

SOFTWARE ENGINEERING — CSC 408F

Mid Term Test (25% of course mark)

October 20, 1999.

7 questions on one page. 100 marks total. 50 minutes total

Answer ANY 5 questions. All questions have equal weight. WRITE LEGIBLY!

1. Assume that your team has decided to use the Spiral Model to develop the course project software. Describe the activities, reviews and checkpoints that might occur in such a spiral up to the due date for Phase B.
2. The original plan for the software project you are managing called for one senior developer and 4 junior developers. Due to management changes above you, the project has now become much larger in scope, budget and importance to the organization. Your new team now consists of 10 senior developers and 90 junior developers. Describe the changes that you would make in the structure and organization of your project to deal with this much larger staff. Pay particular attention to communication issues.
3. Your course project team has assigned you the duties of Risk Manager. Assume your team is doing all of its software development and documentation on CDF. Identify three risks to the successful completion of your project that arise directly from your use of CDF. Discuss the potential severity of each risk and the steps you would take to avoid or minimize the consequences of the risk.
4. Under the TANSTAAFL principle, good programmers cost more than poor (inexperienced, less well educated) programmers. You have \$1,000,000 to spend on staff salaries for a project that you estimate will be about 250,000 lines of C code and will take about 2 years to develop. If good programmers cost \$85,000/year and poor programmers cost \$50,000/year describe the issues that you would consider in deciding how many of each type of programmer to hire.
5. You are in desperate need of programmers so you have hired several individuals who are used to working alone (i.e doing all of requirements, specification, design and implementation of small projects by themselves). What problems might you have in integrating these individuals into your project team. How would you deal with these problems?
6. Your management has told you that the two most important goals for the project you are managing are a) correctness and b) minimum time to completion. Describe possible strategies for satisfying both of these goals.
7. One of Stennings Fundamental Questions is:

Are there effective mechanisms for coordinating changes and limiting the scope of their impact?

Discuss why this is an important issue in software project management.