FULL STACK DEVELOPMENT – WORKSHEET 5

FIND OUTPUT OF THE PROGRAMS

- EXPLANATION are given in comments

Q1.

```
public class Main
{
 public static void main(String args[])
 {
 String s1 = "abc";
 String s2 = s1;
 s1 += "d"; //creates a new string.
 System.out.println(s1 + " " + s2 + " " + (s1 == s2));  // it points to original string so it is false
 StringBuffer sb1 = new StringBuffer("abc");
 StringBuffer sb2 = sb1; sb1.append("d");          // it points to same StringBuffer so,
 System.out.println(sb1 + " " + sb2 + " " + (sb1 == sb2));     // so, this condition is true
 }
 }
```

Ans: abcd abc false

abcd abcd true

Q2. // Method overloading

```
public class Main
 {
public static void FlipRobo(String s)
 {
```

```
System.out.println("String");
 }
 public static void FlipRobo(Object o)
 {
 System.out.println("Object");
 }
 public static void main(String args[])
{
 FlipRobo(null);
 }
}
```

// when we call Fliprobo(null) in main method,both string and object can accept (null) argument but java chooses FlipRobo(String s) because it is more specific than object.

Ans: String

Q3.

```
class First
 {
 public First()
{
 System.out.println("a");
 }
 }
 class Second extends First
 {
 public Second()
 {
 System.out.println("b");
 }
 }
 class Third extends Second
```

```
{
 public Third()
 {
 System.out.println("c");
}
 }
public class MainClass
{
 public static void main(String[] args)
 {
 Third c = new Third();
 }
 }
```

Ans: a

b

c

// when we call second constructor,the Third constructor is called because Third extends second one. And as we call First constructor Second one is called .And at First is called.

Q4.

```
 public class Calculator
{
 int num = 100;
 public void calc(int num)
{
 this.num = num * 10;
 }
 public void printNum()  // prints the value of  variable 'num'
{
 System.out.println(num);
}
```

```
 public static void main(String[] args)
 {
 Calculator obj = new Calculator();
 obj.calc(2); // calc method is called with argument 2 ,2*10=20
 obj.printNum();    // In 'printNum' method ,prints 20 to console
 }
 }
```

Ans: 20

Q5.

```
 public class Test
{
 public static void main(String[] args)
 {
 StringBuilder s1 = new StringBuilder("Java");  // initialized value "Java"
String s2 = "Love";   //   initialized value "Love"
 s1.append(s2);  //   Appends "Love" to the end of the StringBuilder
 s1.substring(4);                                    // Create a new StringBuilder
 int foundAt = s1.indexOf(s2);   //   searches for the index of the string "Love" in s1
 System.out.println(foundAt); // prints the value of foundAt which is 4
 }
 }
```

Ans: 4

Q6.

```
 class Writer
{
public static void write()
{
 System.out.println("Writing...");
 }
```

```
 }
 class Author extends Writer
 {
 public static void write()
 {
 System.out.println("Writing book");
 }
 }
public class Programmer extends Author
{
 public static void write()
 {
 System.out.println("Writing code");
}
public static void main(String[] args)
 {
 Author a = new Programmer();
 a.write();
 }
}
```

// the actual object type is 'Programmer' ,so 'write method of the 'Programmer' class is invoked.

Ans: Writing code

Q7.

```
 class FlipRobo
{
 public static void main(String args[])
 {
 String s1 = new String("FlipRobo");
 String s2 = new String("FlipRobo");
if (s1 == s2) System.out.println("Equal"); // comparing two string //condition is false
```

```
 else
 System.out.println("Not equal"); // this will print or run.
 }
 }
```

Ans: Not equal

Q8.

```
 class FlipRobo
{
 public static void main(String args[])
{
try
{
 System.out.println("First statement of try block"); //fist print this
 int num=45/3;
 System.out.println(num);  // second execute this
}
 catch(Exception e)
 {
 System.out.println("FlipRobo caught Exception"); // no exception so, 'catch' block is not executed
}
 Finally
 {
 System.out.println("finally block"); // third execution
}
 System.out.println("Main method"); // fourth output
}
}
```

Ans: First statement of try block

15

finally block

Main method

Q9.

```
 class FlipRobo
 {
 // constructor
FlipRobo()
 {
System.out.println("constructor called");
 }
 static FlipRobo a = new FlipRobo(); // creat a static instance ‘Fliprobo’ named “a”

public static void main(String args[])
{
 FlipRobo b; // declare a reference variable ‘b’ .which call  the  constructor of second time.
  b = new FlipRobo();
 }
 }
```

Ans: constructor called

constructor called

Q10.

```
 class FlipRobo
 {
 static int num;
static String mystr;
 // constructor FlipRobo()
 {
 num = 100;
 mystr = "Constructor"; }
```

```
 {
 System.out.println("Static Block 1"); // execute first static block
 num = 68;
 mystr = "Block1";
}
 {
 System.out.println("Static Block 2");// execute second static block
 num = 98;
 mystr = "Block2";
}
public static void main(String args[])
 {
 FlipRobo a = new FlipRobo(); // main method is called which create an instance of 'Fliprobo'
System.out.println("Value of num = " + a.num); // constructor is called and prints num=100
 System.out.println("Value of mystr = " + a.mystr);
 }
 }
```

Ans: Static Block 1

Static Block 2

Value of num = 100

Value of mystr = Constructor