**\* Software Testing Assignment.\***

1. **What is SDLC.**

Ans. Software development life cycle defines the process for planning, implementation, Testing,

Documentations, deployment and ongoing maintenance and support.

1. **What is Agile methodology?**

Ans. Agile 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. It is a flexible model; it is change with customer demand.

1. **What is SRS?**

Ans. A software requirements specification (SRS) is a complete description of the behavior of the system to be developed. Example: Amazon.

1. **What is oops?**

Ans. OOPS is an Object-oriented programming.

1. **Write Basic Concepts of oops.**

Ans. Concepts of OOPS are:

Object, Class, Encapsulation, Inheritance, Polymorphism, Overriding, Overloading, Abstraction.

1. **What is object?**

Ans. An object represents an individual, identifiable item, unit or entity, either real or abstract, with a well-defined role in the problem domain. An object is like a black box, the internal details are hidden.

1. **What is class?**

Ans. It is a blue print of Object; a class represents an abstraction of the object and abstracts the properties and behavior of that object.

1. **What is encapsulation?**

Ans. Encapsulation is the practice of including in an object everything it needs hidden from other objects. The internal state is usually not accessible by other objects.

1. **What is inheritance?**

Ans. Inheritance describes the relationship between two classes. A class can get some of its characteristics from a parent class and then add unique features of its own.

1. **What is polymorphism?**

Ans. Poly refers too many. It is a single function in many ways different upon the usage is called polymorphism. The ability to change form is known as polymorphism.

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

There are 6 SDLC phases.

> Requirements Gathering- Establish Customer Needs.

> Analysis- Model and Specify the requirements- “What”.

> Design There - Model and Specify a Solution – “Why”.

> Implementation- Construct a Solution in Software.

> Testing- Validate the solution against the requirements.

> Maintenance- Repair defects and adapt the solution to the new requirements.

**12) Explain Phases of the waterfall model.**

1) Requirement Collection

2) Analysis

3) Design

4) Implementation

5) Testing

6) Maintenance.

**13)** **Write phases of Spiral model.**

1) Planning- It is an Initial Requirements.

2) Risk Analysis- It will delay project or increase its cost.

3) Engineering- Development of the next level product.

4) Customer Evaluation- Assessment of the result of engineering.

**14) Write Agile manifesto principles.**

1. Individuals and interactions.
2. Working software.
3. Customer collaboration.
4. Responding to change.

**15) Explain working methodology of Agile model and also write pros and cons.**

* **Methodology.**

1. Iteration.
2. Warm up.
3. Construction.
4. Release end Game.
5. Production.
6. Retirement.

* **Pros.**
* Is a very realistic approach to software development
* Promotes teamwork and cross training.
* Functionality can be developed rapidly and demonstrated.
* Resource requirements are minimum.
* Suitable for fixed or changing requirements.
* Delivers early partial working solutions.
* Good model for environments that change steadily.
* Minimal rules, documentation easily employed.
* Enables concurrent development and delivery within an overall planned context.
* Little or no planning required.
* Easy to manage.
* Gives flexibility to developers.
* **Cons.**
* Not suitable for handling complex dependencies.
* More risk of sustainability, maintainability, and extensibility.
* Strict delivery management dictates the scope, functionality to be delivered, and adjustments to meet the deadlines.
* It is Depends on customer interaction, if customer is not clear, team can be driven in the wrong direction.
* There is very high individual dependency, since there is minimum documentation generated.
* Transfer of technology to new team members may be quite challenging.