

CSI518 Software Engineering

Fall 2003 Final Exam

December 19, 8:00 – 10:00

1. You are asked to use design patterns to design a course registration system similar to MyUAlbany; describe what patterns you would use, why the patterns were chosen and how you apply the patterns. (20pts)
2. Describe the commonalities and the differences, if any, between software verification and validation. Give an example technique for verification and one for validation. (10pts)
3. Compare the strengths and weaknesses between black-box testing and white-box testing. Give an example technique for black-box testing and one for white-box testing. (10pts)
4. What techniques would you suggest for testing your term project and why? (10pts)
5. Describe the major activities of software configuration management and their importance. (10pts)
6. Why does software maintenance cost so much more than other phases of software development and how would you suggest reducing software maintenance cost? (10pts)
7. What is software change impact analysis? Describe the existing techniques and limitations for impact analysis and what would you suggest for effective change impact analysis? (20pts)
8. Comparing with the traditional socket programming or RPC for distributed computing, describe the pros and cons of CORBA. (10pts)
9. What is your role in the team project and how would you rate your team leaders and members?