

Name: _____

**CSI 518 Software Engineering
Fall 1996 Final Examination
December 19 Tuesday 3:30 - 5:30**

- (1) Describe the software life cycle briefly.
- (2) Explain the differences between Verification and Validation and list one methodology for Verification and one for Validation.
- (3) Explain what is a test plan and what is its purpose; What should be included in a test plan?
- (4) Explain how test coverage is used as a measure of test case completeness.
- (5) List at least two white box testing techniques and compare their ability in error detection. (explain with an example!)
- (6) What is a dynamic program slice? Explain how program slicing can be used to improve program reliability.
- (7) What are CASE tools and what are their uses? (explain briefly)
- (8) Describe the Clean Room Process. List the advantages and disadvantages of using this approach.
- (9) List three different approaches that provide software fault tolerance and compare their strengths and weaknesses.
- (10) What is software reliability; what are the uses of software reliability measure and how to estimate this metric? (You can use one of the existing approaches and explain it briefly)