UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2014/2015 – 2nd Year Examination – Semester 4

IT4305: Rapid Software Development
Part 2: Structured Question Paper

2nd of August, 2015
(ONE HOUR)

To be completed by the candidate
BIT Examination Index No: _____

Important Instructions:

- The duration of the paper is **1 (one) hour**.
- The medium of instruction and questions is English.
- This paper has **3 questions** and **9 pages**.
- **Answer all questions.** First and second question carry 30 marks each and the third question carries 40 marks.
- **Write your answers** in English using the space provided **in this question paper**.
- Do not tear off any part of this answer book.
- Under no circumstances may this book, used or unused, be removed from the examination hall by a candidate.
- Note that questions appear on both sides of the paper.
  If a page is not printed, please inform the supervisor immediately.

Questions Answered

Indicate by a cross (✗), (e.g. ✗) the numbers of the questions answered.

To be completed by the candidate by marking a cross (✗).	1	2	3	
To be completed by the examiners:				

(1) (a) What is the main difference between Agile Testing and Traditional testing?   **(6 Marks)**

ANSWER IN THIS BOX

(b) List down four (04) guiding values of Agile Manifesto.   **(8 Marks)**

ANSWER IN THIS BOX

(c) What is the primary purpose of 'value stream mapping' as used in Lean Software development?   **(2 Marks)**

ANSWER IN THIS BOX

(d) At the beginning of the 5th iteration of a project, a new requirement was introduced to support a new type of browser. The tester realizes that the existing test automation framework and scripts will not support the new type of browser. **(14 Marks)**

Here are three procedures that the tester can follow.

I.   The tester will notify the team of the issue. A risk analysis is done and the team decides that regression testing must be performed on the new type of browser in addition to the other supported browsers. The tester will update the sprint plan by adding tasks to modify the framework and scripts to support the new type of browser.

II.   The tester does some research and concludes that the risk that any new defects would be introduced in the new type of browser that have not already been found in other supported browser is very low. The tester continues with the existing sprint plan and makes no changes to test automation framework or scripts.

III.   The tester will stop what he is doing, design specific tests for compatibility testing of the new type of browser and communicate with the team that any other testing work for the sprint will have to be pushed to the next iteration.

What is the best course of action for the tester on this team to take?
Justify the reason for you to select that option and to reject the other two options.

ANSWER IN THIS BOX

(2) Code360 is an ICT solutions provider, catering to clients all over the world. Until recently, they were following the waterfall method when implementing their products. Currently the company is going through a major revision in their development process and the management is asking you to look in to SCRUM as the software engineering methodology for their products.

(a) List any five (05) reasons, why code360 should use SCRUM as the software development methodology over their current practice **(5 Marks)**

ANSWER IN THIS BOX

(b) One important artefact of SCRUM is the product backlog. Explain what the product backlog is with the help of a diagram **(7 Marks)**

ANSWER IN THIS BOX

(c)   i. List any three (3) other artefacts of scrum in addition to the product backlog.   **(3 Marks)**

ANSWER IN THIS BOX

(d) Product owner is an important member of any SCRUM team. However, it is known that there are some projects that have a team of the product owner. Explain why a product needs a product owner team. **(5 Marks)**

ANSWER IN THIS BOX

(e) i. Scrum involves multiple levels of planning. Briefly describe what multilevel planning is and list the five (5) levels of planning. **(7 Marks)**

ANSWER IN THIS BOX

ii. Briefly explain the two (2) planning levels formally defined in SCRUM.   **(3 Marks)**

ANSWER IN THIS BOX

(3) (a) Write down five (05) practices of Extreme Programming (XP) and describe each by a single sentence.   **(1 *5 + 2 * 5=15 Marks)**

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ANSWER IN THIS BOX

Practice	Description

(b) When it comes to Product Releasing in Extreme Programming, it attempts to prevent bugs rather than fixing bugs. Explain briefly how this is achieved by using 2 practices in XP.
(6 Marks)

ANSWER IN THIS BOX

(c) Compare and Contrast Scrum and Extreme Programming with respect to the given criteria.
(12 Marks)

ANSWER IN THIS BOX

	Scrum	XP
Time Span of the iteration		
Changes during iterations		

Prioritization of the work			
Team Size			

(d) One of the practices of Extreme Programming is "Sit-together". List down three (03) benefits of this practice.   **(7 Marks)**

ANSWER IN THIS BOX

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