1. **What is SDLC?**

Full form of SDLC: The Software Development Life Cycle (SDLC) is a structured process that enables the production of high quality, low cost software, in the shortest possible production time.

SDLC is a structure imposed on the development of a software product that defines the process for planning, implementation, testing, documentation, deployment, and ongoing maintenance and support

1. **What is software testing?**

Software testing is a process used to identify correctness, completeness, and quality of developed computer software.

1. **What is agile model/methodology?**

Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product.

1. **What is SRS?**

Full form of SRS “A software requirements specification is a complete description of the behavior of the system to be developed.”

1. **What is oops?**

**In coding language oops is “Object oriented programming system. “In software testing oops is Black box testing or functional testing.**

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

\* Object

\* Class

\* Encapsulation

\* Inheritance

\* Polymorphism

\* Abstraction

1. **What is object?**

Object is an instances of a class.

1. **What is class?**

Class is a collection of data member (variable) and member function (methods or process) with its behaviors.

1. **What is encapsulation?**

Data hiding, wrapping up of data into single unit. Private your data member and member function.

1. **What is inheritance?**

Properties of parent class extends into child class. Main purpose is reusability, extendibility.

1. **What is polymorphism?**

Ability to take one name having different or many forms.

1. **Draw use case on online book shopping.**

Draw use case on paint.

1. **Draw use case on online bill payment system(paytm)**

Draw use case on paint.

1. **Write SDLC phases with basic introduction.**
2. **Requirements Gathering/collection**
3. **Analysis**
4. **Design**
5. **Coding**
6. **Testing**
7. **Maintenance**
8. **Explain phases of waterfall model?**

The phases of the waterfall model are below.

* Requirements gathering
* Analysis
* Design
* Coding
* Verification
* Testing
* Maintenance

**16) Write phases of spiral model?**

Spiral model has four phases:

* Planning
* Risk analysis
* Product development
* Planning or evaluation

1. **Write agile manifesto principles.**

**Twelve agile manifesto principles:**

* Customer satisfaction is the highest priority
* Welcome changing requirements
* Deliver working software frequently
* Business people and developers must work together daily
* Build project around motivated individuals
* Face to face conversation is the best form of communication
* Working software is the primary measure of progress
* Agile process promote sustainable development
* Technical excellence and good design enhance agility
* Simplicity is essential
* Self-organizing teams
* Regularly reflect and adapt

**17) Explain working methodology of agile model and also write pros and cons.**

This agile methodology enables teams to quickly adapt to changing requirements.

**Pros of agile:**

* Flexibility
* Early feedback
* Collaboration
* Continuous improvement
* Increased customer satisfaction

**Cons of agile:**

Lack of documentation

Scope creep

High team dependency

Difficult to manage complex projects

Potential for unpredictable deadlines

**18) Draw use case on online shopping products using COD**

Draw diagram use case save in paint on desktop. Payment method COD.

**19) Draw use case on online shopping product using payment gateway.**

Same Draw diagram use case save in paint on desktop. Payment method credit card.

**20) What is functional system testing?**

Functional system testing is a type of software testing that verifies a system functionality by ensuring that it meets specified requirements and business needs.

**21) What is non- functional testing?**

Non- functional testing is a type of software testing that evaluates a software application non-functional attributes, such as performance, usability and security.

**22) What is black box testing? What are the different black box testing techniques?**

Black box testing is a software testing method that evaluates the functionality of an application without knowing its internal structure or code.

**There are four main black box testing techniques:**

* Equivalence partitioning
* Boundary value analysis
* Decision table testing
* State transition testing
* Test planning
* Error guessing pairwise testing

**23) What is white box testing and list the types of white box testing?**

White box testing is a software testing technique that examines the internal structure, logic, and code of program to ensure it behaves as expected.

**Types of white box testing:**

* Unit testing
* Loop testing
* Path testing
* Penetration testing
* Static analysis
* Conditional testing

**24) explain the difference between functional testing and nonfunctional testing.**

Functional testing verifies if a software application’s features and functions work as intended according to specified requirements,

While non-functional testing assesses aspects of the software that aren’t directly related to functionality, like performance, usability, security and reliability, essentially, evaluating “how well” the software performs rather than “if” it performs a specific action.

1. **What is 7 key principals? Explain in detail?**

* Testing shows presence of defect ( never any project complete 100% accurate, Nobody can prove that project is bug free, some error or bug can find from project)
* Exhaustive testing is impossible
* Early testing
* Defect clustering
* Pesticide paradox
* Testing is context dependent
* Absence of error fallacy