FULL STACK DEVELOPMENT – WORKSHEET 2

Q1 to Q7 are multiple choice questions having one correct answer only.

Q1.Java method overloading implements the OOPS concept

A. **Encapsulation**
B. **Inheritance**
C. **Polymorphism**
D. **Abstraction**

Ans:- Polymorphism

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

A. **True**
B. **False**
C. **Depend on code**
D. **None**

Ans:- True

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

A. **Constructor**
B. **Static**
C. **All**
D. **None**

Ans:- None

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

A. **Binding**
B. **Abstraction**
C. **Inheritance**
D. **None**

Ans:- Inheritance

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

A. **Encapsulation**
B. **Inheritance**
C. **Polymorphism**
D. **Abstraction**

Ans:-Encapsulation

Q6.Which of the following declarations does not compile?

A. **double num1, int num2 = 0;**
B. **int num1, num2;**
C. **int num1, num2 = 0;**
D. **int num1 = 0, num2 = 0;**

Ans:- double num1, int num2 = 0;

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

A. **Set**
B. **List**
C. **Array**
D. **collection**

Ans:- Set

Q8 to Q16 you have to find output and give explanation where needed.

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);
 }
}
```

A. 20
B. 0
C. COMPILE ERROR

Ans:- 20

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");
  }
}
```

A. BINGO
B. bingo
C. 0
D. Compile Error

Ans:- Compile Error

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);
   }
}
```

A. **Compilation Error**
B. **Runtime Error**
C. **5 6 5 6**
D. **5 6 5**

Ans:- Compilation Error

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

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

A. abc
B. a
C. b
D. c

Ans:- abc

Q12. What will be the output of the following Java program?

```
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();
    }
}
```

A. 2 2
B. 3 3
C. Runtime Error
D. Compilation Error

Ans:- Compilation 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());
	}
}
```

A. 1
B. 0
C. Runtime Error
D. Compilation Error

Ans:- Compilation 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);
    }
}
```

A. [2 5]
B. [0 0]
C. [5 2]
D. [0 2]

Ans:- [2 5]

Q15.What is the output of the following program?

```
String john = "john";
String jon = new String(john);
System.out.println((john==jon) + " "+ (john.equals(jon)));
```

A. true true
B. true false
C. false true
D. false false

Ans:- false true

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

```
Student studentName, studentId;
studentName = new Student();
Student stud_class = new Student();
```

A. Three reference variables and two objects are created.
B. Two reference variables and two objects are created.
C. One reference variable and two objects are created.
D. Three reference variables and three objects are created.

Ans:- Three reference variables and two objects are created.

Q17 to Q25 are simple java programs to write.

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

```
package intenship;

import java.util.Scanner;

public class OddEven {


	public static void main(String[] args) {

		// TODO Auto-generated method stub
```

```
int num;
System.out.println("Enter any Number :");
Scanner sc = new Scanner(System.in);
num=sc.nextInt();
if (num%2==0) {
        System.out.println("Entered number is Even");
}
else
        System.out.println("Entered number is Odd");
        }

}
```

Output:

Enter any Number :
2
Entered number is Even

Output:
Enter any Number :
9
Entered number is Odd

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

```
package intenship;

public class AverageNumbers {
```

```
        public static void main(String[] args) {
        double num1 = 15.5;
        double num2 = 20.5;
        double average = (num1+num2)/2;
        System.out.println("Average of two numbers is:"
+average);
}

}
```

Output:

Average of two numbers is :18.0

Q19. Write a java program to swap two numbers

```
package intenship;
import java.util.*;
public class Swap_With {

        public static void main(String[] args) {
                // TODO Auto-generated method stub
int x,y,t;// x and y are to swap
Scanner sc = new Scanner(System.in);
System.out.println("Enter the value of X and Y");
x = sc.nextInt();
y = sc.nextInt();
System.out.println("before swapping numbers:"+x+""+y);
/*swapping*/
t = x;
```

```
x = y;
y = t;
System.out.println("After swapping:"+x+""+y);
System.out.println();


    }

}
```

Output:

Enter the valve of X and Y

2

3

Before swapping numbers: 2 3

After swapping : 3 2

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

```
package intenship;
import java.util.Scanner;
public class PrimeNumber {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
int n,count=0;
System.out.println("Enter any Number");
 Scanner r=new Scanner(System.in);
n=r.nextInt();
```

```
for(int i=1; i<=n; i++)
{
        if(n%i==0)
        {
                count++;
        }
}
if(count==2)
        System.out.println("The given Number is a Prime Number");
else
        System.out.println("The given number is not a Prime Number");
        }

        }
```

Output

Enter any number
95
The given number is not a Prime Number

Output

Enter any number
11
The given number is a Prime Number

Q21. Write a java program to find table of n

```
package intenship;

import java.util.Scanner;


public class TableExample {
```

```
	public static void main(String[] args) {
		// TODO Auto-generated method stub
Scanner sc = new Scanner(System.in);
System.out.println("Enter number:");
//reading a number whose tableis to be print
int num=sc.nextInt();
//loop strat execution form and execute
for(int i=1;i<=10;i++)
{
	//prints table ofthe enterted number
	System.out.println(num+"*"+i+"="+num*i);
}
	}

}
```

Output

```
 Enter number : 7
7*1=7
7*2=14
7*3=21
7*4=28
7*5=35
7*6=42
7*7=49
7*8=56
7*9=53
7*10=70
```

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

```
package intenship;
import java.util.Scanner;

public class LargestNumberExample {

	public static void main(String[] args) {
		// TODO Auto-generated method stub
int a,b,c, largest,temp;
//object of the Scanner class
Scanner sc=new Scanner(System.in);
//reading input from the user
System.out.println("Enter the first number:");
a = sc.nextInt();
System.out.println("Enter the second number:");
b = sc.nextInt();
System.out.println("Enter the third number:");
c = sc.nextInt();
//comparing a and b and storing the largestnumber
temp=a>b?a:b;
//comparing the temo variable with c and storing
largest=c>temp?c:temp;
//prints the largest number
System.out.println("The largest number is:"+largest);

	}

}
```

Output

```
Enter the first number : 55
Enter the second number : 67
Enter the third number : 87
The largest number is :87
```

Q23. Write a java program to calculate Simple Interest

```
package intenship;


public class SimpleInterest {


	public static void main(String[] args) {

		// TODO Auto-generated method stub

float p,r,t,si;//principal amount,rate,time and simple interest
respectively

p=13000; r=12; t=2;

si=(p*r*t)/100;

System.out.println("Simple Interest is:"+si);

	}


}
```

Output

```
Simple interest is :3120.0
```

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

```
package intenship;
 import java.util.Scanner;
 public class AreaPerimeterRectangle {

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

```
            // TODO Auto-generated method stub
 int l, b, perimeter, area;
 Scanner s = new Scanner(System.in);
 System.out.println("Enter length of rectangle:");
 l = s.nextInt();
 System.out.println("Enter breadth of rectangle:");
 b = s.nextInt();
 perimeter = 2*(l + b);
 System.out.println("perimeter of rectangle:"+perimeter);
 area = l*b;
 System.out.println("Area of rectangle:"+area);
        }

 }
```

Output

```
 Enter length of rectangle : 4
 Enter breadth of rectangle: 5
 Perimeter of rectangle : 18
 Area of rectangle : 20
```

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

```
package intenship;
 import java.util.Scanner;
 public class VowelConsonant {

        public static void main(String[] args) {
            // TODO Auto-generated method stub
            System.out.println("Enter a character :");
            Scanner sc = new Scanner(System.in);
 char ch = sc.next().charAt(0);
 if(ch == 'a' || ch == 'e' || ch =='i' || ch == 'o' || ch == 'u' || ch == ' ')
 {
 System.out.println("Given character is vowel");}
 else{
```

```
        System.out.println("Given character is a consonant");
        }
        }
}
```

Output

Enter a character : a
Given character is vowel
Enter a character : b
Given character is a consonant