

# Exam Software Product Management

February 1, 2012

17.00 - 19.00h

Name:	Student nr.:
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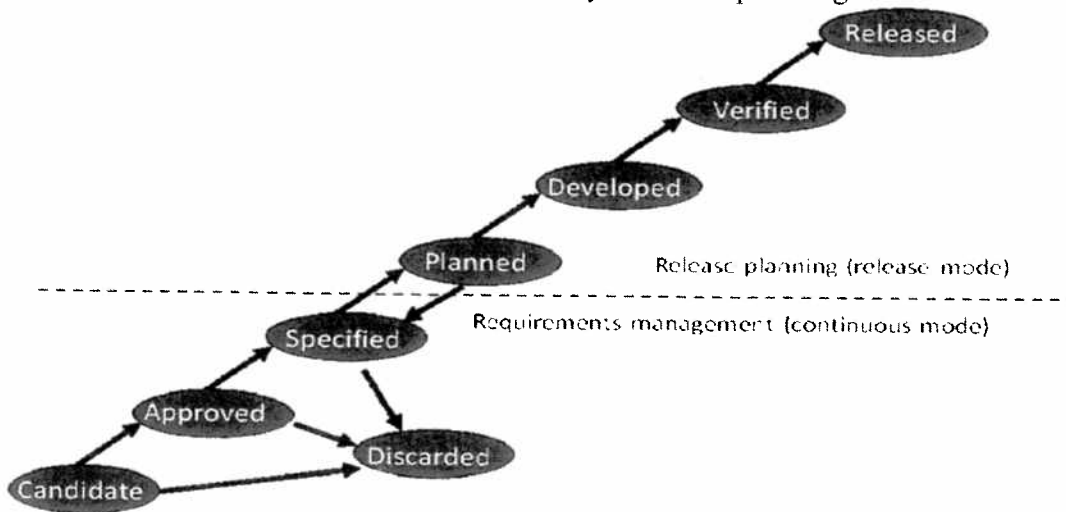
- The exam consists of 16 multiple choice questions and 8 open questions, divided over 9 pages. Please check first whether you have properly obtained all pages.
- Enter the answers in the space allocated. In case you need more space you can use the back of the pages. Make a proper reference to such an extra part on the back.
- This is a 'closed book' exam. No slides, books whatsoever are allowed, except for an English-'other language' dictionary. All other materials or equipment are prohibited.
- Cell phones and other electronic devices need to be switched off.
- Per multiple choice question only **one** answer (A, B, C, or D) is correct. Encircle the right answer for each question.
- When you have finished the exam you should submit the complete package stapled in the correct order.
- Good luck! Grades will be published on the course website as soon as possible.

Multiple choice questions (50%)	
Open question 1	
Open question 2	
Open question 3	
Open question 4	
Subtotal open questions (50%)	
Total	

## Multiple choice questions

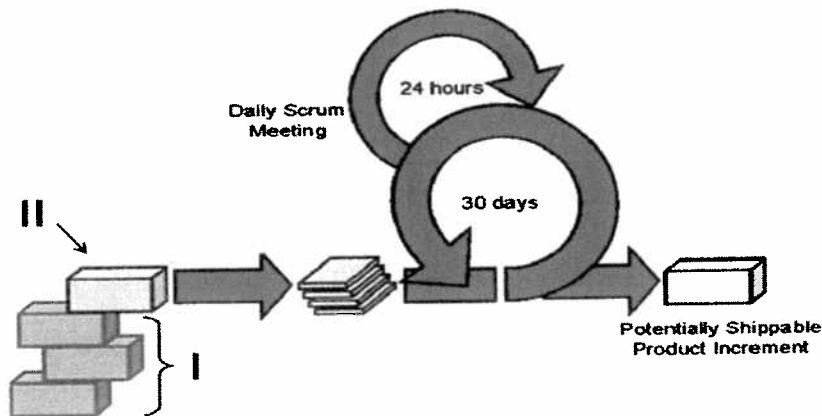
1. Ebert (2007) distinguishes product managers, marketing managers, and project managers. Which of the following statements are correct?
  - I. "The product manager and marketing manager roles should be distinguished, since marketing activities might conflict with the more global role of overall product success."
  - II. "The project manager is accountable for market and customer success."
  - A. Both statements are incorrect
  - B. Statement I is correct and statement II is incorrect
  - C. Statement I is incorrect and statement II is correct
  - D. Both statements are correct
  
2. Requirements can be categorized in three different types, namely: functional requirements, quality requirements, and constraints. Indicate the types of the following requirements:
  - I. "The system must be developed using the Rational Unified Process."
  - II. "The system shall offer a user-friendly interface."
  - A. I is a functional requirements and II is a constraint.
  - B. I is a quality requirement and II is a constraint.
  - C. I is a constraint and II is a functional requirement.
  - D. I is a constraint an II is a quality requirement.
  
3. Read the following two statements:
  - I. "The number of realized requirements in product software usually depends on the available time and resources, since these are fixed."
  - II. "In tailor-made software, the resources and time are estimated based on the requirements."
  - A. Both statements are incorrect
  - B. Statement I is correct and statement II is incorrect
  - C. Statement I is incorrect and statement II is correct
  - D. Both statements are correct
  
4. What is not a functionality of the Functional Architecture Framework (FAF)?
  - A. The FAF is a standard positioning arrangement for all requirements
  - B. The FAF provides a vision on the functional architecture of all relevant applications of your product in the business domain
  - C. The FAF can be used to estimate the ROI
  - D. The FAF can be used to order requirements of different variants of a product

5. In the figure below, different requirements' states are presented. At which stage can the customer be informed that the functionality is in the upcoming release?



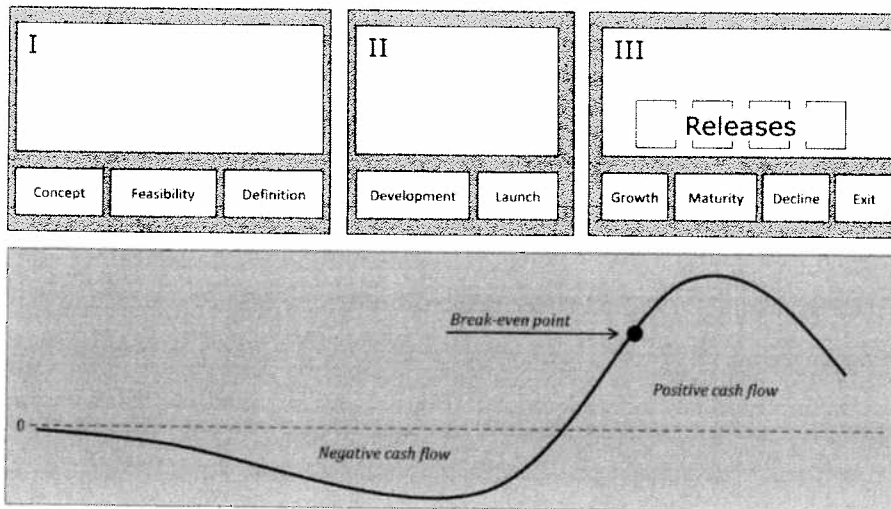
- A. Specified  
 B. Planned  
 C. Developed  
 D. Released
6. Suppose that you are a product manager and you have a lot of experience with the product you develop. On the other hand, you just entered a new market with your product, which causes the experience of the customer to be low. Looking at these two dimensions, which requirements elicitation techniques will probably yield the best result?
- A. Brainstorming & prototypes  
 B. Prototypes & beta-customers  
 C. Brainstorming & questionnaires  
 D. Questionnaires and beta-customers
7. The following sentence describes a dependency between requirements: "A detailed on-line manual may decrease the customer value of a printed manual." What is the type of dependency that is described here?
- A. Combination  
 B. Implication  
 C. Revenue-based  
 D. Cost-based
8. Wiegers' prioritization matrix uses the following relative variables:
- A. Benefit, volatility, cost, risk  
 B. Benefit, penalty, cost, volatility  
 C. Cost, priority, benefit, risk  
 D. Benefit, penalty, cost, risk

9. The figure below shows the Scrum development process. In this process, the requirements are organized in a certain way. Explain this by indicating which terms should be placed at the I and II in the figure.



- A. (I) Product themes (II) Product requirements  
 B. (I) Product requirements (II) Product features  
 C. (I) Product ideas (II) Product items  
 D. (I) Product backlog (II) Sprint backlog
10. The software product manager is responsible for the release heartbeat of his or her product. Which of the following answers gives the correct meaning of “release heartbeat“?
- A. A scheduled release frequency the software product manager defines for bug fixes  
 B. A standard frequency, defined by the software product manager, for major and minor releases  
 C. The most frequently observed interval between major releases  
 D. The minimal interval between minor releases
11. Inspiration for developing product roadmaps comes from different sources. Which if the following is not a good source for inspiration?
- A. Prioritized product requirements in the requirements database  
 B. Incoming market requirements  
 C. Market analysis  
 D. Roadmap intelligence
12. In product lines, similar features are shared by different products. Suppose that each product within the product line offers the option to select the user interface. How do we call such an option?
- A. Commonality  
 B. Variability  
 C. Variation point  
 D. Variant

13. The figure below shows the product management lifecycle model of Haines. I, II, and III are the so-called 'work area buckets'. Indicate the names of the three work area buckets.



- A. (I) New product planning (II) New product introduction (III) Post-launch management  
 B. (I) Product vision (II) Product development (III) Product launch  
 C. (I) Requirements management (II) Development (III) Release planning  
 D. (I) Product definition (II) Product Planning (III) Product delivery
14. The strategic pricing pyramid represents a model for setting a product's price. Which one of the following layers is **not** part of the Strategic Pricing Pyramid?
- A. Price structure  
 B. Price policy  
 C. Competitors' prices  
 D. Value creation
15. It is difficult to put intellectual property on a balance sheet, since it is hard to objectively value intellectual property assets. However, there is an exception, namely:
- A. If the intellectual property is acquired from another company  
 B. If the intellectual property is valued by an external party  
 C. If the intellectual property is registered as a trade mark  
 D. If the intellectual property is licensed
16. A product manager is supposed to act as a mini-CEO. Which of the following statements gives a good explanation of this metaphor?
- A. Product management is responsible for product sustainability  
 B. Product management is good for a manager's career  
 C. Product management has the authority over other business units  
 D. Product management leads to a salary increase

## Open questions

1. Software product management has similarities but also differences with traditional product management of non-software products. Name two of these differences.

2. Give the definitions of market requirement and product requirement *and* explain why it is necessary to distinguish these.

A market requirement is...

A product requirement is...

It is necessary to distinguish these because...

3. Give three differences between requirements management for tailor-made software and requirements management for product software.

4. Lehmann and Buxmann (2010) describe three different approaches of price determination for software products: cost-based pricing, value-based pricing, and competition-oriented pricing. Imagining that you developed a new innovative software product for consumers and you are ready to sell it. Evaluate the suitability of *each* of the three price determination approaches, **and** explain which of the three would be most applicable to this situation.

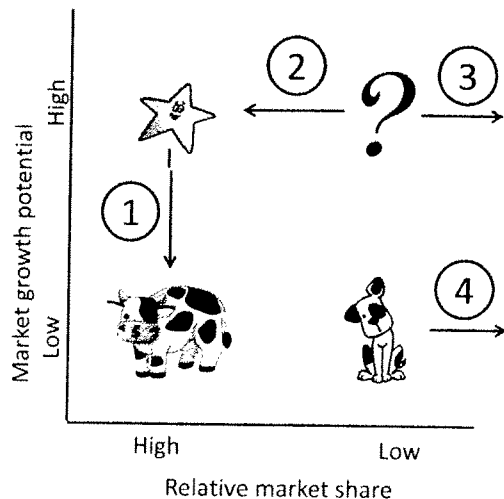
5. The perceived value of a product is often not the same as the objective value of a product. Explain why it is a problem if the perceived value is lower than the objective value and give three strategies that can increase the perceived value of a product.

6. Explain the cumulative voting prioritization technique by providing an *example* in which you prioritize *four* requirements with *three* stakeholders. Show explicitly how the resulting priorities of the requirements are obtained.



7. A value proposition is an offer that describes the quantifiable benefits that the product promises to deliver. Give the value proposition for Google Docs. The product allows users to create and edit documents (texts, spreadsheets, and presentations) online while collaborating in real-time with other users. Make sure to include target group, business drivers or pain points, solution description, USPs, competition, and distinctive advantage.

8. The figure below shows the BCG Growth Share model. It shows a question mark, star, cash cow, and dog. Based on a product's position in the model, a company should choose a strategy to optimize its portfolio. Describe for each of the numbers (1, 2, 3, and 4) which strategy should be followed.



- 1.
- 2.
- 3.
- 4.

