## 1. What are statically typed and Dynamically typed programming language? ANSWER:-

In a statically typed programming language, the data type of a variable must be specified at the time of its declaration. The type of a variable cannot be changed once it has been declared. Examples of statically typed languages include Java, C, and C++.

On the other hand, in a dynamically typed programming language, the data type of a variable is determined at runtime. The type of a variable can be changed after it has been declared. Examples of dynamically typed languages include Python, Ruby and JavaScript.

### 2. What is the variable in java?

#### ANSWER:-

In Java, a variable is a named location in memory where a value can be stored and retrieved.

### 3. How to assign a value to a variable?

#### ANSWER:-

To assign a value to a variable in Java, you use the assignment operator (=). int x = 5;

# 4. What are primitive datatypes in java? ANSWER:-

In Java, primitive data types are basic data types that are built-in to the language and are not objects. The eight primitive data types in Java are:

byte: a 8-bit signed integer data type that can hold values from -128 to 127.

short: a 16-bit signed integer data type that can hold values from -32,768 to 32,767.

int: a 32-bit signed integer data type that can hold values from -2,147,483,648 to 2,147,483,647.

long: a 64-bit signed integer data type that can hold values from -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807.

float: a 32-bit single-precision floating-point data type that can hold values with decimal points.

double: a 64-bit double-precision floating-point data type that can hold values with decimal points.

char: a 16-bit Unicode character data type that can hold a single character.

boolean: a data type that can hold only two values: true or false.

## 5.What are the identifiers in java? ANSWER:-

In Java, an identifier is a name given to a variable, method, class, or other element in a program. Identifiers are used to refer to these elements in the code and must follow certain rules in order to be valid.

## 6.List the operators in java? ANSWER:-

In Java, operators are special symbols that perform specific operations on one, two, or three operands, and then return a result. There are several types of operators in Java, including:

Arithmetic operators: These operators perform basic arithmetic calculations, such as addition (+), subtraction (-), multiplication (\*), division (/), and remainder (%).

Comparison operators: These operators compare two values and return a Boolean value, such as equal to (==), not equal to (!=), greater than (>), less than (<), greater than or equal to (>=), and less than or equal to (<=).

Logical operators: These operators perform logical operations on Boolean values, such as and (&&), or (||), and not (!).

Bitwise operators: These operators perform bitwise operations on integers, such as and (&), or (|), xor  $(^{\wedge})$ , and complement  $(^{\sim})$ .

Conditional operator (? :): This operator return one value if the condition is true and another if the condition is false.

Shift operators: These operators shift the bits of a value to the left (1 Malformed citation <<) or right (>> ) by a specified number of places.

Assignment operators: These operators are used to assign a value to a variable, such as =, +=, -=, \*=, /=, %=, &=,  $^=$ , |=, 2 Malformed citation <<=, and >> =.

# 7.Explain about increment and decrement operators and give example ? ANSWER:-

The increment and decrement operators in Java are used to increase or decrease the value of a variable by 1.

The increment operator (++) is used to increase the value of a variable by 1. It can be used as a prefix or postfix operator.

When used as a prefix operator, it increments the variable's value and then returns the new value. For example:

```
int x = 5;
int y = ++x; // x is incremented to 6 and y is set to 6
```