

**CSI 518 Software Engineering**  
**Fall 1997 Final Examination**  
**December 16 Tuesday 10:30 - 12:30**

This is an open book/notes exam, you might be able to find answers from the book/notes, however, the credits will be given based on your OWN justification and explanation ONLY.

- (1) Describe the testing process and give a suggestion of testing strategies that could be applied at each stage of the testing process.
- (2) Are traditional testing techniques adequate in testing object-oriented software? Why or why not? (explain with examples!)
- (3) As a manager, what would be your plan in developing a safety critical software which has a reliability threshold of  $1 - 10^{-6}$ ? How would you determine when to release the software?
- (4) Describe vertical reuse vs. horizontal reuse and compare their benefits and required overhead.
- (5) Why software maintenance costs 50% to 70% of total development efforts and how would you reduce the cost.
- (6) What are major activities in configuration management and what tools can be used in these activities?
- (7) What types of software need to be re-engineered and how?
- (8) Describe the structure and the significances of CORBA.
- (9) What were/are the top risk items of the team projects (both teams)? Have they been resolved? If yes, how? if no, why?