

CS5500, Fall 2004, Test 1

Chapters 1-9. Time 60min. Closed books, notes, except your minds only. Use extra paper as needed, but make sure to identify each answer. If anything is not clear, state a reasonable assumption and answer the question.

YOU MUST RETURN THIS PAGE. NAME _____

- 1 (20) Consider a small company with just one team of 6 people developing one project, and a big company with many teams developing various projects.
 - a) In what sense the first company can be more efficient/productive if any?
 - b) In what sense the second company one can be more efficient/productive if any?
 - c) Overall, which company can be more efficient/productive in general?

- 2 (30) A company has 3 programmers. They make \$120k/yr. each with benefits. You are the boss making \$150/yr., and there is a secretary/stuff person making \$30k/yr. Other external costs such as space leased and utilities are \$100k/yr. for the company.

One programmer is only 50% as efficient as the others.
Your company is currently developing a product that you believe is tightly on schedule, to be completed in a month, the client is eagerly awaiting the software, but if you slip there is no penalty provision in the contract.
You are tempted to fire the inefficient programmer, but someone suggests you may also send him to a month long training costing you extra \$10k.

 - a) What are exactly the options you are facing?
 - b) For each options, use cost-befit analysis to decide its cost/impact
 - c) If cost is the objective, what option would you pick and why?
 - d) If your objective is to make the client happy first, what option would you pick and why?
 - e) List some other important objectives you may want to consider in this situation.

- 3 (15) Differentiate between Version, Revision, and Variation.

- 4 (15) Compute the number of FP adjusted function points for a product that has 3 inputs, 3 outputs, 5 Inquiries, 2 Master files, and 10 Inferences, all are average except the complex interfaces and simple inputs. The technical factors have no influence on the project except that you have to pay extra special attention, due to requirements, to portability and maintenance.

- 5 (20) Problem 9.8 in the Schach book.