

CISC 7540X Final Exam

Short-answer questions. Each question is worth 5-points. Leaving an answer blank earns 1-point (writing a wrong answer earns 0-points).

1. What is a software development life cycle?
2. What is the Waterfall software development methodology?
3. What is agile software development and how does it differ from other methodologies?
4. What is Scrum, and how is it used in software development?
5. What is a version control system and how does it work?
6. What is a software design pattern and when should you use one?
7. What is a software testing strategy and why is it important?
8. What is continuous integration and why is it important?
9. What are some common software security threats and how do you mitigate them?
10. What is object-oriented programming (OOP) and how does it differ from other programming paradigms?

11. What is functional programming and how does it differ from OOP?
12. What is declarative programming and how does it differ from OOP and functional programming?
13. Project Management 4Ps: People, Product, Process, Project. Briefly elaborate on what aspects of People dimension the project manager needs to be concerned with.
14. Continuing from above, briefly elaborate on what aspects of Product dimension the project manager needs to be concerned with.
15. Continuing from above, briefly elaborate on what aspects of Process dimension the project manager needs to be concerned with.
16. Continuing from above, briefly elaborate on what aspects of Project dimension the project manager needs to be concerned with.
17. What are OKRs, and what makes for a strong vs weak OKR?
18. What are non-functional requirements? How are they specified and tested for?
19. What is a data model? What does it contain? What are the objectives of data modeling? What are some different approaches to data modeling?
20. Briefly describe Data Flow Architecture. What projects is it appropriate for?