Study required for the Midterm Test

The midterm test will be a 70-minute (1 hour and 10 minutes) closed-book exam. No supporting material is allowed. The test will take place on Thursday, April 19, 2012 from 2:30 pm in SEM-201. Its weight is 25% of the course grade.

For this test you are required to study material from [Stellman and Greene 2005]. The possible questions are the following:

Chapter 1

1. Briefly enumerate 4 basic project management principles that will help guide you through any software project.

2. Describe and comment on the “Tell Everyone the Truth All the Time” project management principle.

3. Describe and comment on the “Trust Your Team” project management principle.

4. Describe and comment on the “Review Everything, Test Everything” project management principle.

5. Describe and comment on the “All Software Engineers Are Created Equal” project management principle.

Chapter 2

6. Explain the importance of the Vision and Scope document.


8. Briefly outline the structure of the Project Plan.

9. Describe the contents of the Statement of Work component of the Project Plan.

10. Describe the contents of the Risk Plan component of the Project Plan.

Chapter 3

11. Describe the Basic Course of Events of the Wideband Delphi estimation method.

12. Explain the goal and describe the activities of the Kickoff Meeting in the Wideband Delphi estimation method.
13. Explain the goal and describe the activities of the Individual Preparation in the Wideband Delphi estimation method.

14. Explain the goal and describe the activities of the Estimation Session in the Wideband Delphi estimation method.

15. Explain the goal and describe the activities of the Assemble Results phase in the Wideband Delphi estimation method.

Chapter 4

16. Describe the 4 ways in which one task can be dependent on another. Also, give 2 reasons why a task may be dependent on another.

17. In project schedules, what is the critical path and why is it important to track?

18. Explain the difference between effort and duration (in connection with allocation of resources to tasks).

19. Describe what buffers are in project schedules, explain when are they useful, and indicate the risks of using buffers.

20. Describe what earned value management is and explain how the performance of the project can be tracked.

Chapter 5

21. Explain what is meant by inspection, describe its goals, and indicate why it is important.

22. What are the desired qualities of a good moderator during inspection meetings?

23. What are the three main objections to inspections and how can each of them be addressed?

24. Describe how a deskcheck is performed and explain when it is a useful review.

25. Explain what is meant by code review and describe what is meant by a defect in the context of a code review.

26. Describe the benefits of pair programming. Give several recommendations for implementing pair programming and indicate also some of the possible drawbacks.

Chapter 6

27. Explain what is meant by requirements elicitation, indicate its objective, and list three types of elicitation activities.

28. Outline the structure of the discussion summary template (indicate its 7 components).

29. Indicate the structure of the SRS template.

30. Explain the differences between functional requirements and non-functional requirements.

31. Briefly describe 5 kinds of non-functional requirements.
Chapter 7
32. Explain what a version control is and why it is important.
33. Describe the basic course of events of Subversion.
34. Compare the two models for version control systems: lock-modify-lock and copy-modify-merge. Explain which model is more efficient for team development.
35. Briefly explain the main purpose of refactoring a program.
36. Describe the Test-Driven Development as a unit testing methodology. Also, state at least 4 benefits of applying this method to a software project.

Chapter 8
37. Explain how quality is measured in software testing.
38. Explain what is meant by smoke tests and indicate what are their advantages and disadvantages.
39. Explain what is meant by a postmortem report and discuss its importance.
40. Indicate 2 questions that you would expect to see on a postmortem survey, and explain their purposes.
41. Discuss 3 myths about testers.

Chapter 9
42. Explain and discuss the “Not-Invented Here” syndrome.
43. Explain and discuss the common excuse “It Just Adds More Bureaucracy” and give an example.
44. Explain and discuss the “It’s Too Risky” claim.
45. Describe two goals of measuring cost related to implementing changes (see section Measure Your Progress).

Chapter 10
46. In the context of project management, briefly explain what is meant by responsibility, authority and accountability.
47. Describe 3 ways that guidelines can help make your decisions more predictable.
48. Describe 3 rules that can help you avoid micromanagement.
49. Describe several ways in which a project manager can motivate his or her team members.
50. Describe the characteristics of your ideal software project manager. State any assumptions that could help focus and/or clarify your description.
51. Describe the characteristics of your ideal employee (software developer). State any assumptions that could help focus and/or clarify your description.

52. Assume you are a software project manager working with a team of 4 to 8 people under your supervision. Describe your most important 7 principles that you will apply consistently in your management of the team. State any assumptions that could help focus and/or clarify your description.

Chapter 11

53. Indicate the major reasons why outsourced projects fail. Briefly indicate the steps a project manager can take to prevent project failure (2-4 lines each).

54. Briefly indicate the main management issues that can arise while working on an outsourced project (2-4 lines each).

55. Under “Plan and manage the project scope” phase, explain why the client has more flexibility in the allocation of resources while outsourcing.

56. Explain how an outsourced project’s inspection process can be adapted from an in-house project’s inspection process.