

Software Engineering

命題方式：Close Book 考試時數：4 hours

1. What is the purpose of process assessment? Why has SPICE been developed as a standard for process assessment? Discuss the pros and cons of both the continuous and staged CMMI models. 20%
2. Using the architecture of a house or building as a metaphor, draw comparisons with software architecture. How are the disciplines of classical architecture and software architecture similar? How do they differ? 15%
3. Assume that you're the manager of a small project. What baselines would you define for the project, and how would you control them? 15%
4. What is Liskov Substitution Principle? Give an example and explain its application in implementation. 15%
5. Many organizations buy commercial software, thinking it is cheaper than developing and maintaining software in-house. Describe the pros and cons of using COTS software. What must the customer, user, and developer anticipate when designing a product that uses COTS software in a large system? 15%
6. What is a design pattern? Please explain how 'adapter design pattern' and 'bridge design pattern' work. 20%