**CE320-6-AU**

**UNIVERSITY OF ESSEX**

Undergraduate Examinations 2012

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**LARGE SCALE SOFTWARE SYSTEMS AND EXTREME PROGRAMING**

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Time allowed: **TWO** hours

Candidates must answer **ALL** questions**.**

The paper consists of **FOUR** questions.

The questions are **NOT** of equal weight.

The percentages shown in brackets provide an indication of the proportion of the total marks for the **PAPER** which will be allocated.

**Please do not leave your seat unless you are given permission by an invigilator.**
**Do not communicate in any way with any other candidate in the examination room.**
**Do not open the question paper until told to do so.**
**All answers must be written in the answer book(s) provided.**
**All rough work must be written in the answer book(s) provided. A line should be drawn through any rough work to indicate to the examiner that it is not part of the work to be marked.**
**At the end of the examination, remain seated until your answer book(s) have been collected and you have been told you may leave.**

***Candidates must answer ALL questions***

## Question 1

Extreme Programming (XP) addresses particularly well some issues that have traditionally affected software development. Describe how XP addresses each of the following issues:

(a) Staff turnover. [10%]

(b) Business changes. [10%]

(c) Schedule slips. [10%]

## Question 2

Project management and bug and issue tracking systems such as "Trac" are key tools in the development of software in teams.

(a) What are the key functions of Trac and in what ways does Trac support software development in an XP team? [16%]

(b) In what ways is Trac limited in relation to XP practices? [6%]

**Question 3**

Testing has traditionally been reserved to the last stages of a software project. However, good XP teams do not need to hold a separate testing phase, their production code effectively presenting *no or very few bugs*. Explain what strategies XP uses to avoid bugs altogether. [21%]

**Question 4**

You are part of an XP team that has been asked to build a tool: a final year project assistant to help students with their final year project. You are asked to sketch a release plan for this tool. Given the nature of the project, you can act both as a programmer and as a customer. To come up with a release plan, think about all of the tasks you carried out and things that would have made your life easier while working on your own final year project.

In your release plan please specify:

(a) A list the features identified for the release. [15%]

(b) A priority for each item in terms of value for the customers using a point system where 3 = very valuable, 2 = valuable, 1 = optional. [7%]

(c) A list of the features that should be implemented in the first iteration. [5%]

**END OF PAPER CE320-6-AU**