**Software Testing Assignment**

**Module 1 (Fundamental)**

**Q.1 What is SDLC?**

**Ans:** 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. There are a number of different development models.

**Q.2 What is software testing?**

**Ans:** Software testing is the process of finding errors in the developed product. Software Testing is a process used to identify the correctness, completeness, and quality of developed computer software.

**Q.3 What is agile methodology?**

**Ans:** Agile methodology:

* Agile model believes that every project needs to be handled differently and the existing methods need to be tailored to best suit the project requirements. In agile the tasks are divided to time boxes (small time frames) to deliver specific features for a release.
* Iterative approach is taken and working software build is delivered after each iteration. Each build is incremental in terms of features; the final build holds all the features required by the customer.
* Agile thought process had started early in the software development and started becoming popular with time due to its flexibility and adaptability.

**Q.4 What is SRS?**

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

* It includes a set of use cases that describe all of the interactions that the users will have with the software.
* Use cases are also known as functional requirements. In addition to use cases, the SRS also contains nonfunctional (or supplementary) requirements.

**Q.5 What is oops?**

**Ans:** Object-oriented programming (OOP) is a computer programming model that organizes software design around data, or objects, rather than functions and logic.

**Q.6 Write Basic Concepts of oops.**

**Ans:** There are six oops concepts :

1. Class
2. Object
3. Inheritance
4. Polymorphism
5. Abstraction
6. Ancapsulation

**Q.7 What is object?**

**Ans:** Object is instance of class. That is both data and function that operate on data are bundled as a unit called as object.

**Q.8 What is class?**

**Ans:** Class is a structure in which we can have member functions and member verieble are there.

**Q.9 What is encapsulation?**

**Ans**: To wrapping data into single unit.

**Q.10 What is inheritance?**

**Ans:** To access property of one class to another class.

**Q.11 What is polymorphism?**

**Ans:** Same function name but heavy different functionalities.

**Q.12 Draw Usecase on Online book shopping?**

**Ans:** https://drive.google.com/file/d/1x6ksyq9jH77ewEQz44mtgrFWDGFtDbTl/view?usp=drive\_link

**Q.13 Draw Usecase on online bill payment system (paytm)**

**Ans:** https://drive.google.com/file/d/1huR9eve44b4xpcvx7sjoGBjZ5xUbTDen/view?usp=drive\_link

**Q.14 Write SDLC phases with basic introduction.**

**Ans:** SDLC phases :

1. Requirements collection/Gathering:

Although requirements may be documented in written form, they may be incomplete, unambiguous, or even incorrect. Requirements will Change.Inadequately captured or expressed in the first place.

1. Analysis:

The analysis phase defines the requirements of the system, independent of how these requirements will be accomplished. This analysis represents the **“what”** phase. The requirement documentaries to capture the requirements from the customer's perspective by defining goals.

1. Design:

The Design team can now expand upon the information established in the requirement document.

1. Implementation:

In the implementation phase, the team builds the components either from scratch or by composition. The implementation phase deals with issues of quality, performance, baselines, libraries, and debugging.

1. Testing:

Regression Testing

Internal Testing

Unit Testing

Application Testing

Stress Testing

1. Maintenance:

Maintenance is the process of changing a system after it has been deployed.

**Q.15 Explain Phases of the waterfall model.**

**Ans:**



**Q.16 Write phases of spiral model .**

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**Q 17 Write agile manifesto principles.**

**Ans:** Individuals and interactions over processes and tools. Working software over comprehensive documentation. Customer collaboration over contract negotiation. Responding to change over following a project plan.

**Q.18 Explain working methodology of agile model and also write pros and cons.**

**Ans:** Methodology of agile:

* 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.
* Agile Methods break the product into small incremental builds.
* These builds are provided in iterations.
* Each iteration typically lasts from about one to three weeks.
* Every iteration involves cross functional teams working simultaneously on various areas like planning, requirements analysis, design, coding, unit testing, and acceptance testing.
* At the end of the iteration a working product is displayed to the customer and important stakeholders.
* Pros:
* Is a very realistic approach to software development.
* Promotes teamwork and cross training.
* Functionality can be developed rapidly and demonstrated.
* Suitable for fixed or changing requirements.
* Delivers early partial working solutions.
* Good model for environments that change steadily.
* Cons:
* Not suitable for handling complex dependencies.
* More risk of sustainability, maintainability and extensibility.
* An overall plan, an agile leader and agile PM practice is a must without which it will not work.
* Strict delivery management dictates the scope, functionality to be delivered, and adjustments to meet the deadlines.

**Q.19 Draw usecase on Online shopping product using COD.**

**Ans:** https://drive.google.com/file/d/1n7mvHUZjTT6k7UxyBnDhvq6lYF1K1B3y/view?usp=drive\_link

**Q.20 Draw usecase on Online shopping product using payment gateway.**

**Ans:** https://drive.google.com/file/d/1fng13JptVgdbAuiCi5fMzdY1\_AcxJLgV/view?usp=drive\_link