UNIVERSITY OF LONDON

CO3353 ZA

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
Planning and scheduling

a. Identify and discuss the differences between *product-based* and *task-based* approaches to scheduling in terms of:

    (i)   resource-allocation
    (ii) progress-monitoring
    (iii) managing interdependencies.   [21]

b. Give an example of a tool that you could use to document and manage the schedule.   [4]

Question 2
Risk management

a. Identify and discuss the differences between a project *risk* and a project *issue*.   [5]

b. Describe the risk management workflow, from identification of risk-types to control of risks throughout the project.   [20]

Question 3
Project execution

a. Explain how a project manager ensures that a project meets its objectives with regard to **each** of the following:

    (i)   use of resources
    (ii) delegating work to team members
    (iii) monitoring progress
    (iv) managing risks
    (v) controlling changes.   [25]

Question 4
Testing

a. Define the purpose of each of the **four** main forms of software testing (*unit, component, system* and *acceptance*). [8]

b. Give examples of the specific issues that have to be addressed in **each** case. [8]

c. Describe the scope and content of a typical *test plan* covering **all four** types of testing. [9]

Question 5
Process improvement

a. Describe the *Plan Do Check Act (PDCA)* process improvement methodology. [8]

b. Give an example of how PDCA could be used to analyse and mitigate a problem such as reduction of incomplete or inconsistent requirements where the proposed mitigation is to introduce a validation methodology. [17]

END OF PAPER