

UNIVERSITY OF TORONTO
Faculty of Arts and Science

DECEMBER EXAMINATIONS 1998

CSC408F
Duration - 3 hours

No Aids Allowed

Total Marks: 100

CHECK YOUR EXAMINATION PAPER. Questions are printed on both sides of the sheets. There are 2 pages on this exam including this cover page. Please ensure that you have both before you start. It is your responsibility to do so.

Answer all questions in the EXAMINATION BOOKS provided. All answers in the books must be numbered to correspond with their question.

MARKING SCHEME: All questions are of equivalent value. Blank answers receive approximately 1/3 credit. False or irrelevant statements decrease your mark (but never below 0), while correct and relevant statements increase your mark (but never above the maximum value for the question).

HINTS

- **READ EACH QUESTION CAREFULLY**
- Write legibly and understandably. An unreadable answer receives no credit.
- Some of the questions are more difficult than others. If you get stuck, skip it and return to it later.
- Manage your time carefully.
- If there seems to be ambiguity in the question, ask the invigilator for clarification or state your assumptions and continue. If your assumptions are reasonable and don't trivialize the problem, you will probably receive full credit.

1. Describe Boehm's spiral lifecycle mode. What are its strengths and weaknesses as compared to a standard waterfall model?
2. In "Peopleware", the authors describe their "coding war games" experiment. Describe how this experiment was conducted. What were the results? What conclusions can be drawn?
3. Describe the benefits of inspections and reviews in a software development cycle. Discuss contributors to effective and ineffective reviews.
4. Describe the various methods used to determine when testing can stop.
5. List the five CMM levels and describe what aspect of process maturity each level is intended to capture. List some key activities that occur in a software development shop at the various maturity levels.
6. Describe what a software development organization must do to conform to ISO 9001. In your opinion, is this worthwhile? Discuss.
7. In "The Mythical Man-Month", Brooks discusses the "Second System Effect." Describe it and explain how one could avoid it.
8. Is it useful to incorporate a software metrics program into the development process? List three advantages, three disadvantages, and defend your position.
9. What items should be addressed in a requirements definition? For the purposes of this question, provide a list of potential sub-section headings for a university faculty's student database holding course selections and grades. List five items that should definitely not appear in a requirements definition.
10. What is the purpose of Configuration Management? Describe the activities involved in software configuration management.

TOTAL MARKS = 100.