

# INFO5992 – Understanding IT Innovations

Semester 2 2025

## Practice Exam Questions

Please note that these questions are NOT an indication of what would be covered in the exam. You need to study all the topics covered during the lectures and tutorials in the unit.

### Short Answer Questions

- Differentiate between proprietary software and open-source software.
- How is the Value Chain different from the Value Network? Describe with the help of an example.
- Explain how knowledge sharing within and across teams contributes to driving innovation in startups. In your answer, discuss a mechanism or practice that facilitate effective knowledge sharing.
- Compare low-end and high-end disruption strategies in innovation. In your answer, explain how each type targets different customer segments.
- Explain how modularity in software architecture enables innovation through APIs. In your answer, discuss how modular design supports scalability and third-party integration.
- Can Generative AI be considered a General Purpose Technology (GPT)? Support your answer with two arguments.
- What steps can a tech startup company take to diffuse its innovation successfully? Provide at least two initiatives.

### Long Answer Questions

- During periods of technological discontinuity, startups may face competence-enhancing or competence-destroying innovations. Explain both concepts and discuss how each type of innovation can affect a startup's existing capabilities, competitive position, and strategic choices.
- During technological discontinuity, is it necessary for a dominant design to emerge? What might be the situation when a dominant design does not emerge?
- Open-source software helps a company drive innovation compared to proprietary software. Provide at least four reasons to support this argument.

- A healthcare company using AI models like ChatGPT is struggling with competition, scalability, and adaptability. It decides to go through technological discontinuity. What could be four reasons for making this decision?
- A startup decides to shift from a closed innovation model to an open innovation approach. What could be two reasons for making this shift and two risks associated?
- Startups use the Business Model Canvas to plan and refine their business strategy. Explain four reasons why clearly defining customer segments and value propositions is critical for a startup's success.
- What are four common barriers that prevent companies from successfully implementing innovation strategies? Briefly explain how each barrier affects innovation.

## Scenario-Based Question

### Scenario:

Suppose you want to work on a digital-human startup based on language models (such as ChatGPT) for private tutoring school students for science and ICT subjects. You noticed that the traditional approach to developing a business model for this startup may not work, and hence, you want to start by developing an innovative business model. You noticed that you must undergo various processes to develop a business model by customer development, agile model development instead of a traditional model, and other commercialisation aspects.

- Explain the customers' needs for the above startup and classify them based on their needs.
- Provide at least two customer segments. For each customer segment, list at least three needs.
  - What value proposition can this company offer to each customer segment?
- What are the key resources the startup would need? Take the nature of this startup and provide a list of resources and briefly explain their importance (i.e., tangible and intangible resources).
- Describe how the generated data can help them improve their services and be used to innovate their products and services.