1) What are classes and objects in in OOP? In ■■■, a class is a template that defines the Structure and the It outlines behaviour attributes (data members) and methods (functions) that the object will have. blueprint for example, a 'car' of an object. It acts like a class may be define properties like 'brand' and 'Speed' and behaviours Like 'drive'. An Object is an individual instance of a class, holding Specific values for the class's

attributes
and
using its
methods.
2) What
is
inheritance?
Inheritance
is an essential
■■■
feature that
lets a
class
inherit
attributes
and
methods
from
another
class, enabling
Code
reuse
and
Creating a
relationship between classes. It models.
real-world
hierarchies, like 'Vehicle'
being
a
Superclass
and
'Car'
being
a Subclass.
Types of
inheritance:
Single Inheritance: Child inherits from one parent class.
Multilevel Inheritance: A class inherits from a derived class.Hierarchical
Inheritance: Multiple classes
inherit
from
One
parent.
Multiple Inheritance: Java
Supports this through
interfaces.
What
is
encapsulation?
Encapsulation
is

the practice of bundling data (variables) and behaviour (methods) into a Single unit (class) While restricting direct access to the data. It is achieved using access Specifiers:

Private: Data is accessible only within the class.

Public: Data accessible from anywhere

Protected: Data is accessible within the class and Subclass.

Default (Package-private): Data is accessible within the Same package.

4) What is abstraction?

Abstraction focusing Simplifies Complex Systems by on what an object does instead of

how it does it. It hides internal details and exposes only relevant functionalities. This Can be achieved in two ways: Abstract Classes: Defined with the abstract Keyword, they Can have both abstract (no implementation) and Concrete Cimplemented) methods. Interfaces: Define a Contract of methods that a class must implement.

5) What are access modifiers in Java OOP ?

Access modifiers in Java define the visibility of and main types are Variables, methods,

public, private, protected, and default (Package - private). classes. The four