Oops Fundamentals-Assignment

Question 1: -**How to create an object in Java?**

Ans: -As we know that In Java, we cannot execute any program without creating an object.In java we can create an object using a **new** keyword.

Syntax:-

class <name> Object<name>=new class <name>.

Question 2: -**What is the use of a new keyword in Java?**

Ans: -The new keyword in Java instantiates a class by allocating desired memory for an associated new object. It then returns a reference to that memory.The new keyword in Java is also used to create the array object. The new keyword is followed by a call to a constructor, which instantiates the new object.

Question 3: -**What are the different types of variables in Java?.**

Ans: -**There are three different types of variables in OOPs in Java.**

- Instance variable
- Static variable
- Local variable

Question 4: -**What is the difference between instance variable and local variable?.**

Ans: -

Instance Variable	Local Variable
They are defined in class but outside the body of methods.	They are defined as a type of variable declared within programming blocks or subroutines.
These variables are created when an object is instantiated and are accessible to all constructors, methods, or blocks in class.	These variables are created when a block, method or constructor is started and the variable will be destroyed once it exits the block, method, or constructor.
These variables are destroyed when the object is destroyed.	These variables are destroyed when the constructor or method is exited.
It can be accessed throughout the class.	Its access is limited to the method in which it is declared.

It includes access modifiers such as private, public, protected, etc.	It does not include any access modifiers such as private, public, protected, etc.

Question 5: -**In which area memory is allocate for instance variable and local variable?.**

Ans: -Instance variables are declared in the class, but outside of the constructors, methods, or blocks of the particular class.They are used to represent the state of an object and are stored in the **heap section** of the memory.

Primitive local variables are only allocated to **Stack Memory** blocks that contain their methods.

Question 6: -**What is method Overloading?**

Ans: -Method Overloading allows different methods to have the same name, but different signatures where the signature can be represent by the number of input parameters or type of input parameters.

In java two ways for overloading method.
1.By changing the number of arguments.
2.By changing the type of datatype.