2.1 Explain why it is important that software products are developed and delivered quickly. Why is it sometimes sensible to deliver an unfinished product and then issue new versions of that product after delivery?

Sometimes, it’s a lot more worthwhile to be the first one to put a product out before anyone else. Also, having a smaller product, unfinished product that is ready to ship can be a lot more beneficial in the future as investing into the larger product might allow other companies to take that spot.

2.2. Explain why the fundamental objectives of agile software engineering are consistent with the accelerated development and delivery of software products.

Agile approach is designed to optimize the development process for adaptability, customer satisfaction, and continuous improvement. These principles align well with the goal of accelerated development and delivery of software products, as they provide a framework for efficient, customer-centric, and quality-driven development practices.

2.3. Give three reasons why Extreme Programming, as envisaged by its developers, is not widely used.

While Extreme Programming offers valuable principles and practices for software development, its adoption can be hindered by organizational resistance to change, resource constraints, and compatibility issues with the specific project or organizational context. Consequently, XP may not be widely used in some environments, despite its potential benefits.

2.4. You are developing a software product to help manage student admissions at a university. Your agile development team suggests that they create a number of small releases that potential customers can try and then provide feedback. Comment on this idea and suggest why it may not be acceptable to the system’s users.

while the idea of small, incremental releases aligns with Agile principles, such an important system such as student admissions might be a bad idea considering that it’s users would much rather have a full working product.

2.5. Explain why the Product Owner plays an essential role in Scrum development team. How might a development team that is working in an environment where there are no external customers (e.g., a student project team) reproduce this Product Owner role?

The reason why the product owner plays a valuable role is because they have the capability of dictating the direction of the entire project from the product’s function, user base, design, etc/ in the context of a more local environment, they can reproduce much of the former choices except for the lack of a user base.

2.6. Why is it is important that each sprint normally produces a potentially shippable product increment? When might the team relax this rule and produce something that is not ready to ship?

The reason why is that it indicates that the team can reliably produce a minimum viable product, no matter when it's scheduled to be due. The goal should always be to work towards achieving a potentially shippable product as soon as feasible. This ensures that stakeholders can benefit from the value delivered by the development team on a regular basis.

2.7. Explain why estimating the effort required to complete a product backlog item using person-hours or person-days may lead to significant variations between the estimated effort and the actual effort.

Relying solely on person-hour or person-day estimations can lead to significant discrepancies between estimated and actual effort.

2.8. Why are daily scrums likely to reduce the time that is normally required for new team members to become productive?

Overall, the frequent and structured communication facilitated by daily scrums accelerates the onboarding process for new team members. It provides them with a clear understanding of ongoing work, enables them to address challenges early, and fosters a sense of belonging within the team, all of which contribute to faster productivity.

2.9. One problem with self-organizing teams is that more experienced team members tend to dominate discussions and therefore influence the team's way of working. Suggest ways to counteract this problem.

A couple ways to counteract this would be to encourage quieter members on the team for their input. As well as pitting up team members who have more experience with those who are either new or don't give as much input.

2.10. Scrum is designed for use by a team of five to eight people working together to develop a software product. What problems might arise if you try to use Scrum for student team projects in which members work together to develop a program? What parts
of Scrum could be used in this situation?

1. Varying skill sets
2. Multiple perspectives/alternate goals for the project
3. Limited Time Availability