1. how to create an object in java

   o Using new Keyword

   o Using clone() method

   o Using newInstance() method of the Class class

   o Using newInstance() method of the Constructor class

   o Using Deserialization

2. what is the use of new keyword in java
   It creates a Java object and allocates memory for it on the heap. new is also used for array creation, as arrays are also objects.

3. what are the different types of variables in java

   There are three types of variables in Java: Local, Instance, and Static

4. what is the difference between instance variable and local variable

| INSTANCE VARIABLE | LOCAL VARIABLE |
| --- | --- |
| It can be accessed throughout the class. | Its access is limited to the method in which it is declared. |
| It is not compulsory to initialize instance variables before use. | It is important to initialize local variables before use. |
| It includes access modifiers such as private, public, protected, etc. | It does not include any access modifiers such as private, public, protected, etc. |
| These variables are destroyed when the object is destroyed. | These variables are destroyed when the constructor or method is exited. |

5. in which area memory is allocated in local variable and instance variable
   Local variables are created in the stack. Instance variables are created in the heap & are part of the object they belong to. Reference variables are created in the stack

6. what is method overloading
   Method Overloading allows different methods to have the same name, but different signatures where the signature can differ by the number of input parameters or type of input parameters, or a mixture of both