Agile Processes
In-Class Assessment III
2019-2020

Please read the following rules before answering the questions.
- All questions are compulsory.
- Please read the questions properly -- they may be either descriptive answers questions or multiple-choice questions.
- There may be multiple correct options for the multiple-choice questions. You need to identify the <u>exact correct options</u> to be awarded the full marks. Otherwise, you will be awarded zero (0) for that particular question
- Marks for each question are written towards the end of each question.
- This is an open-book assessment, and you are allowed to consult your notes during the assessment.
- Please compose your answers in any software, and save them as .PDF file.
- The .PDF file should be uploaded in the CS moodle before 21st November 2019, 5:00PM Beijing time.

Q1: What happens during a review meeting in Scrum? Explain. *(10 marks)*

Q2: Which of the following is not an Agile value according to the lecture notes? *(5 marks)*
    (a) Pair programming.
    (b) New, reduced role for the manager.
    (c) Focus on quality, achieved through testing.
    (d) No "Big Upfront" steps.

Q3: What does "No big Upfront Steps" mean? *(5 marks)*
    (a) That the project iterations should be short.
    (b) That the exact scope of the system should be decided in advance.
    (c) That software teams should not spend a long time on requirements, design, and architecture before actually starting to code.
    (d) That focus should be on achieving quality through testing.

Q4: The Lean approach has an emphasis on removing "waste". Which of the following items constitute waste according to Lean? Check all that apply. *(5 marks)*

    (a) Defects not caught by tests and reviews.
    (b) Doing overtime.
    (c) Customer waiting.
    (d) Design documents.

Q5: More waste: The Lean approach has an emphasis on removing "waste". Which of the following items constitute waste according to Lean? Check all that apply. *(5 marks)*

(a) High management involvement.
(b) Handoffs.
(c) Customer involvement.
(d) Seeking information.

Q6: What is a regression test suite in the context of a software project? *(5 marks)*

(a) A collection of tests used to generate a system failure on purpose in pre-determined software elements.
(b) A collection of tests that never failed in the history of the project.
(c) A collection of tests used to make sure that faults which never occurred before do not appear in the code of newly implemented features.
(d) A collection of tests including tests that failed in the history of the project, to make sure that faults that have already occurred in the past do not occur again when implementing new features.

Q7: Which Scrum role is responsible for accepting or rejecting the result of an iteration in a project? *(5 marks)*

(a) Product manager
(b) Requirements manager
(c) Requirements master
(d) Product owner

Q8: Which of the following reflects XP's approach to unit testing? *(5 marks)*
(a) Always Write code before writing the corresponding unit tests.
(b) Always write unit tests before writing the corresponding code.
(c) Always write first the smallest amount of code to implement a given story. Then always write the corresponding unit tests.
(d) Always write first the smallest amount of code to implement a given story. Then, if you have time, write the corresponding unit tests.

Q9: Which of the following are expected benefits of Test-Driven Development? Check all that apply. *(5 marks)*
(a) Write fewer tests.
(b) Drive the design of the program.
(c) Replace specifications by tests.
(d) Catch bugs early.

Q10: Which of the following questions should a participant to a scrum of scrums meeting answer? Check all that apply. *(5 marks)*
  (a) What will your team do before we meet again?
  (b) Are you about to put something in another team's way?
  (c) What did your team do since we last met?
  (d) Is anything slowing your team down?

Q11: Why do some decks of cards used to play the planning poker game have card values resembling the Fibonacci sequence (0, 1, 2, 3, 5, 8, 13, ...)? *(5 marks)*
  (a) In honor of Leonardo Fibonacci, who in his work as an early mathematician applied ideas that prefigured agile methods.
  (b) To reflect the numbers that statistically the majority of developers pick.
  (c) To reflect the inherent uncertainty of short-term estimation.
  (d) To avoid nit-picking discussions on small differences of estimation.

Q12 Which of the following sentences about agile methods is true? Check all that apply. *(5 marks)*
  (a) Kent Beck, in XP, suggests that contracts for software development should fix time, cost, and quality, leaving the precise scope of the system open to negotiation. This should lead to signing a sequence of small contracts instead of just a big one.
  (b) Crystal is a name for a set of methods using different colours to reflect the size and criticality of a software project.
  (c) The Lean Software method was inspired by techniques first applied at Toyota and the automobile industry.
  (d) Most of Scrum's practices are about how to manage a project.

Q13 What it is meant in the lecture when criticizing the tenth principle ("Simplicity, the art of maximizing the amount of work not done is essential")? *(5 marks)*
  (a) It is meant that simplicity should not be a goal, because software systems are complex by nature.
  (b) It is meant that simplicity should be attained by minimizing the amount of work done instead.
  (c) It is meant that simplicity comes at a cost, and usually requires more work, rather than less, to reduce complexity.
  (d) It is meant that simplicity is important, but not essential.

Q14 Agile methods suggest a new, reduced role for the manager. Which of the following is true? *(5 marks)*

    (a) The manager should only be responsible for the successful completion of the project.

    (b) The manager should not assign tasks to developers.

    (c) The manager should only be responsible for software testing.

    (d) The manager should only make sure that the customer's needs are met.

Q15 Which of the following sentences about iterative development is true? *(5 marks)*

    (a) Iterative development implies performing the minimum number of iterations necessary to complete the requirements elicitation phase, then the minimum number of iterations necessary to complete the development phase, and finally the minimum number of iterations necessary to complete the testing phase.

    (b) Iterative development implies performing the requirements elicitation phase, then the design phase, then the development phase, and finally the testing phase before presenting the result to the customer. This should be repeated every six months.

    (c) Iterative development implies performing short development cycles (from a one day to a few weeks) and avoid requirements elicitation, design and documentation as much as possible.

    (d) Iterative development implies performing development cycles lasting from one day to a few weeks. Each cycle includes requirements elicitation, design, development, and testing on a usually limited scope.

Q16: Which of the following are considered developers' responsibilities in XP and Scrum? Check all that apply. *(5 marks)*

    (a) Communicate constantly with the customers.

    (b) Decide on budget for project iterations.

    (c) Always know the answer to the questions: "How long will it take?", "What are the risks?", "How will we implement it?".

    (d) Identify features that depend on other features.

Q17: Which of the following are considered tracker's responsibilities in XP and Scrum? Check all that apply. *(5 marks)*

    (a) Keep track of the schedule.

    (b) Keep track of the project budget.

    (c) Keep track of how many days of vacation each developer took.

    (d) Measure velocity.

Q18: You are the product owner of an agile software project that just started, and you are about to have your first meeting with the customer. You can assume to have a vague idea of what the customer needs. Which among the following would be your preferred course of action? *(5 marks)*

    (a) You start by presenting a list of features that may be part of the final product.

    (b) Regardless of your knowledge about what the customer needs, you start by asking the customer about the problem without interfering. Later, you suggest a solution in the form of a list of features that may be part of the final product.

    (c) Regardless of your knowledge about what the customer needs, you start by asking the customer about the problem, challenging its existence with questions when appropriate. Later, you suggest a solution in the form of a list of features that may be part of the final product.

    (d) Regardless of your knowledge about what the customer needs, you start by asking the customer about the problem without interfering. Later, you go back to the development team and ask them which product features you should propose to the customer in the following meeting.

Q19: Which would you say are likely to be challenging aspects of the Scrum Master role? Check all that apply. *(5 marks)*

    (a) Writing good user stories.

    (b) Managing conflicts in the team.

    (c) Managing not collocated (remote) teams.

    (d) Time-boxing the daily standup meeting to 15 minutes.