### Ans 1.

## **Evolutionary Model:**

Evolutionary prototyping is a software development method where the developer or development team first constructs a prototype. After receiving initial feedback from the customer, subsequent prototypes are produced, each with additional functionality or improvements, until the final product emerges.

# Agile Model:

The meaning of Agile is swift or versatile." Agile process model" refers to a software development approach based on iterative development. Agile methods break tasks into smaller iterations, or parts do not directly involve long term planning. The project scope and requirements are laid down at the beginning of the development process. Plans regarding the number of iterations, the duration and the scope of each iteration are clearly defined in advance.

#### Ans 2.

Disadvantages of Agile Model can be:

- 1. Documentation tends to get sidetracked, which makes it harder for new members to get up to speed.
- 2. It's more difficult to measure progress than it is in Waterfall because progress happens across several cycles.
- 3. Agile demands more time and energy from everyone because developers and customers must constantly interact with each other.
- 4. Projects can become ever-lasting because there's no clear end.
- 5. Features that are too big to fit into one or even several cycles are avoided because they don't fit in nicely into the philosophy.

## Ans 3.

**Prototyping model:** Most suitable for projects where the final requirements/ scope of tech is not known. E.g.: Working on a VR app, which is about to undergo sudden breakthroughs. In this case, the developers cannot create a well defined long term plan as it might get outdated.

**Evolutionary Model:** Is commonly used when the customer wants to start using the core features instead of waiting for the full software. Evolutionary models are also used in object-oriented software development because the system can be easily portioned into units in terms of objects.

For eg Consider a secure file transfer software. The customer wants to start using it as soon as possible and won't hesitate to use the app without a UI or from the cmd itself. Once the

core functionality is working later versions could develop a user interface and add further QOL changes

**Spiral Model:** The Spiral Model is widely used in the software industry as it is in sync with the natural development process of any product, i.e. learning with maturity which involves minimum risk for the customer as well as the development firms. When there is a budget constraint and risk evaluation is important.