**1.MODULE**

**Software Testing Assignment**

**1. What is SDLC**

**Ans. Software Development Life Cycle {SDLC}**

**there are mainly six phases of SDLC**

* **Requirements**
* **Analysis**
* **Design**
* **Implementation**
* **Testing**
* **Maintenance**

**The goal of {SDLC} is to minimize project risks through forward planning so that software meets customer expectations.**

**2. What is software testing ?**

**Ans. Software Testing is a process used to identify the correctness, completeness, and quality of developed computer software.**

**Software testing is a process of executing a program or application with the intent of finding the software bugs.**

**In simple words testing is executing a system in order to identify any gaps, errors or missing requirements in contrary to the actual desire or requirements**

**3. What is agile methodology ?**

**Ans. 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.**

**4. What is SRS.**

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

**Requirements are categorized in several ways.**

* **Customer Requirements**
* **Functional Requirements**
* **Non-Functional Requirements**

**5. What is oop.**

**Ans. Object-oriented programming**

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

**Ans. concepts of oops**

* **Object**

**An instance of a class is an object.**

* **Class**

**Class is a structure in which you can have Member functions & member Variables are there.**

* **Encapsulation**

**Wrapping data into Single unit.**

* **Inheritance**

**To access Property of One class to another Class. There are 5 types of inheritance.**

**1. Single**

**2. Multi-level**

**3. Multiple**

**4. Hierarchical**

**5. Hybrid**

* **Polymorphism**

**Same function name but having different Functionalities.**

**Two types**

**1. Compile type {overloading}**

**2. Run type {overriding}**

* **Abstraction**

**Hiding internal details and Showing essential information to user.**

**7. What is Object.**

**Ans. An instance of a class is an object.**

**8. What is Class.**

**Ans. Class is a structure in which you can have Member functions & member Variables are there.**

**9. What is Encapsulation.**

**Ans. Wrapping data into Single unit.**

**10. What is Inheritance.**

**Ans. To access Property of One class to another Class**

**11. What is Polymorphism.**

**Ans. Same function name but having different Functionalities.**

**12. Draw Use case on Online book shopping.**

**Online book shopping**

**https://drive.google.com/file/d/1ckyB6bWhOVoqMdTvtI-i5PQymV588LWF/view?usp=sharing**

**13. Draw Use case on Online bill payment system [ PAYTM]**

**Payment system**

**https://viewer.diagrams.net/?page-id=vmrc1FmqvcBhyizdII3L&highlight=0000ff&edit=\_blank&layers=1&nav=1&page-id=vmrc1FmqvcBhyizdII3L#G1ckyB6bWhOVoqMdTvtI-i5PQymV588LWF**

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

* **Requirements = Establish Customer Needs**
* **Analysis = Model And Specify the requirements**
* **Design = Model And Specify a Solution**
* **Implementation = Construct a Solution In Software**
* **Testing = Validate the solution against the requirements**
* **Maintenance = Repair defects and adapt the solution to the new requirements**

**15. Explain phases of the waterfall model**

**Ans. The classical software lifecycle models the software development as a step- by-step "waterfall" between the various development phases.**

**The waterfall is unrealistic for many reasons, especially**

* **Requirements must be “frozen” to early in the life cycle**
* **Requirements are validated too late**

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

* **Planning = determination of objectives, alternatives and constraints**
* **Risk Analysis = Analysis of alternatives and identification/ resolution of risks**
* **Customer Evaluation = Assessment of the results of engineering**
* **Engineering = Development of the "next level" product**

**17. Write agile manifesto principles.**

**Ans. 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.**

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

**Ans. Agile thought process had started early in the software development and started becoming popular with time due to its flexibility and adaptability.**

* **Each build is incremental in terms of features the final build holds all the features required by the customer.**
* **Pros**
* **Promotes teamwork and cross training.**
* **Is a very realistic approach to software development**
* **Cons**
* **More risk of sustainability, maintainability and extensibility.**
* **Not suitable for handling complex dependencies.**

**19. Draw use case on online shopping product using COD.**

**COD**

**https://viewer.diagrams.net/?page-id=TExE7TO9Z7YQJkq7ltPL&highlight=0000ff&edit=\_blank&layers=1&nav=1&page-id=TExE7TO9Z7YQJkq7ltPL#G1ckyB6bWhOVoqMdTvtI-i5PQymV588LWF**

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

**Payment gateway https://viewer.diagrams.net/?page-id=BGUtGLJOwggrKw\_QOnIS&highlight=0000ff&edit=\_blank&layers=1&nav=1&page-id=BGUtGLJOwggrKw\_QOnIS#G1ckyB6bWhOVoqMdTvtI-i5PQymV588LWF**