

**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!**

1. Assume you have the time and resources to thoroughly and rigorously test the Program Committee Assistant program that your team developed in the course project.

- a) How would you automate the testing process so that you could minimize the amount of human effort required to do the testing?
- b) What software tools would you like to have available to help test this software?

2. You are the *Manager of Software Maintenance* for a large software organization. Your organization is in the process of developing the Requirements for a large software system that will take several years to implement. Since you will eventually be responsible for maintaining this system, your input has been requested by the Requirements Analysis team.

What five Requirements would you ask for in order to make your job of maintaining the system easier and more efficient? Justify your choices.

3. The *generic risks* that a software project might encounter include:

- | | |
|--|---|
| 1 Misunderstanding the Requirements | 4 Misunderstanding of target environment |
| 2 Personnel turnover, loss of key people | 5 Disputes among project teams or team members |
| 3 Inadequate time for testing | 6 Misestimation of project difficulty or complexity |

- a) Which team (or teams) were you on for the course project?
- b) Which of the risks listed above did your team actually encounter?
- c) Describe how your team dealt with these risks.

4. Suppose you developed a routine to determine the inverse of a matrix. The routine is to be incorporated in a library of reusable components. Which aspects of this routine should be documented in order that others may determine the suitability of the routine for their application?

5. You have been appointed chairperson of the *Change Committee* for a large software project that is developing your companies next major product. When you moved into your new office, you discovered a large stack of unprocessed *Change Request Forms* that your committee will need to process.

- a) What kind of people do you want on your change committee? Justify your choices.
- b) What kinds of information about the current state of the project would you need in order to analyze and process the Change Requests?