

ICS 52 - Introduction to Software Engineering
Midterm Exam #1 – Winter, 2009

Last Name: _____ First Name: _____

1	2	3—6	7	8	9	Total
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1. (20 points.) The textbook says, in chapter 1, “Viewing software engineering as a branch of engineering is problematic.” Identify two (or more) important differences between software engineering and traditional engineering (the book mentions the example of bridge design). Explain how those differences lead to differences in the *processes* of software engineering and traditional engineering.

See pages 8—9. Common good answers:
Cost during development, not production
Logical, not physical
Does not wear out
Initial problem often not well defined.
Not visible
Continuity

2. (15 points.) Draw and label a diagram of the waterfall model.

See textbook, p. 52

3. (2 points) Define “prescriptive” as used to describe a software process model.

Used to guide the software development process.

4. (2 points) Valuing “responding to change” over “following a plan” is a hallmark of what type of software process?

Agile.

5. (2 points) Define “a module’s secret” as used in software engineering.

Decisions and data that is “hidden” within the module.

6. (4 points) What activities are associated with the upper right hand quadrant of the spiral model?

See p. 62

9. (25 points) Congratulations! You have just been hired as Software Architect for a new system called Cheater Zapper (CZ). CZ will be used by teachers to determine if papers turned in to them are substantially similar to other papers which have been submitted to CZ. Teachers use CZ by uploading Word, plain text, or PDF files over the Web, or they can fax printed copies to a special phone number. CZ ranks each paper on a 1 to 100 scale, with a higher number indicating greater similarity to another submitted document. Select two architectural styles described in the book or in lecture, write down their names, and for each style draw a diagram (*not* a UML class diagram) showing an architecture for CZ following that style. Make sure your diagram is fully and clearly labeled, is specifically for CZ (i.e. isn't generic), and clearly illustrates the selected architectural style.

Style #1 _____

**I used X Layered X P&F X Repository, etc.
to indicate that the diagram does not follow the style closely.**

Style #2 _____