CSC408S/CSC2105S – SOFTWARE ENGINEERING WINTER 2002/2003
Mid Term Test (25% of course mark) March 6, 2003.

5 questions on **1** page. **100 marks total. 50 minutes total Open Book & Notes**
Answer ALL 5 questions. All questions have equal weight. WRITE LEGIBLY!
If you need to make any assumptions to answer a question, state those assumptions clearly in your test book.

1. The manager of Software Quality Assurance has authorized you to buy one software tool to help improve the quality of the software produced by your organization. You have narrowed your choice down to two alternatives:

1) A tool that will accurately measure the degree of **cohesion** for each software module in a large system.
2) A tool that will accurately measure the amount of **coupling** among the modules in a software system.

Which tool would you buy? Justify your decision.

2. Suppose you are managing a project which is getting behind schedule. Possible actions include:

1) renegotiating the time schedule
2) adding people to the project
3) renegotiating the software quality requirements

In which ways can these actions help you finish the project on time?
Which action would you prefer? Why? Are there other ways to finish the project on time?

3. Assume you are working for a small software company that has ambitions to become a big software company. The products your company has developed so far have all been for Linux on PC type workstations. A wealthy investor has offered to invest a **lot** of money in your company **if** any new software your company produces is highly portable to different hardware and software environments. (e.g. Windows, SunOS, MacOS, etc.)
This was too good an offer for your company to refuse. They appointed you **Portability Czar** (you can give orders to everyone) to ensure that all new software is highly portable.
Describe how your would carry out the duties of your new job.

4. Define *traceability*. What are the advantages of building traceability into a software system? What steps should be taken to create traceability and to ensure that the traceability information is kept up to date as the software system evolves?

5. Your CSC408S project team faces several *personnel related* risks in the course project:

1) the risk that a team member will drop the course, perhaps very close to a project deadline.
2) the risk that a team member will not do the work that has been assigned to them.
3) the risk that the work done by a team member will be of poor quality.

Discuss strategies for managing these risks including identification, prioritization and reduction. Describe a *contingency plan* for dealing with each of these risks.