

Question 1:

Explain the following agile methodologies Scrum, Kanban, Extreme Programming.

Scrum

It's a simple framework that facilitates team collaboration on complex projects. The good news is that scrum is easy to understand. The bad news, it's hard to master. Scrum emphasizes teamwork in project management. It stresses accountability and is an iterative progress towards a well-defined goal. Scrum is part of agile software development and teams practicing agile. The name comes from the sport of rugby, where scrum is a formation where everyone plays a specific role, but everyone is working towards a quick adoption of strategies. When working with a Scrum methodology, start with what is known and then track the progress, changing your actions as needed.

Scrum has three roles: Product Owner, Scrum Master, and Team

Kandan Methodology

The Kanban Method is a means to design, manage, and improve flow systems for knowledge work. The method also allows organizations to start with their existing workflow and drive evolutionary change. They can do this by visualizing their flow of work, limit work in progress (WIP) and stop starting and start finishing. The Kanban Method gets its name from the use of kanban – visual signaling mechanisms to control work in progress for intangible work products.

A general term for systems using the Kanban Method is flow – reflecting that work flows continuously through the system instead of being organized into distinct timeboxes.

Kanban can be used in any knowledge work setting, and is particularly applicable in situations where work arrives in an unpredictable fashion and/or when you want to deploy work as soon as it is ready, rather than waiting for other work items.

Values

Teams applying Kanban to improve the services they deliver embrace the following values:

Transparency, Balance, Collaboration, Customer Focus, Flow, Leadership, Understanding, Agreement, and Respect.

Extreme Programming

Extreme Programming (XP) is an agile software development framework that aims to produce higher quality software, and higher quality of life for the development team. XP is the most specific of the agile frameworks regarding appropriate engineering practices for software development. The general characteristics are:

- Dynamically changing software requirements

- Risks caused by fixed time projects using new technology
- Small, co-located extended development team
- The technology you are using allows for automated unit and functional tests.

Values

The five values of XP are communication, simplicity, feedback, courage, and respect.

Question 2:

Who are the members of an agile team and what are their roles.

Agile Team Members	Roles
Scrum Master	is responsible for facilitating the team, obtaining resources for it, and protecting it from problems.
Development Team	Team members are the makers: front- and back-end engineers, copywriters, designers, videographers, you name it. Team members have varied roles and skills but all are responsible for getting stuff done on time and in excellent quality. A developer or programmer is responsible for the creation and delivery of a system. This includes modeling, programming, testing, and release activities, as well as others.
Product Owner	is the one person responsible on a team (or sub-team for large projects) who is responsible for the prioritized work item list (called a product backlog in Scrum), for making decisions in a timely manner, and for providing information in a timely manner.

Question 3:

List five project management tools.

1. Scoro
2. Workzone
3. Zoho
4. GanttPRO

5. Redbooth

Question 4:

List the phases of Software Development Life Cycle.

- ❖ Requirement gathering and analysis
- ❖ Design
- ❖ Implementation or coding
- ❖ Testing
- ❖ Deployment
- ❖ Maintenance