O/p of following:

class T {

int t = 20;

T() {

t = 40;

}

}

class Main {

public static void main(String args[]) {

T t1 = new T();

System.out.println(t1.t);

}

}

1. O/p of following:

class Test

{

static int a;

static

{

a = 4;

System.out.println ("inside static block");

System.out.println ("a = " + a);

}

Test()

{

System.out.println ("inside constructor");

a = 10;

}

public static void func()

{

a = a + 1;

System.out.println ("a = " + a);

}

public static void main(String[] args)

{

Test obj = new Test();

obj.func();

}

}

|  |  |
| --- | --- |
| A | inside static block  a = 4  inside constructor  a = 11 |
| B | Compiler Error |
| C | Run Time Error |
| D | inside static block  a = 4  inside constructor  a = 5 |
| E | inside static block  a = 10  inside constructor  a = 11 |