Worksheet 2

Q1. Java method overloading implements the OOPS concept?

Ans. Polymorphism

Q2. Data members and member functions of a class are private by default?

Ans. True

Q3. Which of the following functions can be inherited from the base class?

Ans. None

Q4. Identify the feature, which is used to reduce the use of nested classes?

Ans. Inheritance

Q5. Which concept of Java is achieved by combining methods and attributes into a class?

Ans. Encapsulation

Q6. Which of the declaration does not compile?

Ans. double num1, int num2 = 0;

Q7. Which of these interface must contain a unique element?

Ans. Set

Q8. Predict the output?

```
package main;

class T{

int t = 20;

}

class Main{

public static void main(String args[]){

T t1 = new T();

System.out.println(t1.t);

 }

 }
```

Ans. 0

Q9. What is the output of the below java program?

```
//bingo.java file

public class Hello

{

public static void main(String[] args)

{

System.out.println("BINGO");

}

}
```

Ans. BINGO

Q10. What will be the output of the following java program?

```
class variable_scope
{
    public static void main(String args[])
    {
        int x;
        x = 5;
        {
            int y = 6;
            System.out.print(x + " " + y);
        }
        System.out.println(x + " " + y);
    }
}
```

Ans.   Compilation error

Q11. What will be the output of the following java code?

```java
class String_demo
{
    public static void main(String args[])
    {
        char chars[] = {'a', 'b', 'c'};
        String s = new String(chars);
        System.out.println(s);
    }
}
```

Ans. abc

Q12. What will be the output of the following java program code?

```java
public class finalclassA {
    public static void main(String[] args) {

        final class A {
            int i;
        }
        class B extends A {
            int j;
System.out.println("j +" "+i");
        }
        class inheritance {
            public static void main(String args[]) {
                B obj = new B();
                obj.display();
            }
        }
    }
}
```

```
        }
}
```

Ans. Runtime Error

Q13. What is output of following program?

```
public class Test
{
    public int getData() //getdata() 1
    {
        return 0;
    }
    public long getData() //getdata 2
    {
        return 1;
    }
    public static void main(String[] args)
    {
        Test obj = new Test();
        System.out.println(obj.getData());
    }
}
```

Ans. Runtime Error

Q14. What is the output of the following program?

```
public class Test {
    static int start = 2;
    final int end;

    public Test(int x) {
        x = 4;
        end = x;
    }
```

```
    public void fly(int distance) {
        System.out.println(end - start + " ");
        System.out.println(distance);
    }

    public static void main(String[] args) {
        new Test(10).fly(5);
    }
}
```

Ans.[2 5]

Q15. What is the output of the following program?

```
public class MyClass {
    public static void main(String... data) {
        String john = "john";
        String jon = new String(john);
        System.out.print((john==jon)+"
"+(john.equals(jon)));
    }
}
```

Ans. false true

Q16. Given that Student is a class, how many reference variables and objects are created by the following code?

Student studentName, student;

studentName = new Student();

Student stud_class = new Student();

Ans. Three reference variables and two objects are created.

Q17. Write a java program to check even or odd number?

Ans.

```java
import java.util.Scanner;

public class Evenorodd {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        System.out.println("Enter the number : ");
        int number = s.nextInt();
        // check whether the number is even or odd
        if (number % 2 == 0)
            System.out.println(number + " is Even");
        else
            System.out.println(number + " is Odd");
    }
}
```

Q18. Write a java program to find average of two numbers?

Ans.

```java
import java.util.Scanner;

public class Averageoftwonumbers {
```

```java
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number : ");
        int num1 = sc.nextInt();
        System.out.println("Enter hte number : ");
        int num2 = sc.nextInt();
        float avg = (num1+num2)/2;
        System.out.println("Average of (" + num1 +" "
+ " " + num2 + ") / 2 = " +avg);
    }
}
```

Q19. Write a java program to swap two numbers?

Ans.

```java
public class Swaptwonumbers {
    public static void main(String[] args){
        int a = 25, b = 30;

        System.out.println("Before swapping the
numbers:");
        System.out.println("First number = " + a);
        System.out.println("Second number = " + b);

        // Temporary value is assigned with the value
of the First variable
        int temp = a;

        // The First variable is assigned to the
value of the Second variable
        a = b;

        // The Second variable is assigned to the
value of the Temporary variable
        // i.e, the First variable
        b = temp;

        System.out.println("After swapping the
numbers: ");
        System.out.println("First number = " + a);
```

```java
        System.out.println("Second number = " + b);
    }
}
```

Q20. Write a java program to check whether a number is prime or not?.

Ans.

```java
import java.util.Scanner;

public class Primeornot {
    public static void main(String[] args){
        int num, i, count=0;
        Scanner s = new Scanner(System.in);
        System.out.println("Enter a Number : ");
        num = s.nextInt();
        for(i=2; i<num; i++)
        {
            if (num%i == 0)
            {
                count++;
                break;
            }
        }
        if (count==0)
            System.out.println("Prime Number.");
        else System.out.println("Not a Prime
Number.");
    }
}
```

Q21. Write a java program to find the table of n?

Ans.

```java
import java.util.Scanner;

public class Tableofn {
```

```java
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter number: ");
//reading a number whose table is to be print
        int num=sc.nextInt();
//loop start execution form and execute until the
condition i<=10 becomes false
        for(int i=1; i <= 10; i++)
        {
//prints table of the entered number
            System.out.println(num+" * "+i+" =
"+num*i);
        }
    }
}
```

Q22. Write a java program to find the largest of three numbers?

Ans.

```java
public class Largestofthreenumbers {
    public static void main(String[] args){
        double n1 = 500, n2 = 250, n3 = 800;

        if( n1 >= n2 && n1 >= n3)
            System.out.println(n1 + " is the largest
number.");

        else if (n2 >= n1 && n2 >= n3)
            System.out.println(n2 + " is the largest
number.");

        else
            System.out.println(n3 + " is the largest
number.");
    }
}
```

Q23. Write a java program to calculate simple interest?

Ans.

```java
public class Simpleinterest {
    public static void main(String[] args){
        // p = principal amount, r = rate, t = time,
si = simple interest
        float p = 15000;
        float r = 10;
        float t = 2;
        float si = (p*r*t)/100;
        System.out.println("Simple interest is:"
+si);
    }
}
```

Q24. Write a java program to calculate Area and perimeter of rectangle?

Ans.

```java
public class Perimeterofrectangle {
    public static void main(String[] args){
        float a,b,c,d,perimeter;
        a=c=25;
        b=d=15;
        perimeter = 2*(a+b);
        System.out.println("Perimeter of rectangle
:"+ perimeter);
    }
}
```

Q25. Write a java program to check whether character is vowel or consonant?

Ans.

```java
import java.util.Scanner;

public class Vowelorconsonent {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a charachter : ");
        char ch = sc.next().charAt(0);
        if(ch == 'a'|| ch == 'e'|| ch == 'i'|| ch ==
'o'|| ch == 'u'){
            System.out.println("The given character
is a vowel : ");
        }else{
            System.out.println("The given character
is a consonant : ");
        }
    }
}
```