Assignment 2

1. What are Java Tokens? Name the types of them.

1. The smallest individual entity used in a program is known as Java Token.
There are 5 types of Java Tokens:-

- Keywords
- Identifiers
- Literals
- Separators
- Operators

2. What are Literals? Name different types of literals.

2. The quantity which does not change its value during the program execution is called literals.

3. What are Identifiers? State the rules for declaring identifiers?

3. It is the name of memory area used to store data values.
int a; // Here int is the data type which tells us the type of data being stored and a is the name of variable.

4. What is operand, operator and expression?

4. Operand: These are the values on which certain operators are performed.
Operator: Operator are the special symbols that cause an action to take place.

Expression: It is a valid combination of operators and operands.

5. What is Type Conversion?
5. Type conversion is a method of changing a variable from one data type to another.

6. Differentiate between implicit and explicit type conversion?
6. Converting a lower data type into a higher one is called implicit data type conversion. It is also known as widening type casting or casting down. It is done automatically.
Whereas
Converting a higher data type into a lower one is called explicit data type conversion. It is also known as narrowing type casting or casting up. It is done manually by the programmer.

7. Differentiate between unary and binary operator?
7. The operators which require only one operand to work upon are called unary operators.
Whereas
The operators which require two operands to work upon are called binary operator.

8. Differentiate between % and / operators.
8. % is known as modulus operator and is used to find the remainder on dividing a number by other.

Whereas
/ oper is also known as division operator and is used to find the division between two numbers.

9. Differentiate between = and == operator.
9. = is a type of assignment operator whereas == is a type of relational operator.

10. Explain the ternary operator with its syntax and example?
10. The operators which requires three operands to work upon is called ternary operators. It is also known as conditional operator.

Variable = Condition ? Values True : False ;

Example :-

```
Class Tax
{
    Public static void main (String [] args)
    {
        Int income;
        double tax;
        Scanner sc = new Scanner (System.in);
        System.out.println("Enter Your Income");
        income= sc.nextInt();
```

```
System.
Tax = (Income >= 200000)? 0.3 * Income : 0 * Income;
System.out.println("Your Tax is: " + tax);
    }
}
```

11. Differentiate between Arithmetic and Relational Operator?
11. The operators which perform mathmatical operators are called arithmetic operators.
Whereas
The operators which are used to compare two operands are called relational operators.

12. What are escape sequences?
12. Some characters cannot be typed directly and must be written as "escape-sequences."

13. Using Ternary operator, print "Hello" when g is 10 otherwise print "Bye".

```
Class Alphabet
{
    public static void main (String[] args)
    {
        int g = 10;
        if (g == 10)? Hello : Bye;
```

System.out.println("Value of y is:" y);

}
}

14. If x=10, find the value of y :-

(i) y = ++x + x-- - ++x + --x

y = 11 + 11 - 11 + 10
y = 22 - 21
y = 1

(ii) y = --x - x-- + x--

y = 9 - 9 + 8
y = 8

(iii) y = x++ + ++x + --x

y = 10 + 12 + 11
y = 33