**MODULE : 1**

**SE- Overview of IT Industry**

1. **What is software? What is software engineering ?**

**Ans: Software is a set of instructions, data or programs used to operate computers and execute specific tasks. It is the opposite of hardware, which describes the physical aspects of a computer. Software is a generic term used to refer to applications, scripts and programs that run on a device.**

**Software engineering is the branch of computer science that deals with the design, development, testing, and maintenance of software applications. Software engineers apply engineering principles and knowledge of programming languages to build software solutions for end users.**

**2. Explain types of software.**

**Ans:** **▸ System Software**

**• The programs directly related to the computer hardware and perform tasks associated with controlling and utilizing computer hardware**

**▸ Application Software**

**• An application is a job or task a user wants to accomplish through a computer.**

**• Application software are programs that help a user perform a specific job.**

**3. What is SDLC? Explain each phase of SDLC.**

**Ans:** **SDLC: The Software Development Life Cycle (SDLC) refers**

**to a methodology with clearly defined processes**

**for creating high-quality software.**

**1 Requirement Gathering : The information gathering techniques are repeated processes that are used to create and organize data across different kinds of sources**

**2 Analysis : A scientific analysis of the data make a chemical analysis of the soil a detailed analysis of the bone structure of horses performing chemical analysis of the soil The newspaper printed an analysis of each candidate's positions.**

**3 Designing : Designing is the process of planning, conceptualizing, and implementing the plan for designing a website in a way that is functional and offers a good user experience. User experience is central to the web designing process.**

**4 Implementation : Implementation is the execution or practice of a plan, a method or any design, idea, model, specification, standard or policy for doing something.**

**5 Testing : Software testing is the act of examining the artifacts and the behavior of the software under test by verification and validation. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation.**

**6 Maintenance: Maintenance means keeping your computers and laptops in good condition through regular cleanings, hard drive updates, and virus prevention. Doing so can lengthen the lifespan of your devices and it can also help you browse the web more safely.**

**4. what is DFD? Create a DFD diagram on Flipkart.**

**Ans: A data-flow diagram is a way of representing a flow of data through arocess or a system.**

**Diagram : Flipkart**

**Customer order**

**Order**

**Customer**

**Receipt**

**Manager**

**5. What is flow chart ? Create a flowchart to make addition of two numbers.**

**Ans:**

**A flowchart is a diagram that depicts a process, system or computer algorithm. They are widely used in multiple fields to document, study, plan, improve and communicate often complex processes in clear, easy-to-understand diagrams.**

**Flow chart :**

***Input***

**process**

**6. What is use case Diagram? Create a use- case on bill payment on paytm.**

**A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram shows various use cases and different types of users the system has and will often be accompanied by other types of diagrams as well.**

**Use-case diagram:**

department

customer