**1. What is the Feasibility Study of the SDLC model & why is this important?**

**Answer: Feasibility Study.** Feasibility study is a preliminary exploration of a proposed project or undertaking to determine its merits and viability of SDLC. A feasibility study aims to provide an independent assessment that examines all aspects of a proposed project, including technical, economic, financial, legal, and environmental considerations. This information then helps decision-makers determine whether or not to proceed with the project.

A feasibility study evaluates a project's or system's practicality. As part of a feasibility study, the objective and rational analysis of a potential business or venture is conducted to determine its strengths and weaknesses, potential opportunities and threats, resources required to carry out, and ultimate success prospects. Two criteria should be considered when judging feasibility: the required cost and expected value.

A feasibility study is a comprehensive evaluation of a proposed project that evaluates all factors critical to its success in order to assess its likelihood of success. Business success can be defined primarily in terms of ROI, which is the amount of profits that will be generated by the project.

Finally A feasibility study evaluates a project's or system's practicality of SDLC model.

**Important of Feasibility Study.** The importance of a feasibility study is based on organizational desire to “get it right” before committing resources, time, or budget. A feasibility study might uncover new ideas that could completely change a project’s scope. It’s best to make these determinations in advance, rather than to jump in and to learn that the project won’t work. Conducting a feasibility study is always beneficial to the project as it gives you and other stakeholders a clear picture of the proposed project. Some keys of Feasibility Study are as follows

• Improves project teams’ focus

• Identifies new opportunities

• Provides valuable information for a “go/no-go” decision

• Narrows the business alternatives

• Identifies a valid reason to undertake the project

• Enhances the success rate by evaluating multiple parameters

• Aids decision-making on the project

• Identifies reasons not to proceed

**2. Write 5 advantages of Agile methodology.**

**Answer. Advantages of Agile Methodology. The advantages of Agile methodology are as follows:**

1. **Frequent Delivery.**
2. **Face-to-Face communication with clients.**
3. **Efficient design and fulfils the business requirement.**
4. **Anytime changes are acceptable.**
5. **It reduce total development time.**

**3. Write short notes on SDLC model phase.**

**Answer. SDLC Model Phase.** Software Development life cycle (SDLC) is a spiritual model used in project management that defines the stages include in an information system development project, from an initial feasibility study to the maintenance of the completed application.

There are different software development life cycle models specify and design, which are followed during the software development phase. These models are also called "**Software Development Process Models."** Each process model follows a series of phase unique to its type to ensure success in the step of software development. **Here, are some important phases of SDLC life cycle:**

1. **Waterfall Model.** The waterfall is a universally accepted SDLC model. In this method, the whole process of software development is divided into various phases.
2. **Agile Model.** Agile methodology is a practice which promotes continues interaction of development and testing during the SDLC process of any project. In the Agile method, the entire project is divided into small incremental builds. All of these builds are provided in iterations, and each iteration lasts from one to three weeks.
3. **Spiral Model.** The spiral model is a risk-driven process model. This SDLC model helps the group to adopt elements of one or more process models like a waterfall, incremental, waterfall, etc. The spiral technique is a combination of rapid prototyping and concurrency in design and development activities.
4. **V-Model.** In this type of SDLC model testing and the development, the step is planned in parallel. So, there are verification phases on the side and the validation phase on the other side. V-Model joins by Coding phase.
5. **Incremental Model.** The incremental model is not a separate model. It is necessarily a series of waterfall cycles. The requirements are divided into groups at the start of the project. For each group, the SDLC model is followed to develop software.
6. **Iterative Model.** It is a particular implementation of a software development life cycle that focuses on an initial, simplified implementation, which then progressively gains more complexity and a broader feature set until the final system is complete. In short, iterative development is a way of breaking down the software development of a large application into smaller pieces.
7. **Big bang model.** Big bang model is focusing on all types of resources in software development and coding, with no or very little planning. The requirements are understood and implemented when they come.
8. **Prototype Model.** The prototyping model starts with the requirements gathering. The developer and the user meet and define the purpose of the software, identify the needs, etc.