**1. What is SDLC?**

SDLC is a Software Development Life Cycle. It is a structure for any Software Development which includes Planning, Implementation, Documentation, Deployment and Maintenance and ongoing Support.

**2. Write SDLC phases with basic introduction**

SDLC is a structure of process which includes data gathering, implementation, deployment, documentation, and maintenance.

\*Analysis- Analysis in SDLC is to get basic information about what is requirement and how it is going to plan based on requirement

Design- This phase defines the Architecture of document, priority of project. Gathered information is used to design the product.

Implementation- This is the phase where actual works starts like writing a program with the provided information. This phase gives clear picture about how to make it work and what is needed more to finalize the product. It may be precisely design to adopt any future changes if required.

Testing- This is crucial phase as it helps to maintain smooth flow between the taste and requirement, means it is a bridge between customer and developer

Maintenance-This is a final phase which is required to check the smoothness of the final product and to adopt any changes if required.

**3. Explain the phases of Waterfall Model**

Waterfall is like a water flowing downwards. which means it's only a one way. The phases are as below :

Analysis- It defines the requirement of what to make and how to make, it covers budget, time, cost etc..

Design- This phase defines the Architecture of document, priority of project.

Implementation- This is the phase where actual works starts from writing a program with the information and plan gathered built from above phases. It may be precisely design to adopt any future changes if required

Testing- This is crucial phase as it helps to maintain smooth flow between the taste and requirement, means it is a bridge between customer and developer

Maintenance-This is a final phase which is required to check the smoothness of the final product and to adopt any changes if required.

**4. What is Agile Methodology?**

The Agile methodology is a way to manage a project by requirements. In Agile the tasks are divided to time.

**5. What is SRS?**

SRS stands for **Software Requirement Specification.** It gives us an idea of the behavior of the systems to be developed. It includes set of Use-Cases.

**6. What is oops?**

OOPS means Object Oriented Programming System. It's a writing process.

Identifying objects and assigning responsibilities to these objects.

OOP has specific languages like C, C++, java. It's like a black box where the details are hidden.

**7. Write basic concepts of oops?**

basic concepts of oops are Object, class, encapsulation, inheritance, polymorphism, Abstraction.

**8. What is object?**

Object is tangible things. which we can touch & feel like Car, printer, flower, tree.

**9. What is class?**

Class is an collection of data variable and method function with its behavior.

**10. What is encapsulation?**

Encapsulation is one type of data hiding. The internal state is usually not accessible by other objects. It is wrapping up of data into single unit.

**11. What is inheritance?**

Inheritance means one class has same characteristics of another class means two different class has a relationship.

It is a process of making a new class from an existing class. It describes the relationship between two classes.

**12. What is Polymorphism?**

Polymorphism means having many forms. It allows to respond to the same message in different ways.

**13. What is RDBMS?**

RDBMS is relational database management system. RDBMS provides an interface between users and applications and the database, as well as administrative functions for managing data storage.

**14. What is SQL?**

SQL means structure query language. That is used to manage relational databases and perform various operations on the data.

**15. Write SQL commands?**

SQL commands are DDL (Data Definition Language), DML (Data Manipulation Language), DCL (Data Control Language), DQL (Data Query Language).

**16. Write Agile Manifesto principles?**

Individual & Interaction over the process

Working Software over Comprehensive Document

Customer Collaboration over Contract Negotiation

Responding to change

**17. What is join?**

A join is a clause used to combine rows from two or more tables, based on a related column.

**18. Write types of join?**

Inner Join

Left Join

Right Join

Full Join