**Assignment Of Fundamental Of Java**

Q.1 – What is Statically typed and dynamically typed programming languages?

Ans. - Statically typed languages require explicit declaration of variable types checked at compile-time (e.g., Java). Dynamically typed languages determine types at runtime, offering flexibility but checking at execution (e.g., Python). Trade-offs involve early error detection versus development flexibility and ease.

Q.2 – What is the variable in Java ?

Ans.- In Java, a variable is a named storage location used to store data during the execution of a program. Variables have a data type (e.g., int, double, String) that defines the kind of data they can hold. They are declared using a specific syntax, such as `int x = 10;`, where "x" is the variable name.

Q.3- How to assign a value to variable ?

Ans.- In Java, assign a value to a variable with the syntax `datatype variable Name = value;`. For example, `int x = 10;` declares an integer variable 'x' with the assigned value 10.

Q.4- What are primitive datatype in Java?

Ans.- In Java, primitive data types are fundamental types for storing simple values: byte, short, int, long (integer types); float, double (floating-point types); char (character type); Boolean (true/false). They represent basic building blocks and are stored directly in memory for efficient performance in handling straightforward data.

Q.5- What are Identifiers in Java ?

Ans.- In Java, identifiers are names given to entities such as variables, methods, classes, and labels. They follow certain rules: starting with a letter, underscore (\_), or dollar sign ($), followed by letters, digits, underscores, or dollar signs. Identifiers are case-sensitive, and Java has naming conventions for readability.

Q.6-List the Operators in Java ?

Ans.- Java operators include arithmetic operators (+, -, \*, /, %), relational operators (==, !=, <, >, <=, >=), logical operators (&&, ||, !), assignment operators (=, +=, -=, \*=, /=, %=), bitwise operators (&, |, ^, ~, <<, >>, >>>), and the ternary operator (condition ? expr1 : expr2).

Q.7 Explain about increment and decrement operators in java ?

Ans. - In Java, the increment (`++`) and decrement (`--`) operators increase or decrease a variable by 1. They can be used as postfix (e.g., `x++`) or prefix (e.g., `++x`). Post-increment uses the current value first, while pre-increment changes the value before its use.