FULL STACK DEVELOPMENT – WORKSHEET 1

Q1. What is the size of float and double in java?

Ans. **A. 32 and 64**

Q2. Automatic type conversion is possible in which of the possible cases?

Ans. **B. Int to Long**

In Java Automatic type conversion is possible without any explicit casting or conversion operator for smaller to larger Data types. When a value of a smaller data type is assigned to a variable of a larger data type, automatic type conversion takes place.

Eg: int small = 25;
long large = small; // int is automatically converted into long.

Q3. Find the output of the following code. int Integer = 24; char String = 'I'; System.out.print(Integer); System.out.print(String);

Ans. **A. Compile error.**

"Integer"and "String"are both reserved keywords in Java and have special meaning and usages within the language. Hence the code does not gets compiled and throws a compilation error.

Q4. Find the output of the following program. public class Solution{ public static void main(String[] args){ short x = 10; x = x * 5; System.out.print(x); } }

Ans. **C. Compile Error.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

        short x = 10;
        x = (x*5);
        System.out.print(x);
    }
}
```

Output- Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Type mismatch: cannot convert from int to short

Q5. Find the output of the following program. public class Solution{ public static void main(String[] args){ byte x = 127; x++; x++; System.out.print(x); } }

Ans. **A. -127**

```
package flip_Robo;

public class Solution {

	public static void main(String[] args) {

	/* here the variable 'x' is declared as byte and it also holding the
	maximum value */
	byte x = 127;
	x++;
	/* in first increment operation it increases the value of x  by 1. since
	x is already at its max value, incrementing causes  overflow.*/

	//therefore x++ is equivalent to x=-128.

	x++;
	//second x++ will increment the value by 1 again.
	// now value of x becomes -127.

	System.out.print(x);
	//hence final output -127.
	}
}
```

Q6. Select the valid statement. A. char[] ch = new char(5) B. char[] ch = new char[5] C. char[] ch = new char() D. char[] ch = new char[]

Ans. **B. char[] ch = new char[5]**

```
//in all other options either wrong brackets were specified or the size of the
array not defined.
```

Q7. Find the output of the following program. public class Solution{ public static void main(String[] args){ int[] x = {120, 200, 016}; for(int i = 0; i < x.length; i++){ System.out.print(x[i] + " "); } } }

Ans. **B. 120 200 14**

```
package flip_Robo;

public class Solution {
```

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

                //Array x initialized with three values.
                int[] x = {120, 200, 016};

                // for loop iterates each element of an array.
                for(int i = 0; i < x.length; i++){

                System.out.print(x[i] + " ");
                /*first two are decimal numbers, where as the last number is in octal
                Form. which is converted to decimal and then displayed. */
                }
        }
}
```

Output: **120 200 14**

Q8. **When an array is passed to a method, what does the method receive?**

Ans. **A. The reference of the array.**

In java, arrays are reference types, which means that when you pass an array to a method, you are actually passing a copy of the reference to the array.

Q9. **Find the value of A[1] after execution of the following program. int[] A = {0,2,4,1,3}; for(int i = 0; i < a.length; i++){ a[i] = a[(a[i] + 3) % a.length]; } A. 0 B. 1 C. 2 D. 3**

Ans. **B. 1.**

```
        package flip_Robo;

        public class Assignment2 {

        public static void main(String[] args) {

        //initialize array 'a' with values
                int[] a = { 0, 2, 4, 1, 3 };

        //for each iteration calculate the new value of a[i]
                for (int i = 0; i < a.length; i++) {
                        a[i] = a[(a[i] + 3) % a.length];

                }
        //display the new a[1] value
```

```
            System.out.println("The output of second element of the updated
            array is: " + a[1]);
        }
}
```

Output: **The output of second element of the updated array is: 1**

Q10. When is the object created with a new keyword?

Ans. **A. At run time.**

In java, when you use the 'New' Keyword, it dynamically allocates memory for an object at runtime. This means that the memory for the object is allocated when the program is executed and reaches the point where the 'New' keyword is encountered.

Q11. Identify the corrected definition of a package.

Ans. **B. A package is a collection of classes.**

In java, a package is a way to organize and group related classes and interfaces together.

Q12. Identify the keyword among the following that makes a variable belong to a class,rather than being defined for each instance of the class.

Ans. **B. static.**

When a variable is declared as 'static', it is associated with the class rather than with individual instances of the class. This means that all instances of the class share the same value of the static variable.

Q13. Identify what can directly access and change the value of the variable res. Package com.mypackage; Public class Solution{ Private int res = 100; }

Ans. **D. None.**

The variable 'res' is declared with the the 'private' access modifier. This means that it is only accessible within the same class ('Solution') and not accessible outside of it.

Q14. In which of the following is the toString() method defined?

Ans. **A. java.lang.Object.**

Q15. Identify the output of the following program. String str = "abcde"; System.out.println(str.substring(1, 3));

Ans. **B. bc.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

String str = "abcde";

// substring() method is used to extract a portion of a string.
System.out.println(str.substring(1, 3));

/*
str.substring(1,3) is called which means it will extract the characters
from index 1('b') but not the character at index('d')
*/
// output is "bc"

}
}
```

Q16. Identify the output of the following program. String str = “Hellow”; System.out.println(str.indexOf(‘t));

Ans. **D. -1.**

```
package flip_Robo;

public class Assignment2 {

public static void main(String[] args) {

String str = "Hellow";

/*indexOf() method is used to find the index of a specific character or
substring within string
 */
System.out.println(str.indexOf('t'));

//here 't' is not there in the given string.
//hence the output is -1
}
}
```

Q17. Identify the output of the following program. Public class Test{ Public static void main(String argos[]){ String str1 = “one”; String str2 = “two”; System.out.println(str1.concat(str2)); } }

Ans. **C. onetwo.**

```
package flip_Robo;

public class Test {

public static void main(String[] args) {

        String str1 = "one";
        String str2 = "two";

        // concat() method is used to concatenate two strings together.
        System.out.println(str1.concat(str2));

        //The output is "onetwo".
    }
}
```

Q18. How many objects will be created in the following? String a = new String(“FlipRobo”); String b = new String(“FlipRobo”); String c = “FlipRobo”; String d = “FlipRobo”;

Ans **C. 4.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

        String a = new String("FlipRobo");
        String b = new String("FlipRobo");
        String c = "FlipRobo";
        String d = "FlipRobo";

        System.out.println(a);
        System.out.println(b);
        System.out.println(c);
        System.out.println(d);
    }
}
```

Output-
```
FlipRobo
FlipRobo
```

FlipRobo
FlipRobo

Q19. Find the output of the following code. int ++a = 100; System.out.println(++a);

Ans. **B. Compile error as ++a is not valid identifier.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

        int ++a = 100;
        System.out.println(++a);
    }
}
```

Output- Exception in thread "main" java.lang.Error: Unresolved compilation problem:
Syntax error on token "++", delete this token.

Q20. Find the output of the following code. if(1 + 1 + 1 + 1 + 1 == 5){ System.out.print("TRUE"); } else{ System.out.print("FALSE"); }

Ans. **A. TRUE.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

        if (1 + 1 + 1 + 1 + 1 == 5) {
            System.out.print("TRUE");
        } else {
            System.out.print("FALSE");
        }
    }
}
```

Output- TRUE.

Q21. Find the output of the following code. Public class Solution{ Public static void main(String args[]){ Int x = 5; x * = (3 + 7); System.out.println(x);

Ans. **A.50.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

        int x = 5;

        /* in this case x = x * (3+7)
        i.e x = 5 * 10 */
        x *= (3 + 7);

        //Hence output is x = 50
        System.out.println(x);
    }
}
```

Q22. Identify the return type of a method that does not return any value.

Ans. **B. void.**

Q23. Output of Math.floor(3.6)?

Ans. **B. 3.0.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

        System.out.println(Math.floor(3.6));
    }
}
```

Output- 3.0

Q24. Identify the modifier which cannot be used for constructor.

Ans. **D. static.**

Q25. What are the variables declared in a class for the use of all methods of the class called?

Ans. **B. Instance variables.**

Q26. Find the output of the following code. Public class Solution{ Public static void main(String args[]){ Int i; for(i = 1; i < 6; i++){ if(i > 3) continue; } System.out.println(i); } }

Ans. **D. 6.**

```
package flip_Robo;

public class Solution {

public static void main(String[] args) {

        int i;
        for (i = 1; i < 6; i++) {
                if (i > 3)
                        continue;
        }
        System.out.println(i);
}
}
```

Output- 6

Q27. Identify the infinite loop.

Ans. **D. All of the above.**

All three expressions are creating an "infinite" loop.

(A)

```
package flip_Robo;

public class solution {

public static void main(String[] args) {

        for (;;) {
                System.out.println();
        }
}
}
```

(B)

```
package flip_Robo;

public class solution {

public static void main(String[] args) {

        for (i=0;i<1;i--) {
```

```
                System.out.println();
            }
        }
}
```

(C)

```
package flip_Robo;

public class solution {

public static void main(String[] args) {

        for (i=0;;i++) {
                System.out.println();
        }
    }
}
```

Q28. Exception created by try block is caught in which block

Ans. **A. catch.**

In java, exception handling is done using a combination of try-cathc-finally blocks. The try block is used to enclose the code that may throw an exception. If an exception occurs within a try block, it is caught and handled in one or more catch blocks.

Q29. Which of the following exception is thrown when divided by zero statement is executed?

Ans. **C. ArithmeticException.**

In java, the ArithematicException is thrown when an arithematic operation fails or encounters an exceptional condition.

Q30. Where is System class defined?

Ans. **A. java.lang.package.**