ASSIGNMENT 5:

Ans 1) **Statically typed programming language**:
The languages in which memory to the variable is provided at the time of compilation .example:
c,c++,java.

Dynamically typed programming language: The languages in which the memory to the variable is provided at the time of execution.
Example :python, JavaScript.

Ans 2) **Variable**: The container which holds the value while the program is being executed.
The space provided to it in memory and name of variable is unique.
Syntax: datatype variable_name ;

Ans 3) Assigning value to the variable:
Syntax: datatype var_name =value;
The value to the variable can be assigned directly by specifying an equal sign and value.

Values can be assigned separately to the variable after declaration. Example:
int age ;
Age =21;

In this example, variable age is declared first and after that the value “21” is assigned to it.

Ans 4) **Primitive data types**: It includes data types like byte ,int, short ,long ,double and many more.

Int : The int data type is generally used as a default data type for integral values unless if there is no problem about memory.

Byte: The byte data type can have values from **128** to **127** .Its default value is 0.

Long : Values for this data type is 64 bit signed 2’s complement integer.

Float: Values for this data type is 32 bit single precision floating point value.

Ans 5) **Identifiers** : It is a name to given to a package ,class, interface or variable.They consume memory units.

They should always begin with a letter ,$ and _ .

We can’t use any keyword as an identifier.

Ans 6) **Operators** :They are used to perform addition,subtraction,multiplication and division.

Arithmetic operators: These are used to perform simple arithmetic operations on primitive data types. (+,-,*,/, %)

Unary operators : They need only one operand. They are used to increment, decrement or negate a value. (++,--,!).

Assignment operator: This is used to assigning a value to any variable (=).

Relational Operators**:** These operators are used to check for relations like equality, greater than, and less than. (==,>=,<=,>,<,!=).

Logical Operators: These operators are used to perform “logical AND” and “logical OR” operations(&,||).

Ans 7) **Increment operator** : This operator is used to increment the value of any variable by any number.

It is of 2 types:

1) Pre increment operator: In this, first the value of any operator is incremented and after that ,the value is used in the program.

For example: int a=1;

int b;

b=++a;

In this example ,first the value of ‘a’ is incremented by 1 and then it will be assigned to ‘b’.

2) Post increment operator: In this, first the value will be used in the program and after that value is incremented .

For example: int a=1;

int b;

b=a++;

In this example ,first the value of ‘a’ is assigned to ‘b’ and then incremented by 1 .

Decrement operator :This operator is used to decrement the value of any variable by any number.

It is of 2 types:

1) Pre decrement operator: In this, first the value of any operator is decremented and after that ,the value is used in the program.

For example: int a=1;

int b;

b=--a;

In this example ,first the value of ‘a’ is decremented by 1 and then it will be assigned to ‘b’.

2) Post decrement operator: In this, first the value will be used in the program and after that value is decremented .

For example: int a=1;

int b;

b=a--;

In this example ,first the value of ‘a’ is assigned to ‘b’ and then decremented by 1 .