THIS PAPER IS NOT TO BE REMOVED FROM THE EXAMINATION HALLS

UNIVERSITY OF LONDON **CO3353 ZB**

BSc Examination

COMPUTING AND INFORMATION SYSTEMS and CREATIVE COMPUTING

Software Engineering Project Management

Date and Time: Friday 13 May 2016 : 10.00 – 12.15

Duration: 2 hours 15 minutes

There are FIVE questions in this paper. Candidates should answer **THREE** questions. All questions carry equal marks and full marks can be obtained for complete answers to **THREE** questions. The marks for each part of a question are indicated at the end of the part in [.] brackets.

Only your first **THREE** answers, in the order that they appear in your answer book, will be marked.

There are 75 marks available on this paper.

No calculators should be used.

Question 1

Milestones and quality gates

a. Define the milestones associated with **each** phase of the *UP (Unified Process).* [4]

b. Explain how these milestones control the transition from each phase of the project to the next, giving examples in each case. [21]

Question 2

Plan-based and agile approaches

a. Define the principle of "serial in the large, iterative in the small". [5]

b. Identify **eight** attributes of a project that need to be considered before deciding whether to adopt a *plan-based* or an *agile approach.* [8]

c. Explain how **each** of these attributes affects that decision. [12]

Question 3

Risk mitigation

a. Describe how evaluation of probability and impact of a risk helps in selecting a suitable mitigation strategy. Give examples of **four** different forms of mitigation based on *technological, human, organisational* and *budgeting* risk. [20]

b. Explain the difference between a *known risk* and a *predictable risk.* [5]

Question 4

Design for re-use

Re-use of software can occur at **four** levels: *abstraction into patterns, language-specific object libraries, component-based frameworks* and *off-the-shelf systems.*

a. Describe the potential benefits of **each** level. [16]

b. Give examples of **three** specific types of cost normally associated with re-use. [9]

Question 5

Cleanroom methodology

a. Explain the **three** types of model used in the *Cleanroom* testing methodology, describing the role each model plays in ensuring that the finished system meets customer requirements. [18]

b. Identify **seven** features of the cleanroom process that give assurance that the executable programme is consistent with the system specification. [7]

END OF PAPER