

Note: correction in red

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: Wednesday 17 May 2017: 10.00 – 12.15

Duration: 2 hours 15 minutes

There are **FIVE** questions on 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 may be used.

Question 1

- a) In recent years there has been increased use of Agile approaches in software engineering. Distinguishing the Agile approach from standard development methods, it is generally recognised that there are **FIVE** principles which underlie this approach. Discuss these **FIVE** principles.

[15 marks]

- b) A best practice in common use is the work breakdown structure. Discuss what is meant by this concept and highlight its advantages.

[10 marks]

Question 2

- a) Being able to accurately assess the requirements of a customer is critical in developing high quality software. This process is known as 'Requirements Engineering'. Undertaking requirements engineering consists of a number of activities. Discuss in detail two of these activities.

[14 marks]

- b) The requirements for a software development project are formalised in the requirements specification document. Briefly discuss your views on the importance of this document.

[5 marks]

- c) A good requirements specification document would have certain characteristics such as being 'clear'. Discuss **THREE OTHER** characteristics that a good requirements specification document should possess.

[6 marks]

Question 3

- a) There are various types of requirements that the software engineer needs to be aware of. These include functional, non functional, user and system requirements. Compare these various types of requirements.

[12 marks]

- b) A small family shop by the name of SAF is situated in the West End of London. SAF wants to develop a new software package to help them manage their inventory. They have put out a call for software developers to tender for this task. SAF have no experience of developing computer systems and their call for tender is therefore very vague and provides little detail. As a software engineer outline the questions you would need to ask them to enable you to estimate the cost components that you would need to be aware of in order to tender appropriately for this task.

[10 marks]

- c) Define what is meant by the term 'milestone' in the context of a software development project.

[3 marks]

Question 4

- a) Briefly discuss each of the following architectural genres:

- | | |
|--------------------------------|-----------|
| i. The Model View | [3 marks] |
| ii. Client Server Architecture | [3 marks] |
| iii. Layered Architectures | [2 marks] |
| iv. Pipe and Filter | [2 marks] |

- b) Describe and critically assess the use of client server architecture in software design.

[15 marks]

Question 5

- a) Teamwork is of critical importance in successful software development. Belbin has identified 9 team roles in successful teams, e.g. 'the Plant'. Identify and explain **FIVE** more of these roles.

[5 x 4 marks]

- b) State which **ONE** of the roles you described in your answer to 5a) best describes you and justify why you think this description is a good fit.

[5 marks]

END OF PAPER